







“The institutional model of tax administration and aspects of its development”

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THE INSTITUTIONAL MODEL OF TAX ADMINISTRATION AND ASPECTS OF ITS DEVELOPMENT

Abstract

The tax administration effectiveness depends on the level of tax revenues and economic system functioning and the stable economic development of any government. The article considers institutional aspects of tax administration. The purpose of this study is to describe, evaluate and search for the development prospects of the organizational model of tax administration. The authors describe the contemporary condition of the Republic of Kazakhstan tax authorities' organizational structure. Moreover, the international practices of the tax administration's organizational system in modern realities is overviewed. The tax administration effectiveness is evaluated by the correlation-regression analysis of the tax authorities' activity indicators. As a result, the relationship between the degree of effectiveness of tax administration and key performance indicators of tax authorities were identified and evaluated. Based on the conducted theoretical research, this paper reviewed tax administration's partner system within the perspective innovative development framework. The research results are of interest to economists and public officials in the tax audit field.

Keywords

tax, tax administration, organizational model, tax audit,
tax control, Kazakhstan

JEL Classification H21, H83

INTRODUCTION

The country development course aimed at modernization and globalization has become one of the main sources for the stable fiscal policy of the country development in the changing economic conditions. One of these tasks is to target the tax policy to stimulate the exit of business from the shadow economy, expand the taxable base of the non-commodity sector, optimize existing tax exemptions and improve the tax administration mechanism.

The relevance of the study, in our view, is that the governmental financial activity for obtaining taxes and improving the investment climate will be effective only if an optimal mechanism of tax administration is developed. It includes, on the one hand, the possibility of replenishing the budget and, on the other hand, the lack of prerequisites for tax evasion. We believe that a number of unsolved problems of tax administration significantly reduces the possibility of levying taxes, increases the cost of conducting tax audits and unnecessarily complicates the procedures for obtaining tax revenues by the state.

Even a small increase in compliance rates or compliance costs can have a significant impact on government revenues and the economy. The task of effective tax administration is not only to increase the revenues needed to finance public services, but also to minimize the burden for taxpayers. Maintaining the credibility of effective work and the fairness of the tax system is the key to ensuring its sustainability.

Tax administrations are embarking on a period of unprecedented changes associated with the emergence of new technologies, analytical tools and a significant increase in the scale of digital data. But there are also problems for realizing these advantages. These include pressure on budgets and human resources, the ability of tax administrations to respond quickly to rapid changes in business models and the selection of cost-effective technical solutions.

Changes in tax administration issues were first discussed in elaboration of the new Code of the Republic of Kazakhstan by Ministry of National Economy “On Taxes and Other Mandatory Payments to the Budget”. For instance, in order to make improvement in tax administration, differentiated approach is introduced, including implementation methods and measures of debt enforcement, based on the gradation of taxpayers depending on the risk degree, optimization of the procedures for appointing inspections, etc.

The purpose of this research is to analyze of the tax administration existing system and identification of prospects within the framework of innovative development of the Republic of Kazakhstan. Open interaction of tax authorities with legal entities and individuals allows to take into account the interests of both the state and taxpayers. The important task is to ensure the completeness and timeliness of tax revenues in the budget system, as well as the development of tools and methods that enable the formation of a service-oriented tax environment based on maximum automation of the tax administration and designed to support the strengthening of mutual trust between the parties of tax relations.

The effectiveness of the tax policy implementation, management of the tax relations complex depend on the quality of tax administration. The quality of tax authorities’ operating system is one of the key factors of tax administration effectiveness.

1. LITERATURE REVIEW

The term “tax administration” is relatively new for the national taxation system. However, various views about the definition of “tax administration” in the academic community exist.

According to the Tax Code of the Republic of Kazakhstan, tax administration represents the tax control implementation by the tax authorities, the application of methods of enforcement, the tax obligation not fulfilled within the time limit and measures for compulsory tax debts collection. It also includes providing state services to taxpayers (tax agents) and other authorized state bodies in accordance with the legislation of the Republic of Kazakhstan.

Zhamalov (2010) considers tax administration as the tax relations evolving system, which coordinates activities of tax authorities in a modern economy. Tax relations in this case assume fiscal and organizational forms. Organizational relations of the tax authorities formation and functioning system establish the applying for the tax-

tion procedures, according to the Tax Code. Fiscal tax relations occur when the taxpayer fulfills tax liability.

The main elements of tax administration are structure and hierarchy, rights and obligations of tax authorities; procedure for collecting, processing and verifying tax reporting; applying tax exemptions and sanctions; support and generalization of tax statistics; international tax relations regulation.

“Tax administration” considers at least two aspects based on institutional definitions. First, it is a governmental system, which includes tax authority (the State Revenue Committee). Its responsibilities include procedural providing for the tax policy adoption for the regular planning period. In addition, tax authorities execute comprehensive analysis and compilation of budget reports. Second, tax administration represents the set of rules and standards that regulate tax actions and specific taxation techniques, as well as determines the measures of liability for fiscal legislation violation.

The distinctive features of the concept of tax administration are revealed in theoretical study of foreign countries experience. For OECD (Organization for Economic Cooperation and Development) countries, tax administration also includes elements of effectiveness of the tax authority functioning. For the European Commission, the main role of tax administration is its lawful and effective way of collecting taxes with the lowest costs for taxpayers and for the tax authority itself. For this purpose, the tax authority needs to verify that taxpayers comply with tax legislation and maintain adequate resources, such as trained staff, budget, IT, etc. According to the definition of tax administration presented by the Institute for Fiscal Studies, one of the important elements of tax administration is timeliness of tax collections together with economical effectiveness.

The International Bureau of Fiscal Documentation provides the following definition for tax administration: the main activity of the tax administration is taxes levying and collection imposed by law. The main functions of tax administration include:

- registration of taxpayers, including detection of registration absence and fraudulent registration;
- processing tax declarations, retention and third-party information;
- monitoring and control of the correctness and completeness of the received information (including audit);
- compulsory debt collection process;
- consideration of administrative complaints.

The European Commission published fiscal blueprints, which provide recommendations for improvement of the tax authority effective functioning. According to these recommendations, each of the European Union member countries together with the Inter-European Organization of Tax Administrations adopted measures to improve tax administration, consisting of five groups: structure, human and behavioral problems, systems and operation, service for taxpayers and support.

In accordance with the reports of the International Monetary Fund and the OECD, in turn, important features that tax authorities should include:

- 1) separate administrative structure that collects direct and indirect taxes;
- 2) sufficient level of autonomy, most often as semi-autonomous authority, in terms of organization and planning, budget, performance indicators and human resources;
- 3) department for servicing large taxpayers;
- 4) normative and legislative framework for tax regulation;
- 5) extensive network of representative offices with specialists in the regions.

In theoretical studies, the authors note that the indicator of the effectiveness of tax authorities' activities is expressed as the level of tax legislation compliance. Keen and Slemrod (2009) suggest to evaluate this indicator as the difference between what should be legally paid and what is collected by the tax authority. This approach has become widespread in the US and the UK. However, Hasseldine (2012) considers that this approach ignores the change in the behavior of taxpayers. For example, measures aimed for reducing tax gaps may lead consequently to economic activity reduction and revenues reduction.

In the scientific research conducted by Norris (2009), decrease in new small- and medium-sized enterprises (SMEs) activity is noticed due to the activation of tax authorities' actions to reduce the tax gap and tax legislation non-compliance.

Crandall (2010) suggests that the effectiveness of tax administration is measured on three levels: strategic, operational and individual. Thus, overall status of the tax authority is determined on the basis of certain indicators at the strategic level. These indicators include financial indicators, the level of satisfaction with the service, competence level of the employee. For instance, performance evaluation criteria include total number of collected taxes, tax authority costs, ratio of costs to tax collection and level of satisfaction with the tax service.

At the individual level, efficiency is determined by the activities of tax service employees according to the established criteria. At the operational level, efficiency is regulated by the results of the activity (products are measured in terms of the amount of work done, for example, the number of resolved disputes, recovered debts, etc.).

One of the important problems of the tax system administration is low level of tax collection, tax evasion that leads to non-fulfillment of the revenue side of the budget.

According to the research of Richard M. Bird (2015), the main tasks of tax administration consist of three different, although related, actions – identification, evaluation and collection. The main function of tax administration is compliance monitoring, timeline of tax payment, and the application of sanctions. Therefore, an important strategy of tax enforcement is the development of methods for preventing, or at least minimizing, non-compliance at all these stages. Among these methods are involvement of information technologies (IT) and other tools for developing effective risk management strategies.

Nurumov (2013) notes that there is a decrease in the tax administration effectiveness for general and certain types of taxes, forms of tax privileges, preferences, increasing in reference standards number for government decisions, that complicate the tax control procedures and administration in Kazakhstan.

The Republic of Kazakhstan introduces systematic changes in tax legislation in the period of economic development. The changes are held in order to facilitate and improve tax administration. Any shortcomings and deficiencies in tax legislation could lead to a significant tax revenue reduction, increase in the non-compliance of tax obligations, as well as deterioration of the economic situation.

2. DATA AND METHODOLOGY

In scientific research, correlation-regression method is applied in order to determine of impact of tax service providers activity indicators to evaluate tax administration effective-

ness. Firstly, it is due to a variety of factors that contemporaneously affect the quality of administration. Secondly, for the development of recommendations, it is necessary to have an idea about the individual characteristics of factors and the degree of their influence. The indicator groups are calculated and shown in relative values.

The tasks of the correlation analysis are aimed at the measurement and strength of relationship between the varying characteristics, evaluation of unknown causal links and the factors that have the greatest impact on the variation of the outcome indicator. The regression analysis purpose is to determine the form of the dependence, regression function, and use the equation to estimate the predicted values of the dependent variable.

The statistical data of the State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan for the period 2008–2017 are chosen as the initial information for the implementation of the correlation-regression analysis. The implementation of the method includes the following steps.

On the first stage is identification of the factors and performance indicator. The factor that reflects the effectiveness of tax administration, in our opinion, is the share of tax arrears in the amount of tax revenue (Y). The factors that influence to the value of the resultant indicators are presented below:

X_1 – share of tax revenues in GDP;

X_2 – the share of tax revenues in the state budget revenues;

X_3 – the ratio of the tax revenue plan for the relevant period;

X_4 – the ratio of the tax revenue plan to the value of the previous period;

X_5 – the proportion of the amount of revealed violations in the amount of budget funds covered by the control;

X_6 – the ratio of the cost of conducting tax audits to budget funds covered by the control.

At the second stage of the research, it is necessary to compile a summary table of a brief statistical characteristic of the initial indicators in order to avoid abnormal deviations distorting the regression model.

The next stage of the analysis is the construction of a correlation matrix in order to reveal the multicollinearity of the indicators, namely, the existence of a linear relationship between the explanatory variables of the regression model. Multicollinearity impacts the quality of the model and the significance of the coefficients.

The next step is to establish a link between the indicators. There is the amount of arrears of tax revenues varies with the growth of the indicators of the results of tax administration in a directly proportional relationship, i.e. the regression equation has the form:

$$\hat{Y}_i = b_0 + b_1 X_1 + \dots + b_n X_n, \quad (1)$$

where \hat{Y}_i – the estimated value of the share of arrears for tax revenues, b – regression coefficients, n – number of factors, X – factor of tax administration.

The correlation coefficient determines the tightness of the connection between the share of tax arrears and the group of factors of the administration of the administration.

The main research results were obtained and accurately substantiated using the methods of theoretic

cal research, comparative analysis, statistical and econometric methods, methods of induction and deduction, tabular and graphical methods.

3. EMPIRICAL RESULTS

3.1. Main aspects of tax administration system in the Republic of Kazakhstan

According to the tax legislation, tax administration consists of the tax control implementation by the state revenue authorities, the application of methods to ensure the execution of a tax obligation, which is not fulfilled on time, and measures for compulsory collection of tax debts, also providing of public services to taxpayers (tax agents) and other authorized state bodies in accordance with the law of the Republic of Kazakhstan.

In order to understand the tax administration structure of the Republic of Kazakhstan, it is necessary to understand the functions and purposes of tax authority. The main function of tax administration is control of compliance with tax laws. Tax control is the governmental control provided by tax authorities for the implementation of the tax legislation norms of the Republic of Kazakhstan. The tax control forms and its functions are given below (see Table 1).

Thus, tax administration in the Republic of Kazakhstan is a dynamically developing system

Table 1. Forms of tax control exercising their functions

Source: Compiled by the author according to the legislation of the Republic of Kazakhstan.

In the framework of tax control forms is provided:	accounting for tax liability execution
	compliance control of the procedure for applying cash registers
	transfer pricing control
	excisable product control
	compliance control for accounting, storage, valuation, use and sale procedures of governmental property
	control over the authorized state (local) authority activities in the functions implementation of tax legislation ensuring
Other forms of governmental control are provided:	registration of taxpayers in tax authorities
	tax forms acceptance
	cameral control
	monitoring of major taxpayers
	tax inspection
	the ethyl alcohol account control of ethanol producers
compliance authentication of applicant to qualification requirements for production and trade activities	

for managing tax relations, coordinating tax authorities' activities in a market economy, also reflecting degree of market infrastructure development, public administration mechanisms and civil society principles. Therefore, the study of institutional frameworks is carried out through the identification, analysis and prediction. The institutional approach allows to consider the reform of tax administration as a harmonious element of the institutional transformation system and market-related conversion, which is extremely important for the scientifically based strategy formation and the national economy development.

The research of the processes of the tax administration institutions formation is directly connected with the search for approach to increase the tax system effectiveness and tax revenues growth to the budget.

3.2. Current organizational structure of tax administration in the Republic of Kazakhstan

Tax administration in the Republic of Kazakhstan is a complex organizational structure that requires precise and well-functioning organizational system. The tax administration organizational structure scheme of the Republic of Kazakhstan is presented in Figure 1.

Objects (subjects) of state tax control are taxpayers, which include legal entities and individuals. Tax audit for these taxpayers provided by both the internal audit department of the organization (internal audit) and commercial audit organizations (external audit). There are hierarchical links within this system represent micro-level.

The macro level of tax audit is represented by larger and more complex structural links at the state level. Consolidated governmental budget consists of the governmental budget and assets of the National Fund of the Republic of Kazakhstan. The governmental budget consists of the republican and local budgets. Each budget level receives taxes and fees determined by law.

The Ministry of Finance of the Republic of Kazakhstan provides the elaboration of the budget planning, budget execution, achieving of the

tax revenue completeness and timeliness and other mandatory payments to the budget. The State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan fulfills the function of achieving of the tax revenue completeness and timeliness, tax legislation compliance and the tax policy implementation.

Within the governmental audit framework, the Accounts Committee for Control over the Execution of the Republican Budget, as the supreme financial control authority, conducts tax administration effectiveness and compliance audit. Auditing commissions provide audit compliance of local budgets accordingly. According to reports of the Accounts Committee, there are some tax administration and planning issues. In this report, it is suggested to supplement the term "tax gap" in budget legislation, which determines the difference between the tax potential and actually received taxes.

3.3. Evaluation of tax administration efficiency in the republic of Kazakhstan

The main indicators of the tax administration effectiveness in the European Union countries are the quantitative criteria that characterize specific aspects of tax authorities' activities. For instance, in France, such parameters include the number of tax disputes, number of criminal fraud prosecutions and the proportion of the maximum penalties cases for tax offenses. The important indicator is the ratio between costs and the total amount of additional tax payments (the ratio of effort and results, in order to compare the different departments and divisions activities).

In other countries, for example in Sweden, the fiscal indicators are practically not used to evaluate the tax authorities' activity. There is some information that characterize deadline and quality of implementation of all established procedures, including the mandatory review cases of tax service decisions or the taxpayers spent time in order to get the tax service on the line. In Germany, the tax administration analysis is carried out by means of characterizing the tax authorities staff activity, using point rating system. According to this system, depending on the category of each inspected

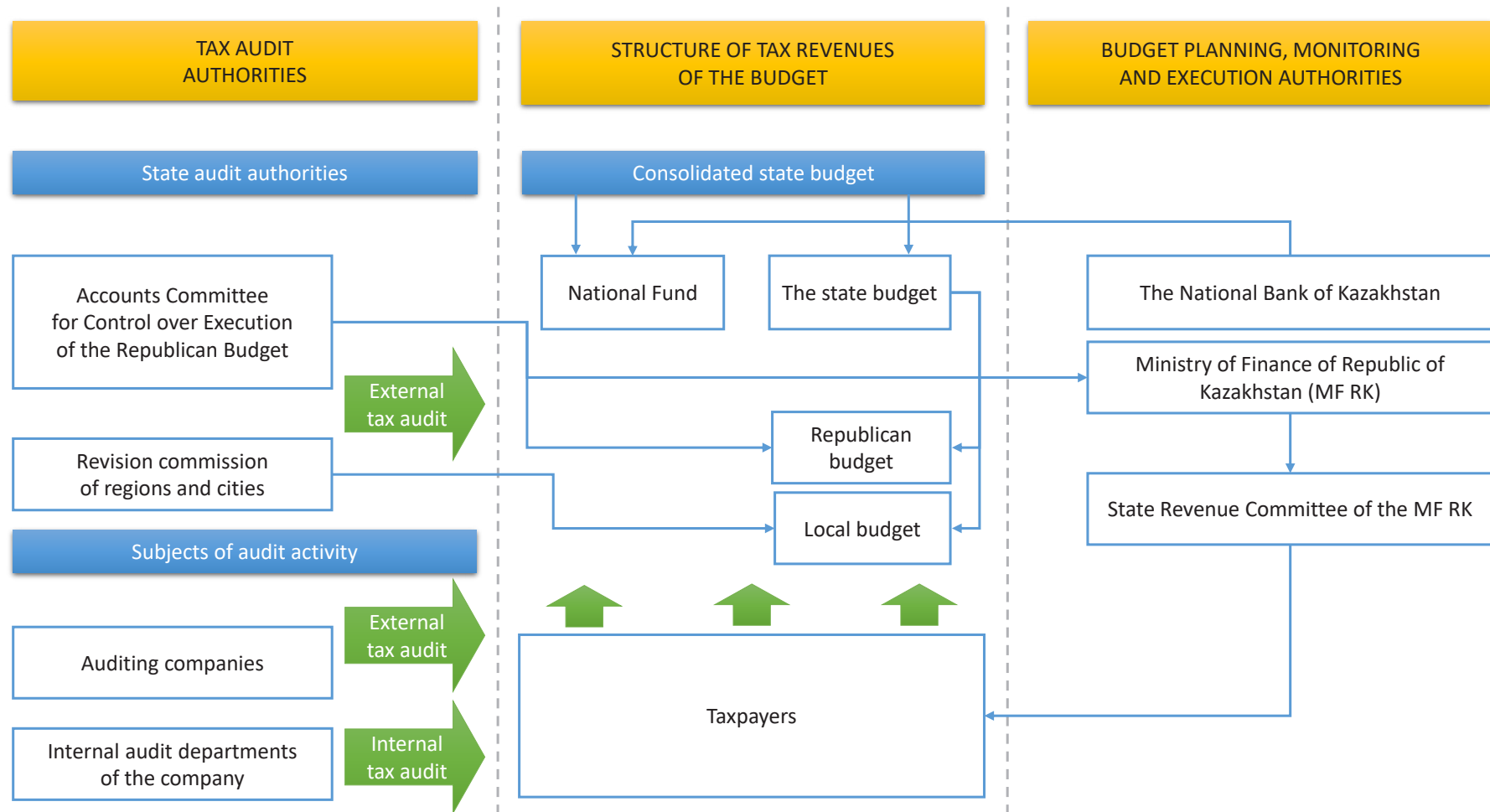


Figure 1. Organizational structure of the tax administration of the Republic of Kazakhstan

company (based on the classification by size and industry affiliation) and the tax inspector counts a certain number of points. The point rating system is the basis for drawing up audit plans for the following fiscal year in order to optimally allocate the load between employees.

Thus, the existing methods analysis has allowed to identify tax administration evaluation indicators in the Republic of Kazakhstan. Table 2 describes the regression model of tax administration effectiveness, depending on the performance of the tax authorities.

Table 2. Indicators of tax administration of the Republic of Kazakhstan for the period 2008–2017

Source: Based on data from the Ministry of Finance of the Republic of Kazakhstan.

Year	Y	X1	X2	X3	X4	X5	X6
2008	0.04	0.13	0.62	0.99	1.27	0.02	0.10
2009	0.07	0.09	0.52	1.05	0.70	0.03	0.08
2010	0.10	0.10	0.57	1.10	1.44	0.05	0.04
2011	0.07	0.11	0.67	1.02	1.44	0.07	0.03
2012	0.03	0.10	0.62	1.01	0.99	0.10	0.02
2013	0.02	0.10	0.68	1.00	1.18	0.12	0.02
2014	0.03	0.09	0.62	0.98	1.04	0.20	0.01
2015	0.03	0.08	0.54	1.11	0.91	0.17	0.01
2016	0.01	0.12	0.57	1.09	1.28	0.28	0.01
2017	0.03	0.13	0.50	1.01	1.13	0.41	0.00

The basic statistics of quantitative indicators is shown in Table A1 (see Appendix A). The correlation matrix of the indicators is illustrated in Table A2 (see Appendix A).

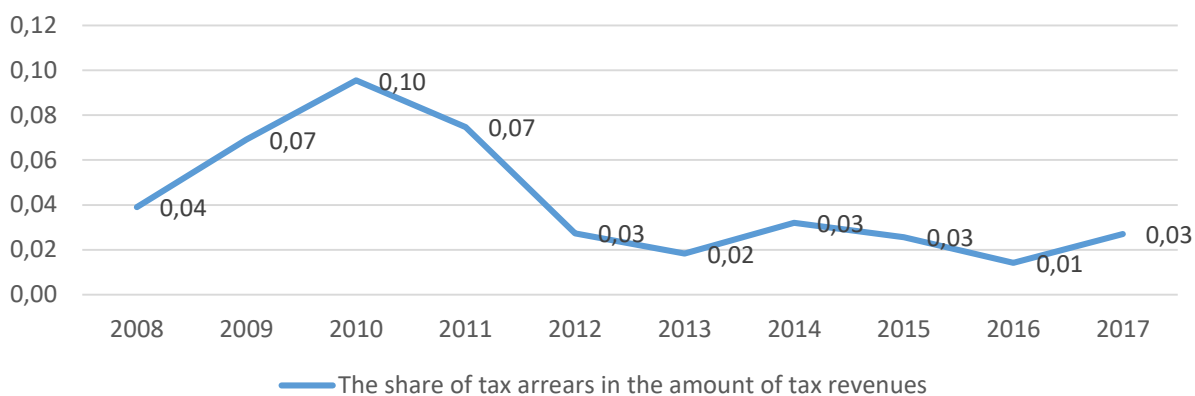


Figure 2. Dynamics of the share of tax arrears in the amount of tax revenues of the Republic of Kazakhstan in the period 2008–2017

Nature, strength and direction of the relation between the productive (Y) and the attributive factors of this study are determined by multiple correlation analysis. As a result, regression model is represented. The regression equation is derived:

$$\hat{Y} = 0.0602 \cdot X_3 - 0.132 \cdot X_5, \quad (2)$$

where \hat{Y} – calculated values of the share of tax arrears in the amount of tax revenues, X_3 – the ratio of the tax revenue plan for the relevant period, X_5 – the proportion of the amount of revealed violations in the amount of budget funds covered by the control.

A factor that reflects the degree of effectiveness of the tax authorities, in our opinion, is the share of tax arrears in the amount of tax revenue (Y) (see Figure 2).

Regression equation analysis showed that the coefficient of determination $R^2 = 0.82$ indicates that the 82% change in the share of tax arrears in the amount of tax revenues is explained by the factors used in the model and 18% from others, respectively. Conducted correlation-regression analysis leads to the following conclusions:

- the tax administration effectiveness positively depends on the tax revenue plan execution. Thus, overfulfilment of the tax revenue plan will increase of the tax authority’s efficiency. Since this indicator is more than 1, that there are reserves of tax collection growth. Therefore, it is necessary to introduce the tax potential concept, which

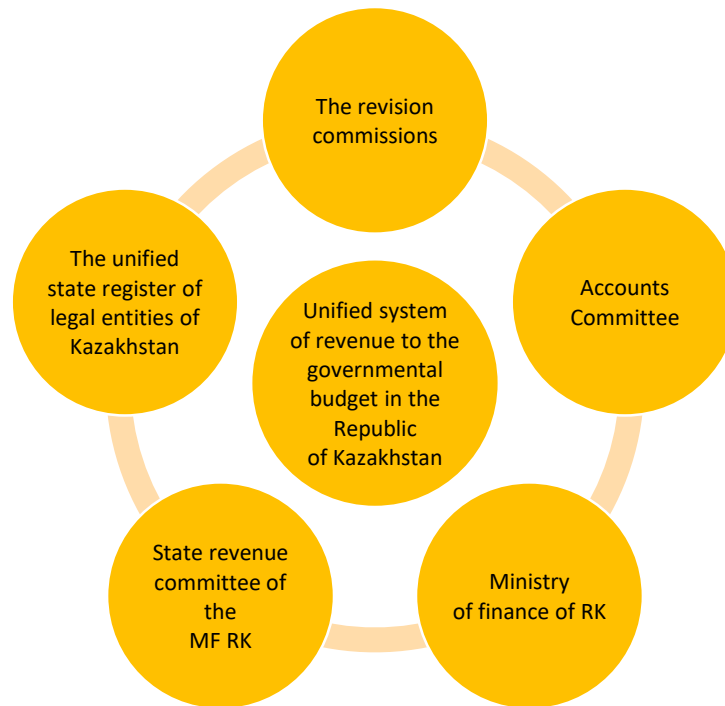


Figure 3. Partner organizational structure of tax administration in the Republic of Kazakhstan

calculates the possible tax base for the tax services, accepting available resources and opportunities;

- also it was revealed that the share of the revealed violations in the amount of budget funds covered by the control negatively affects the tax administration effectiveness. Consequently, it is necessary to reduce the tax offenses level by strengthening the control function and establishing partnership system between taxpayers and tax authorities.

Thus, monitoring and control over these indicators allow to timely respond to possible changes in the level of effectiveness of tax administration. The research of the dependence of the results of tax administration effectiveness on the tax administration functions implementation led to develop a regression model based on two variables: execution of the tax revenue plan, the share of the revealed violations for budget funds covered by the control.

This model contributes to predicting the level of tax administration effectiveness for the long-term period.

3.4. Development of the tax administration institutional model in the republic of Kazakhstan

The existing hierarchical, subordinated tax administration system in Kazakhstan, although it has a number of advantages, but often leads to a long-time lag between the problems recognition and decisions, the long information processing and its duplication, the human resources and financial resources irrational use.

Consequently, it is necessary to create specific type of organization that based on partnership relations between tax authorities and taxpayers, and access to unified information database. It leads to elimination of the informational duplication problem and improvement of data collection, processing and analysis (see Figure 3).

Therefore, the tax administration partner organizational structure leads to elimination of the issue of position and information duplications, reduction of the time processing, analysis of tax revenues, and improvement of the tax administration efficiency.

CONCLUSION

Tax administration is an important component of the tax system of any government. The tax administration effectiveness influences completeness and timeliness of governmental budget tax revenues. The tax administration structure has a complex hierarchical structure that covers a wide range of tax revenues in different budgets levels. In this research, the main factors influencing tax administration effectiveness are determined.

The existing tax administration hierarchical form needs to be improved in order to conform to modern requirements of the tax administration efficiency. The partnership system of budgetary relations is designed to reduce the state temporary and financial resources and to make the tax activity of tax authorities more transparent and effective.

Tax audit conditionally is divided into two levels: macro- and micro-level. At the micro-level, internal and external tax audit is conducted by the initiative of the taxpayer. Tax audit is carried out by departments of internal audit within entity itself, or by private audit company as an external audit. As the part of a governmental audit development, macro level is represented by a more comprehensive structure, comprising state audit authorities, authorized administrative structure for planning, executing of the budget, ensuring the tax payments completeness and timeliness.

The research of the tax authority organizational structure is important link in tax audit mechanism. Information on the structure and mechanism of tax administration provides a further trajectory of performance audit and tools to ensure the completeness and timeliness of tax revenues.

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APPENDIX A

Table A1. Correlation matrix of indicators of the regression model of the effectiveness of tax administration

Source: Compiled by the author based on the calculations performed.

Y	X1	X2	X3	X4	X5	X6	–
1	-0,174	-0,0868	0,2664	0,2331	-0,5766	0,4401	Y
–	1	-0,0053	-0,3095	0,5372	0,3265	0,1573	X1
–	–	1	-0,4944	0,4527	-0,4343	0,0376	X2
–	–	–	1	0,011	0,0093	-0,1346	X3
–	–	–	–	1	-0,0225	-0,0669	X4
–	–	–	–	–	1	-0,735	X5
–	–	–	–	–	–	1	X6

Table A2. Brief statistics of the regression model of the efficiency of tax administration

Source: Compiled by the author based on the calculations performed.

–	Average	Median	Standard deviation	Min	Max
Y	0.043	0.03	0.02791	0.01	0.1
X1	0.105	0.1	0.01716	0.08	0.13
X2	0.591	0.595	0.061	0.5	0.68
X3	1.036	1.015	0.04812	0.98	1.11
X4	1.138	1.155	0.235	0.7	1.44
X5	0.145	0.11	0.1239	0.02	0.41
X6	0.032	0.02	0.03293	0	0.1