







The Main Approaches to Assessing Efficiency of Tax Administration and Control in the Context of Digitalization

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Abstract. The subject of the study is the development of tax administration and tax control. The development of the digital economy and information space makes new demands on tax control and methods of its assessment. In this regard, the article highlights global trends in the development of tax administration and determines the principles of constructing an effective system of tax administration and control. The article reveals the essence of the risk-oriented approach in conducting control measures, highlights the key elements of tax authorities' risk-oriented model of control and supervision and the introduction of information systems in the Russian Federation. The authors state that it is necessary to improve the methodology for evaluating the effectiveness of tax control as an important scientific and practical task for the development of the state's fiscal policy. A comparative analysis of the main approaches to the formation of methods for evaluating the effectiveness of tax administration process and control is carried out. Taking into account the given scientific and methodological provisions, the development directions of tax authorities control activities effectiveness assessment are formulated.

Keywords: Taxation · Tax administration · Tax audit · Effectiveness of tax control · Desk audit · Field audit · Risk oriented tax control

1 Introduction

Aims and goals. The purpose of the study is to develop the main approaches to the formation of models for determining the effectiveness of tax administration and control based on a critical assessment of the theoretical views of Russian and foreign researchers and established practice, both local and global.

Methodology. Dialectical and formal logic were used in the course of the study. Tax control performance evaluation methodologies were analyzed combining monographic, logical, statistical methods of analysis and comparative method.

Results. As a result of the study, various approaches to assessing the performance of tax authorities in general and tax audits in particular were identified and further vectors of model development were identified.

Conclusions. An integrated model for assessing the effectiveness of tax authorities control work should include the aspect of control measures preventive effectiveness, which can be implemented on the basis of organizational, technological and preventive-disciplining effectiveness of control checks.

2 Relevance of the Task to Improve Tax Administration and Control

The challenges of ensuring economic growth and development are inextricably linked to improving tax systems. From the state's point of view, taxation is an important economic tool for ensuring economic growth and attracting financial resources for national development programs [1]. Statistical data indicate that the value of the tax system as the main source of budget revenue in any state is undeniable [2]. At the same time, the actual tasks of maximizing tax collection and minimizing tax evasion are difficult to achieve in practice. A holistic assessment of the effectiveness and optimality of the tax system, identifying problem areas, is a complex multi-factor topic for scientists since there is no single system for evaluating the tax system's indicators. Tax administration is distinguished by a special subsystem in the structure of the tax system, where tax administrations exert a controlling influence on tax revenues in the built-in tax control subsystem [3].

When building and improving tax systems, minimizing administrative and compliance costs is crucial for both the state and taxpayers. Adam Smith called this principle the "economy of collecting" [4]. Similarly, the benefits of any reform in the revenue administration of the budget system should outweigh the costs associated with its adoption, including transition and implementation costs. The positive global trend of the last two decades has become the increase of tax administration efficiency and level of informatization. The 2019 OECD report on tax administration indicates an increase in tax authorities' investment in digitalization in order to:

1. facilitate the filing and payment of taxes;
2. automation of data analysis of taxpayers and third parties;
3. improving communication between taxpayers and tax authorities.

Most foreign jurisdictions digitalize their tax systems. In OECD countries, about 90% of taxpayers have switched to e-filing tax returns and e-payment of taxes, which reduces the time spent by taxpayers.

Various types of electronic billing systems are used all over the world. Tax authorities can use platforms that allow trading partners to exchange electronic documents over a specific network (for example, pan-European public procurement online [PEPPOL]). This is the case in Denmark, Sweden, and most recently in Singapore. Another option is to use XML formats; in this model, taxpayers convert invoices to a government-defined XML format and transmit them through an online portal, such as in Italy and the Slovak Republic. Finally, tax authorities can use online cash register (OCR) initiatives that require retailers to use OCR software to instantly upload sales data to the tax administration portal (Korea, Russian Federation). In Russia, each receipt generated by the cash register contains a QR code that the consumer can use to

verify the correctness of the transaction registration (with the transfer of information to the tax authority).

The online cashier system is based on the “Internet of Things” technology and Big Data analytics. Information on settlements is transmitted to the tax authorities in real time mode, thereby preventing fraud and allows assessing risks automatically, which, in turn, reduces the need for tax audits.

However, in some countries, the introduction of new digital technologies is proving problematic. Ambalangodage D., Kuruppu C., Timoshenko K. (2020) [5] investigated the implementation of the new revenue management information system (RAMIS) in Sri Lanka. They identified barriers and implementation problems such as poor infrastructure, resistance to change (especially among older workers), and a legal framework that prevents the system from fully functioning.

Switching to real-time systems can provide significant benefits for tax administrations, including greater control over taxpayer data and increased fraud prevention measures. The need to disclose information for tax purposes and ensure transparency of business processes in the global space strengthens the role of international financial reporting standards, exchange of tax and financial information in the development of the digital economy.

3 Tax Control: Terminology and Forms

Tax authorities organize a system of tax control measures within the tax administration framework. Tax control is one of the most effective strategies for protecting the interests of the state from tax evasion. In the international terminology, the term tax audit is used for control measures implemented by state tax authorities, whereas in the legislation of the Russian Federation the Tax Code doesn't define the term «tax audit», but establishes the concept of tax control and tax verification. However, the role of audit in modern tax administration goes beyond the framework of checking the taxpayer's reporting obligations and identifying discrepancies between the taxpayer's submitted returns and the payment confirming documentation.

Tax audits are conducted in order to verify that the taxpayer complies with the provisions of tax legislation (OECD, 2006) [6]. A tax inspection is an investigation conducted by a tax authority to verify the accuracy of tax returns and identify inappropriate behavior and activities (Kirchler, 2007) [7].

The tax authority's audit program performs a number of important functions which, if implemented effectively, can make a significant contribution to improve administration of the tax system. The effectiveness and resultiveness of audit activities by tax authorities depends to a decisive extent on the nature and scope of the powers enshrined in the current legal framework, including the provision of sufficient authority to access information, as well as the appropriate system of sanctions for tax offenses. A tax inspection is a random check of tax liabilities declared by taxpayers, which includes checking the accounting system for taxpayer transactions related to business activities (accounting data, primary documents, information about the movement of funds on a Bank account, information from third parties).

Tax audit is the most important and essential component of the activities of state tax authorities to ensure compliance with tax legislation through the proper application of the legislation on taxes and dues, that is, the audit officers conduct the appropriate verification of the correctness of the taxpayer's Declaration of tax obligations, including checking the taxpayer's systems, accounting books and other relevant information. It may include cross-checking the taxpayer's accounts with data from the taxpayer's suppliers or with other government departments and agencies. The source of the information and its effectiveness and efficiency must be guaranteed through appropriate procedures and the use of modern audit tools and methods [6]. The main preventive form of tax control is registration and listing of taxpayers in special registers.

The most effective tools for tax control are tax audits, which allow the most complete and comprehensive control over the correctness of calculation, timeliness and completeness of tax payments by comparing evidence obtained during control measures with data from tax declarations and other accounting documents submitted by taxpayers to the tax authorities. In accordance with the Tax code of the Russian Federation, there are cameral and on-site tax field inspections, as well as checks on transactions between affiliated entities.

According to the results of a study by D'agosto, Manzo, Modica and Pisani, cameral inspections are the most effective in increasing tax compliance [8]. In particular, tax payers who passed a full cameral desk inspection increased their declared regional business tax by about 19% in the year of the audit, declared VAT by about 18%, and personal income tax by 14.7%. Field inspections appear to have a weaker impact on compliance with tax laws.

Based on the provisions of article 89 of the Tax Code of the Russian Federation, inspectors have the right to request any primary documents, including accounting registers, when conducting an on-site inspection. The audit compares the accounting and taxation data obtained as a result of the audit with the data of tax declarations and accounting forms submitted to the Federal Tax Service (FTS). Accounting and taxation have the same documentary basis [9], so when conducting tax audits, the accounting registers are examined. The necessity to disclose information for tax purposes and for ensuring the transparency of business processes in the global space strengthens the role of international financial reporting standards [10].

4 The Role of Tax Control in the Tax Administration System

According to Chan C. W. (2000), tax audit is aimed at improving compliance of tax payers' behavior with tax legislation in the self-assessment system [11]. The main goal of tax authorities' compliance activities is to improve overall compliance with tax laws and, in the process, inspire public confidence that the tax system and its administration are fair. Violations of tax laws are unavoidable due to many reasons, including ignorance of taxpayers, negligence, recklessness and deliberate tax evasion, or immaturity of the tax administration system [6]. Audit remains one of the main tools for combating non-compliance with legislation, and in most OECD countries, tax authorities allocate the most resources to the administration of tax legislation.

In most OECD countries, the share of the tax authority's total human resources allocated to audit and control activities exceeds 30% [12]. In Russia, half of the employees of the Federal tax service perform functions related to audits, investigations and other checks.

At the conceptual level, control measures should include the following three elements:

- 1) a structured algorithm for selecting taxpayers who are candidates for in-depth tax audits;
- 2) implementation of control measures;
- 3) continuous monitoring of the quality and effectiveness of inspections.

Considering that it is not possible to audit all taxpayers, especially by the same mode, a critical aspect is that the first two elements of the audit function use some form of case selection. Types of inspections can range from simple cameral desk inspections to in-depth field inspections at the taxpayer's premises. The choice depends on the calculated risk based on compliance, the amount of turnover, the results of previous audits, the length of time since the last audit, reliability of declarations, etc. Many tax administrations use the Pareto "80/20" principle (20% of taxpayers pay 80% of the collected taxes). Although such a policy has many advantages, it should not be implemented at the expense of the exclusion of taxpayers with high risk and low income [13].

It should be considered reasonable to exclude the top 20% of taxpayers with the highest turnover from any risk selection plan or program and control them individually. In Russia, the structure of tax authorities includes 9 interregional inspections that focus on controlling the largest taxpayers. In addition, since 2016, the legislation has been supplemented with a new specific type of tax control in the form of tax monitoring for the largest companies in terms of assets, revenue and the amount of taxes paid. The essence of tax monitoring is that taxpayers who meet certain conditions voluntarily provide the tax authority with access to the organization's information systems, which increases the transparency of business processes for tax authorities and frees them from on-site inspections.

The rating of Paying Taxes (2020) indicates that the tax system of the Russian Federation demonstrates positive development trends, as it becomes easier for businesses to fulfill their tax obligations in Russia [14]. Due to the use of new information technologies and tax reforms, Russia managed to significantly improve its rating-to rise from 134 to 58 in the rating for the period 2009–2018. Despite the positive changes in tax administration, it is difficult for Russia to achieve the transparency, coherence and clarity of the mechanism of action of tax institutions that are typical for Western countries due to the significant differences between the Eurasian socio-cultural tradition and the western one [15]. In order to improve tax control, Russian tax authorities should continue to work in the field of digitalization of technologies, strengthening investigative powers, and encouraging professional development [16].

5 Principles of Building an Effective Tax Administration and Control System

As follows from official documents of international organizations (European Commission (2007). Fiscal Blueprints) the overall construction of an effective tax administration system must meet the following fundamental requirements [17]:

- The tax administration is responsible for all operations subject to control and evaluation.
- Management and evaluation of the tax administration is based on the performance management system.

To address the global problem of tax base erosion and profit shifting (BEPS), the organization for economic cooperation and development (OECD) and the G20 have joined forces on the basis of an equal partnership [18]. Their joint action Plan for BEPS enabled them to involve more than 100 countries, both developing and developed, in the development and implementation of rules, aimed at ensuring compliance of profit generation and taxation sites, as well as increasing the predictability, transparency and flexibility of the international business tax environment [19].

In order to ensure maximum efficiency of the audit in order to solve the global problem of tax base erosion and profit shifting (BEPS), the following areas are important:

1. Reliable legal framework for tax control, providing for access to information systems for taxpayers' accounting.
2. Developing a risk-based tax audit strategy.
3. Using the most appropriate and modern tools and methods of tax audit to control tax and accounting systems of taxpayers, including computerized ones.
4. Regular monitoring and evaluation of the results and effectiveness of tax audits.

The most important indicators of control function of tax authorities include [20]:

- Operating expenses of the audit Department compared to the revenue received.
- The total number of registered taxpayers compared to the total number of tax inspectors engaged in inspections.
- Number of auditors compared to the total number of employees.
- Degree of implementation of the annual audit plan.
- Average time spent on on-site/off-site inspection in comparison with additional charges.
- Comparison of the total number of on-site/off-site inspections performed and the total number of off-site adjustments.

The above list is only a basis that can be used for setting benchmarks and then monitoring and analyzing audit results. However, the actual percentage or set of indicators should depend on local conditions and the maturity of tax administration.

The number of employees of the tax administration can vary from 1 employee for 20 tax payers to 1 employee for more than 1000 taxpayers. Differences in staffing levels in different countries mean differences in government employment policies as well as

audit policies. In developing tax administrations, where the government may well be the largest employer, the drive to improve efficiency will not mean cutting staff, but reallocating and reorganizing processes, so the ratio is likely to be much lower. The ratio of the number of employees of tax authorities per taxpayer will have a significant impact on the audit policy in terms of the number of inspections of each type and the time of their completion. All tax authorities should strive to reduce the burden of intervention and administration on the taxpayer. To do this, they must develop an audit policy that makes the best use of available resources, focusing on the most risky taxpayers, but not without limiting the time spent on individual cases or excluding other important risks.

The tax administration must have a justification for the percentage of established checks of taxpayers, the average time set for each check, the time spent on large taxpayers, and the percentage of cameral and field checks. The targets set in the plans must meet the “SMART” criteria (be specific, measurable, achievable, realistic, and time-based).

At a high level, the audit function should consist of three elements: 1) selecting taxpayers to conduct the audit during the audit planning process; 2) conducting the audit; and 3) continuously monitoring the quality of the audit.

According to Bird (2010), political readiness, a clear strategy, and adequate resources are the components necessary for effective tax administration [21].

6 The Risk-Based Approach and Digitalization of the Tax Control

Tax authorities in most countries have developed and implemented risk-based audit strategies. The risk-based approach takes into account various aspects of the business, such as historical compliance, industry and corporate characteristics, the debt-to-credit ratio for businesses registered with VAT, and the size of the business to better assess which businesses are most likely to avoid paying taxes. One study found that data mining technologies for auditing, regardless of the method, captured more dissenting taxpayers than random audits. Introducing sophisticated analytic models allows administrations to better identify revenues, claims, or transactions that may require further review or be fraudulent.

However, in a risk-based approach, the exact criteria used to audit case selection must be hidden so that taxpayers were unable to purposefully plan how to avoid detection, and allow a certain degree of uncertainty to encourage voluntary compliance. In most countries, there are risk assessment systems for selecting companies for tax audits, and the grounds on which these companies are selected are not disclosed. Although this is a post-filing procedure, audit strategies can have a fundamental impact on how companies file and pay taxes.

The risk-oriented approach is based on an analysis by the supervisory authority of various information about the company and determining the degree of risk of this firm, committing illegal actions. At the same time, scheduled inspections for companies with the lowest level of risk are rarely assigned, or are not assigned at all.

In Russia, the transition to a risk-based model of control and supervisory activities in the FTS began in 2007 with the adoption of the field tax audit planning system concept, aimed at creating a unified, open and understandable system for taxpayers and tax authorities for planning field tax audits. The introduction of a new risk management model was prompted by the understanding of the physical impossibility to carry out on-site inspections of the entire range of taxpayers. It was necessary to set priorities, with minimal labor and financial expenses, to achieve the maximum result for control measures. The document indicates 12 criteria for identifying risks and determining the number and direction of planned control measures. The Federal tax service not only identified the risks, but also made them public. Open data is one of the most significant, effective, but undervalued risk management tools.

The main principles of the risk-based model are:

- most-favored-nation treatment for bona fide taxpayers;
- timely response to signs of possible tax violations;
- inevitability of punishment of taxpayers in case of detecting violations of the legislation on taxes and dues;
- validity of the choice of objects of verification.

Thus, since 2016, the priorities of state regulation have changed. The efforts of state agencies are aimed at creating a system of “smart control”, which is primarily focused on achieving socially significant results. First of all, the FTS turned to setting up a goal-setting system. The strategic management system in the Federal tax service is at the forefront. The use of a risk-based approach has reduced the period for carrying out mandatory inspections of declarations on excise duties on ethyl alcohol, alcohol and alcohol-containing products, and declarations on value-added tax from three months to two.

Russia is already ahead of most jurisdictions in terms of digitalization of tax services. The process of tax digitalization in Russia takes place in 3 stages:

1. The “digital maturity” model (websites, personal electronic services, electronic document management and reporting).
2. “Fully digital organization” of administration processes (mobile applications (My tax), individual proactive services).
3. The current stage is the “Adaptive Platform” (2019–2025), which combines the IT platforms of the Federal Tax Service and tax payers in real time mode, when tax obligations are performed automatically and “effortlessly” with built-in tax compliance.

In the field of tax control, new breakthrough information services and technologies have been put into operation, the main of which is an automated system for controlling value-added tax. The introduction of the ASK VAT-3 system allows to combine the results of the analysis of bank documents and information about purchase and sales books to identify gaps in the chains of “taxpayer-counterparty”, the interruption of formal workflow and dubious financial transactions.

FTS of the Russian Federation is the leader among government agencies in terms of the volume of stored and used digital information. Each regional department has all the information about the economic activity of individuals and legal entities: from personal

data, information about property, income, and ending with information about transactions, operations, and relationships, as well as the history of their changes and other data received from other government agencies.

This information base makes it possible to effectively carry out work to prevent evasion schemes. Active tax control actions are carried out in respect of taxpayers, who conduct aggressive tax evasion schemes, that cause significant damage to the budget of the Russian Federation. In this regard, the tax authorities are particularly concerned about a number of issues, including:

1. Investigation of tax evasion scheme signs - “business splitting”, when legally separated legal entities actually conduct joint coordinated activities.
2. Deliberate control of pricing and distribution of expenses and revenues.
3. Creating artificial conditions for the formation of losses and their subsequent transfer to other periods.
4. Obtaining an unjustified tax benefit from artificially creating such conditions for financial and economic activities, that allow understating of tax liabilities.

Thus, the tax authorities are already using the opportunity to prevent damage, caused by tax evasion schemes in real time. Using all the control and analytical tools, the tax authorities carry out systematic work to encourage voluntary refusal of taxpayers from illegal tax optimization. When tax violations are detected, the first step is to encourage taxpayers to independently clarify their obligations, and tax planning focuses on those areas of tax risks that could not be neutralized by the results of the work carried out. The system of centralized analysis of reporting indicators, storage of tax audits results and control measures provides for an effective assessment of tax risks. Automated access to global data allows to calculate tax damage from a single inspector’s workplace and determine measures to prevent tax evasion schemes. Thanks to the introduction of modern tools, it was possible to increase tax revenues and fees at all levels of the budget system. The implementation of a set of control measures provided for by the tax code of the Russian Federation is invariably initiated on the basis of data available to the tax authorities.

Those taxpayers who did not agree with the arguments of the tax authorities and did not consider it necessary to voluntarily clarify their tax obligations are included in the tax audit plan. Thanks to this approach, it was possible to reduce the number of tax audits while increasing their effectiveness. The introduction of sophisticated analytical models allows administrations to better identify revenues, pretensions, or transactions that may require further review or be fraudulent.

The future of tax administration involves the creation of a virtual transactional environment - a closed digital ecosystem in which all business entities will make transactions, and the Federal Tax Service of the Russian Federation will be able to automatically calculate and withhold taxes at the time of transaction. Tax services should in the future be fully integrated into the business environment. The boundary of the transition to the “new transparency” in the version of the Federal Tax Service is the practical implementation in the economy of the Internet of Things (IoT) in 2025–2035. In the future, the Federal Tax Service sees itself as a service department, whose IT infrastructure will closely interact in real time mode with “digital processes” within the

taxpayer company, checking the correctness of tax payments in the same mode (“automatic fulfillment of tax obligations without effort”).

7 Analysis of the Main Approaches to the Formation of Models for Evaluating the Effectiveness of Tax Administration and Control

The implementation of tax control provides for the economic and social impact. The economic effect is achieved by increasing the revenue side of the budget by the amounts that are additionally accrued based on the results of tax control. When determining the economic effect, it is necessary to take into account the costs of tax control, since budget revenues increase by the difference between the amounts received and the costs incurred to obtain them.

The social effect is manifested in creating conditions for an even distribution of the tax burden by reducing tax offenses, which makes it possible to fully implement the social regulatory functions of taxes. In addition, the application of penalties to violators provides certain competitive advantages to law-abiding taxpayers, stimulating an increase in tax culture.

An urgent task is to evaluate the effectiveness of the control work performed - post-inspection analysis, aimed at diagnosing the factors, that affect the effectiveness of the control work, as well as developing an optimal strategy for selecting taxpayers for the field audit programs, ensuring the rational use of labor costs.

To assess the budget efficiency of tax authorities, one can use the classic cost effectiveness analysis (CEA). It is aimful to use the ratio of the achieved result and the amount of resources spent, as the basis for evaluating the effectiveness of control activities of tax authorities. In case the costs of labor and material resources are not taken into consideration it is necessary to provide for a possible distorted perception of the control work results.

We can formulate the main thesis: the higher the degree of control efficiency, the lower the cost of achieving the set target. The main performance indicators of the tax authority are: a) the amount of tax revenues; b) the difference between the amount of tax revenue and the costs of the tax authority; c) the ratio of tax revenue to the costs of the tax authority. These indicators are influenced by factors such as the quantitative and qualitative composition of taxpayers, the quality of control work of the tax authority, including the organization of business processes in the tax authority, the legislative framework, etc.

However, the correlation of tax revenues to the budget with the funds spent on the operation of the tax authority is not sufficient to make an objective comparison of the effectiveness of tax inspections. This approach is more applicable to the entire tax system functioning during a certain period of time than to a single territorial tax authority.

Tax control quality management involves the use of a scientifically based methodology for evaluating the effectiveness of tax authorities in the field of control and verification activities with clear algorithms and a system of indicators. We will

analyze differentiated approaches to assessing the quality of tax authorities control work. All methods can be structured in two groups: normative and author's.

7.1 Normative Methods for Assessing the Effectiveness of Tax Control

Intradepartmental methods have a normative basis. They are developed and applied by authorized tax authorities for planning and analysis, as well as in the distribution of material incentives for public servants. In Russia, the first official methodology for evaluating the effectiveness of control and verification activities was approved in 2004.

Since 2007, the performance of Russian tax authorities has been regulated by the internal regulations, according to which the assessment is based on the calculation of an integral indicator. The calculations are based on determining the values of quantitative and qualitative parameters of the tax authorities' activities, taking into account the set value for each criterion (Table 1), while the methodological base for establishing these value coefficients requires a critical revision.

Table 1. Criteria for evaluating the effectiveness of tax authorities

| Criteria | Criterion weight |
|---|------------------|
| 1. Collection of taxes and dues, % | 18% |
| 2. Percentage of the amounts of claims considered by the courts in favor of the tax authorities, relative to the total amounts of legal disputes with taxpayers, % | 16% |
| 3. The share of the number of decisions of tax authorities declared invalid by the court in the number of decisions of tax authorities issued by the results of tax control, % | 16% |
| 4. Reduction of tax arrears to the budget system of the Russian Federation, % | 12% |
| 5. Increase in the share of taxpayers who satisfactorily assess the quality of tax authorities work, % | 6% |
| 6. Number of citizens and organizations that receive information from the Unified state register of legal entities and the Unified state register of individual entrepreneurs using Internet technologies | 6% |
| 7. Share of taxpayers who have access to personalized information about the state of settlement with the budget via communication channels and the Internet, % | 11% |
| 8. The ratio of the number of complaints on tax disputes considered in pre-trial procedure by higher tax authorities to the total number of claims on tax disputes submitted to the tax authorities and considered by the courts, % | 15% |

Based on the positive experience of OECD [22] countries, the tax control activities are considered satisfactory if the following specific quantitative guidelines are met:

- The audit coverage of taxpayers is clearly related to the volume of the tax administration resources. In OECD countries, tax audit coverage ranges from 1% of tax payers (for example, Austria) to 5–10% of taxpayers (for example, Australia, the Netherlands).

- 100% of large taxpayers must pass an audit.
- About 30–50% of the entire tax service working time should be devoted to audit and disclosure of the facts of obtaining unjustified tax benefits.
- With regard to tax control conducted on a risk-oriented basis, at least 70% of inspections must be “positive”, that is, to identify violations and present additional charges for taxes. In the Russian Federation, due to deep pre-verification analyses using digital information techniques, 98% of cases of field tax audits resulted in 2019 with additional tax charges.

7.2 Author’s Methods of Assessing the Effectiveness of Tax Control

In the Tax Administration 2019 report the OECD provides a fairly narrow list of indicators for tax control and tax audits when conducting a comparative assessment of the OECD and other countries with developed and emerging economies:

Number of completed checks

- including the number of audits during which tax adjustments were made. Additional charges based on the results of audits for the financial year, including fines and interest
- including the total amount collected in the financial year as a result of audit evaluations.

A review of monographs and scientific studies has shown that the authors justify various sets of quantitative and qualitative, absolute and relative (coefficient) indicators, which can be difficult to apply in the practice of tax authorities.

Among the scientific studies that affect the definition issues, it should be noted a subgroup of works, the authors of which suggest using a single universal coefficient, as an indicator of the effectiveness of tax control (Table 2).

Table 2. Universal performance indicators of control activities

| Indicator | Method of calculation |
|--|---|
| The ratio of tax assessment | Share of taxes independently accrued by the taxpayer in the total amount of accruals |
| Tax collection rate | The ratio of total tax revenues for the region to the tax potential of the region |
| Coefficient of fiscal efficiency of tax administration | The ratio of the absolute amount of tax revenue to tax administration expenses |
| Assessment of the «tax potential reserve» | The difference between the expected and actual amount of tax payments transferred to the budget |
| The ratio of tax assessment | Share of taxes independently accrued by the taxpayer in the total amount of accruals |
| Tax collection rate | The ratio of total tax revenues for the region to the tax potential of the region |
| Coefficient of fiscal efficiency of tax administration | The ratio of the absolute amount of tax revenue to tax administration expenses |

Not all researchers share the idea of using a single universal coefficient and develop systems of relative indicators to assess the level of effectiveness of tax authorities control work. At the same time, judgments based on the results of such studies are usually based on horizontal and vertical analysis of the relative indicators included in the model. The presence of numerous absolute and relative (coefficient) indicators that characterize the effectiveness of tax control measures does not always make it possible to uniquely determine its effectiveness as a whole.

The method of analyzing the effectiveness of field tax audits (A. A. Sofyin) [23] allows ranking tax inspections based on 14 performance evaluation coefficients and a Matrix of pairwise comparison criteria to build their rating depending on the effectiveness of the control work. The method is quite complex in practical application due to the use of the hierarchy analysis method.

The method of comprehensive assessment of the effectiveness of tax audits (V. G. Gruzdeva) [24] includes a multi-level set of tax control performance indicators based on a system of private indicators structured by the main functional areas of tax authorities' activities "personnel – quality of inspections – relations with taxpayers – financial results". The use of expert assessment methods limits and complicates the methodology.

The methodology for evaluating the effectiveness of tax administration (E. V. Ivanova, 2011) [25] is based on the use of indicators of 3 areas (effectiveness, efficiency and intensity) that are subject to a point assessment. The author uses a methodology for comparative analysis of the work of regional tax authorities.

It is quite justified, that a number of authors underline the need to develop integrated indicators when developing a methodology for evaluating the effectiveness of the tax authority. Among the known methods of determining the value of the integral indicator the following methods are used: the method of sums, method of works, method, arithmetic average, geometric average method, distance method, the method of standardization of the scale of the indicators, matrix, logical (semantic) convolution method, arithmetic weighted average method, methods of expert estimates, as well as the construction of a synthetic index.

For example, Yashina N. I. and Alexandrov E. E. [26] we justified the system of private indicators of tax control efficiency, which is a fairly systematic approach due to the grouping of indicators by areas. They solve the question of choosing the optimal way to integrate private criteria into a single generalizing indicator by constructing an integral indicator based on a linear transformation of private indicators.

Taking into account that Russian Federation includes 85 subjects (regions), and as a result the complex multi-level structure of the Federal tax service and its regional inspections, many scientists (Yashina N. I., Alexandrov E. E., Gruzdeva V. G., Sofyin A. A.) attempts have been made to develop a methodology for ranking tax authorities based on their internal efficiency.

8 Results

Most of the existing methods are aimed at evaluating the activities of tax authorities in general and do not allow to clearly determine the effectiveness of a particular area of work. In particular, the development of methods for assessing the quality of administration of specific types of taxes has not been widely used.

Criteria-based assessment of the consequences of tax control involves monitoring its impact on the behavior of taxpayers. Thus, tax control should be considered effective when it entails a real reduction in the number of tax offenses committed. The effectiveness of tax control can be characterized by the ratio of the amounts of taxes independently accrued by taxpayers and the tax potential of the territory. At the same time, the tax potential should be understood as the maximum amount of taxes and dues, that can be accrued under the current legislation.

The use of this indicator most objectively reflects the effectiveness of the tax control. However, we have to state the complexity of calculating the tax potential of the territory, which makes it difficult to apply this indicator to assess the effectiveness of a particular tax administration.

A comprehensive system for evaluating the performance of tax authorities can be structured by levels:

1. Evaluating the effectiveness of tax administration.
2. Evaluating the effectiveness of tax control.
 - 2.1 Assessment of the effectiveness of registration and accounting of taxpayers.
 - 2.2 Evaluating the effectiveness of tax audits.
 - 2.2.1 Evaluating the effectiveness of desk (cameral) tax audits.
 - 2.2.2 Evaluating the effectiveness of field tax audits.
 - 2.3 Evaluating the effectiveness of tax monitoring.

At the same time, as part of a broader assessment of the tax administration system, it is necessary to consider such an important aspect as the level of expenses for tax compliance by taxpayers (time for documenting, calculating and making payments to meet tax obligations and compliance with procedures after filing documents) [27].

For this purpose, “customer satisfaction surveys (audited taxpayers)” sent by tax inspectors after each tax audit project or report can be used. We should understand the complexity of interpreting such surveys. The indicator of an increase in the share of taxpayers who satisfactorily assess the quality of work of tax authorities does not allow assessing the effectiveness of performing functional duties by tax inspectors. Ultimately, the tax authority represents the interests of the state in tax relations and controls the timeliness and completeness of the taxpayer’s debt repayment. Therefore, when conducting such surveys, the majority of payers negatively assess the actions of tax authorities, even if the rights and legitimate interests of the payer are not violated. In addition, such studies need to involve a third party, which entails an increase in expenditure on the formation of the estimates and therefore reduced effectiveness in the use of funds allocated for implementation of activities of the tax authorities.

A comprehensive model for evaluating the effectiveness of control work of tax authorities should include the aspect of preventive effectiveness of control measures,

which can be implemented on the basis of taking into account the organizational and technological and preventive and disciplining effectiveness of control checks. It should be noted that this parameter of tax control is difficult to measure directly. The generalizing indicator of preventive and disciplining effectiveness can be calculated taking into account the following indicators:

- quantitative measurement of the disciplining effect of tax control can be achieved through an increase in voluntarily paid taxes in the post-verification period;
- preventive impact of tax audits (rank);
- intensity of interaction between tax authorities and taxpayers (rank).

Thus, it is proposed to supplement the assessment of tax control measures from the point of view of tax payers, compliance with their rights, and the adequacy of tax inspectors' actions. In the current realities of tax administration, for analytical purposes, it is recommended to introduce into the system of indicators for assessing the effectiveness of tax control a relative indicator of the "tax gap" for VAT, reflecting the level of discrepancy between the declared VAT deductions and the actual amounts of tax paid. Calculations show that by using the ASK VAT-3 and increasing the transparency of economic operations, the tax authorities of the Russian Federation have reduced the VAT tax gap to a record low of 0.6% in 2019. Moreover, in the world practice the value of the "tax gap" for VAT is much higher, in European countries it reaches 10%, which demonstrates the limited fiscal and control functions of the tax.

9 Conclusion

Tax administrations are becoming more and more like leading digital companies in working with data arrays, attention to interaction with customers, flexibility of the structure, as well as in the acquisition and development of new competencies. Thanks to the transition to work with large volumes of information, constant interaction with taxpayers, and increased transparency of operations, tax administrations are now turning into digital business platforms. In the near future, all relationships in the economy will be reflected in the virtual network of fiscally transparent taxpayers. In an atmosphere of trust, the latter will be ready to share personal data with the inspection in exchange for complete transparency in regard to their position. Tax systems will switch from automatic filling of declarations based on available information to the complete abolition of these reporting forms as unnecessary. For bona fide taxpayers, paying taxes will become a routine that requires no effort and takes place almost without their participation. Inspection control activities will focus only on potential violators.

Creating digital tax ecosystems based on replacing traditional tax control technologies with information and digital ones requires new approaches to evaluating the effectiveness of tax administration, the effectiveness of tax control, and the efficiency of tax authorities' employees. As a result of the study, a comprehensive 3-tier system for assessing the activities of tax authorities with regard to the implementation of the control function is justified.

When assessing the results of tax control, the authors substantiated the feasibility of taking into account sociological surveys of taxpayers, aspects of the preventive impact

of tax control and the dynamics of taxpayer compliance costs. In relation to the effectiveness of control over the completeness of VAT payment, a dynamic assessment of the level of the “tax gap” is relevant - the difference between the amount of VAT that theoretically should be paid by taxpayers and the amount of tax actually paid. The proposed expansion of the set of indicators for assessing the effectiveness of tax control will facilitate ongoing monitoring of the achievement of the strategic goals of tax administrations and effective tax communication in the conditions of a digital economy.

Most of the indicators included in the proposed methodology do not require to organize an additional information collection, since they are mainly based on official tax and budget reporting data. As a result, the presented set of indicators is characterized by minimal labor intensity of the control process.

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