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DIGITAL KAZAKHSTAN: ACHIEVEMENTS OF TAX ADMINISTRATION OF THE REPUBLIC OF KAZAKHSTAN IN THE YEAR OF THE 30TH ANNIVERSARY OF INDEPENDENCE

The purpose of the research is to analyze the process of optimizing tax administration processes, determining its performance indicators and tools to influence them. Tax reforms are often the subject of research in this direction. In the article, in the process of research, general scientific methods of cognition were used: dialectical, abstract-logical, analysis and synthesis, special research methods: analytical and graphic approaches. The main results of the research include the following: 1) the scientific views, characteristics of simplified taxation based on the forecast were considered and systematized, and the criteria for optimizing taxation processes were identified; 2) a model for making decisions on tax preferences based on information technologies is considered; 3) a comprehensive analysis of on-line receipts of relevant information was carried out, which allows its automated analysis in various sections.

The practical significance lies in the possibility of using the main conclusions in the activities of tax departments in the course of improving the methods and tools of tax administration, organizing interagency cooperation, and improving the quality of tax legislation. A set of traditional and innovative tools of tax administration, which make it possible to improve its quality and efficiency, are of immediate practical importance; models for building a tax information space by introducing a digital tax administration system.

Key words: tax administration, optimization of taxation processes, tax preferences, electronic digital signature.

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Цифрлық Қазақстан: ҚР салықтық әкімшілендірудің Тәуелсіздіктің 30 жылдығы жылындағы жетістіктері

Зерттеудің мақсаты – салықтық әкімшілендіру процестерін оңтайландыру процесін талдау, оның тиімділік көрсеткіштері мен оларға әсер ету құралдарын анықтау. Белгіленген бағыттағы зерттеу тақырыбы көбінесе салық реформалары болып табылады. Мақалада зерттеу барысында танымның жалпы ғылыми әдістері қолданылды: диалектикалық, дерексіз-логикалық, талдау және синтез, арнайы зерттеу әдістері: аналитикалық және графикалық тәсілдер. Зерттеудің негізгі нәтижелеріне мыналарды жатқызуға болады: 1) ғылыми көзқарастар, болжам негізінде оңайлатылған салық салу сипаттамалары қаралып, жүйеленді, сондай-ақ салық салу процестерін оңтайландыру өлшемдері анықталды; 2) ақпараттық технологиялар негізінде салықтық преференциялар туралы шешімдер қабылдауға арналған модель қаралды; 3) өзекті ақпараттың online түсімдеріне кешенді талдау жүргізілді, бұл оған әртүрлі бөлімдерде автоматтандырылған талдау жүргізуге мүмкіндік береді.

Практикалық маңыздылығы салықтық әкімшілендірудің әдістері мен құралдарын жетілдіру, ведомствоаралық өзара іс-қимылды ұйымдастыру, салық заңнамасының сапасын арттыру барысында салық департаменттерінің қызметінде негізгі қорытындыларды пайдалану мүмкіндігінен тұрады. Салықтық әкімшілендірудің оның сапасы мен тиімділігін арттыруға мүмкіндік беретін дәстүрлі және инновациялық құралдарының кешені; салықтық әкімшілендірудің цифрлық жүйесін енгізу арқылы салықтық ақпараттық кеңістікті құру жөніндегі модельдер тікелей практикалық маңызға ие.

Түйін сөздер: салықтық әкімшілендіру, салық салу процестерін оңтайландыру, салықтық преференциялар, электрондық цифрлық қолтаңба.

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Цифровой Казахстан: достижения налогового администрирования РК в год 30-летия Независимости

Цель исследования состоит в анализе процесса оптимизации процессов налогового администрирования, определения его показателей эффективности и инструментов воздействия на них. Предметом исследований в обозначенном направлении часто являются налоговые реформы. В статье в процессе исследования применялись общенаучные методы познания: диалектический, абстрактно-логический, анализа и синтеза, специальные методы исследования: аналитический и графический подходы. К основным результатам исследования можно отнести следующие: 1) рассмотрены и систематизированы научные взгляды, характеристики упрощенного налогообложения на основе прогноза, а также выявлены критерии оптимизации процессов налогообложения; 2) рассмотрена модель для принятия решений о налоговых преференциях на основе информационных технологий; 3) проведен комплексный анализ online поступлений актуальной информации, которая позволяет проводить автоматизированный ее анализ в различных разрезах.

Практическая значимость состоит в возможности использования в деятельности департаментов налоговых служб основных выводов в ходе совершенствования способов и инструментов налогового администрирования, организации межведомственного взаимодействия, повышения качества налогового законодательства. Непосредственное практическое значение имеют комплекс традиционных и инновационных инструментов налогового администрирования, позволяющих повысить его качество и эффективность; модели по построению налогового информационного пространства путем внедрения цифровой системы налогового администрирования.

Ключевые слова: налоговое администрирование, оптимизация процессов налогообложения, налоговые преференции, электронная цифровая подпись.

Introduction

To date, the tax administration of the Republic of Kazakhstan has entered a qualitatively new stage of development, a number of large-scale reforms have already been implemented over the years of Independence of Kazakhstan – in particular, the New Tax Code has been adopted, which significantly brings the tax system of Kazakhstan closer to international practice, carries a large investment potential, and also allows build a transparent system of tax administration.

Kazakhstan's position in the World Bank's Doing Business rating is 39th among 183 countries of the world, as well as the best among the CIS countries (an increase of 14 positions compared to last year's data) is also a confirmation of the effectiveness of the tax policy being pursued.

The concept of the Strategic Development Plan of the Republic of Kazakhstan until 2025 sets a goal – to achieve leading positions in all areas of the country's development. An important role in its implementation is assigned to tax administration, which is able to ensure the implementation of planned government programs with the necessary financial resources. The subject of tax administration is relevant at the present time, since tax administration has a huge impact on the country's economy; annually, amendments are made to the legislation on taxes and compulsory payments, which are aimed at a qualitative improvement of the tax system. This is confirmed by the Concept of the Strategic Development Plan of the Republic of Kazakhstan until 2025, in which one of the key areas is to increase the stimulating effect of the tax system on the development of the economy while simultaneously implementing the fiscal function (Decree, 2018).

It is also worth noting that the relevance of tax administration is explained by the objective process of socio-economic change in the society of the state, which is accompanied by constant modernization of state institutions. The functioning of the national economy as a whole depends on the effectiveness of the tax system, one of the most important regulatory institutions of the state (Aliev, 2017).

The tax system is the main means of regulating the country's economy, affecting the structure of the state, its development and the conditions of existence, which is rapidly changing due to changes in economic, political and social requirements. Revealing the essence of tax administration, many authors adhering to the first approach define a wide range of tasks facing it, including:

- forecasting tax revenues;

- development of new concepts of taxation;

- preparation of tax justifications for the implementation of the protectionist policy of foreign economic activity;

- optimization of tax rates;

- assessment of the tax potential of the region, etc.

Such a broad understanding of the essence of tax administration was characteristically of Western European scientists at the end of the $19^{\text{th}} - 20^{\text{th}}$ centuries, when the fundamental principles of state regulation of tax relations were laid.

So, the Swedish scientist K. Wicksell in his scientific work "Research on the theory of finance" in 1896 for the first time substantiated the "theory of optimal taxation". He argued that "a flagrant injustice is forcing people to pay taxes, which are then spent on activities that do not meet or even contradict their interests". According to Wicksell (1988), taxes intended to cover government spending should not contradict the social contract. Some of them must necessarily be directed by the state to meet the needs of taxpayers: social support, health care, etc.

This theory was further developed in the works of Buchanan (1994) in the second half of the XX century. He was among the first authors to substantiate that the state should create the necessary conditions for the functioning of market mechanisms and with the help of these mechanisms, one of which is taxes, to regulate economic processes in the interests of the population to provide it with the necessary benefits.

Tax policy is a more abstract definition that reflects general trends in the development of tax relations, including in relation to a certain stage of the country's economic development and its further socio-economic and political prospects. Tax administration, to a greater extent, should be associated with the practical activities of authorized bodies, primarily tax. In addition, tax policy, as a theoretical concept, is broader than tax administration, since, covering the sphere of tax relations, it is closely connected with other areas of the state's activity – political, social, economic, legal relations.

Literature Review

Mansfield (1987), in his work, examines a critique of the theoretical approach to tax administration, a generally critical view of the tax structure in developing countries. He also defines that tax administration is a loosely defined area, encompassing law, public administration, sociology and psychology, and economics. He reviewed tax administration in developing countries from an economic point of view.

Savić et al. (2015) in their work considering the efficiency of tax administration using data envelopment analysis (DEA) and regression analysis in 13 European countries. They cite an input-oriented DEA model aimed at minimizing input for a given output level.

Taxes are the main source of the national budget revenues. That is why, the compliance with laws and regulations in the field of taxation can speed up the development of normal and legal system of paying taxes and other mandatory payments. It is especially relevant nowadays, when the financial crisis broke out in a range of countries (Clark et al., 2018), Economic Crisis and Austerity in Southern Europe, Threat or Opportunity for a Sustainable Welfare State (Petmesidou & Guillén, 2015). Tax administration that is associated with paying taxes requires an accurate definition of a tax and understanding of its components (Pronina et al., 2018). Funds that enable the State to properly perform its functions of stabilizing the economy and the financial system should be attracted and directed to areas in need of public funding and support (Brondolo et al., 2008). Besides, the role of government bodies of tax control is very important. Their tasks include collecting the taxpayers' funds and controlling the timeliness and correctness of paying taxes and other mandatory payments (Serikova et al., 2018). All these responsibilities must be carried out in accordance with the above mentioned laws and regulations. The correctness and strictness of their compliance can speed up the development of a normal and legal system of paying taxes and other mandatory payments (Kurbanova et al., 2020).

Taxes are the main source of the national budget revenues (Meyer et al., 2015). Their complete and smooth flow is impossible without an effective tax structure in a state. When defining the trajectories of modernizing domestic economy, the state needs to improve the functions of tax administration (Junquera-Varela et al., 2017). Thus, especially significant attaches to scientific research to improve the forms and methods of tax administration processes in the conditions of innovative economic modernization (Keen & Slemrod, 2017). The issues of legal control and regulation of taxation are one of the most relevant in economic and social life of each nation (Huda et al., 2018).

The term "digital economy", which is based on the use of new IT technologies, was first used in 1995 by the American scientist from the University of Massachusetts Nicholas Negroponte. In world practice, the digital economy is considered to be a global network of social and economic measures that are carried out through Internet platforms and mobile networks (Petuhova, 2019).

In order to measure how efficient the tax administration is in implementing a compliance strategy several methods are used. The main methods have been developed by the Blueprints (2007), and jointly by the International Finance Corporation, Price Waterhouse Coopers and the World Bank (2020), by the International Monetary Fund (2020), by the World Bank, and by the OECD's Centre for Tax Policy and Administration for the Forum on Tax Administration. Other models that have been used to assess the performance of a tax administration are the following: International Tax Dialogue (2010); Public Expenditure and Financial Accountability Framework (PEFA, 2020); the USAID's Collecting Taxes Database (USAID, 2020); and Diagnostic Framework for Revenue Administration (Gill, 2000). The assessment of the efficiency of the tax administration using DEA is very rare, probably due to the lack of information regarding the tax administration. In the literature, the articles from Moesen & Persoon (2002), Gonzalez & Mile (2000), and Barros (2007) are the most prominent ones.

Methodology

In order to manage the process of tax administration in the region and the municipality, an information infrastructure should be formed that provides data for calculating the key and effectiveness providers (Figure 1). The indicators will help guide efforts to optimize tax administration processes and measure the results of all changes in this area.

Among the key indicators of the effectiveness of tax administration, it is advisable to distinguish two groups – direct and indirect. In the first group of indicators – the dynamics of tax collections, the level of taxpayers' debts to the budget; the effectiveness of tax audits and the amount of tax claims fulfilled, the costs of the tax system functioning per unit of taxes collected.

The indicator of the dynamics of tax revenues should be the main criterion for the effectiveness of

the economic and investment program of the region and individual projects. The effectiveness of tax audits shows how up-to-date the information base the tax authority has and on the basis of which it makes decisions about the audit. In addition, this criterion takes into account the effectiveness of spending budget funds for inspections (whether additional assessments were made based on the results of the audit, whether they can actually be recovered, and whether the court confirmed the legality of the additional assessments). Transparency of tax audit rules can significantly improve the situation and reduce the corruption of the tax audit. To improve this indicator, information technologies are used to analyze the risk of tax evasion as the basis for audits.

The second block of key indicators includes indirect indicators characterizing the relationship between tax authorities and taxpayers (for example, data from opinion polls on the basis of which quality will be assessed), as well as the level of their "electronic interaction" (in particular, the number of companies reporting via electronic communication channels, providing certificates and statements in electronic form). The indirect costs of tax administration of enterprises are determined by the complexity of meeting tax requirements, the quality and quantity of services for taxpayers (Table 1).

For enterprises, indirect costs include hours spent fulfilling tax requirements, such as filling out tax forms, making payments and paying (transferring) tax payments. Such costs should also be converted to monetary units (e.g., using an average estimate of the cost of one hour of working time).

To ensure the relevance of the data and reduce labor intensity, regulatory online interactions with the tax inspection databases should be established. In order to clearly indicate the most urgent problems in the field of tax collections at the current moment, it is necessary to determine the parameters for a qualitative assessment of their condition: "poor" - red color, "good" - yellow color, "excellent" green color or gradation of these colors depending on indicators (e.g., according to the degree of deviation from the average or planned indicator). These indicators should become part of the "dashboard" of the head of administration in his situational room. Online receipt of relevant information allows its automated analysis in various sections. It is also necessary to rank tax revenues by the size of taxpayer enterprises, types of taxes, which will allow modeling the impact of tax preferences and other tax innovations on the territory's budget.

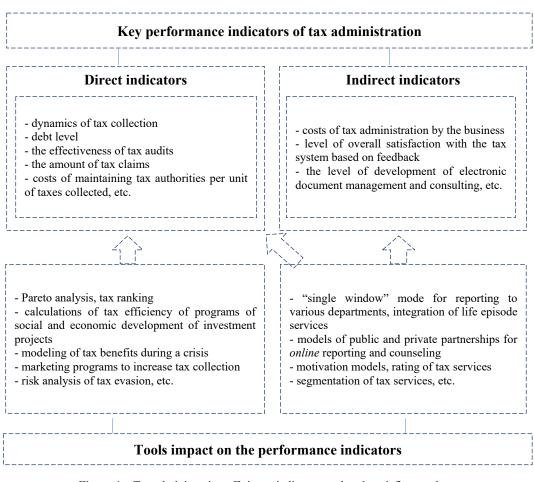


Figure 1 – Tax administration efficiency indicators and tools to influence them Note – compiled by authors

Type of system	Differentiation	Countries where the system is used	Benefits	Limitations
Patent	Type of activity	Bulgaria, Egypt, Kosovo, many Af- rican countries	 Easy to administer Positive effects of motivation, since additional earnings in excess of the average income (projected) are taxed at a zero rate Minimization of the discretion- ary power of the tax administra- tion and, therefore, corruption 	 Weak performance Does not take into account the specifics of the taxpayer Violation of vertical justice Regressive The need for zoning complicates the system
Indicator system	Potential Income Indicator Group	Spain, Italy, Argentina	 Positive effects of motivation, since additional earnings in excess of the average income (projected) are taxed at a zero rate Differentiation of the tax bur- den in accordance with the scope of activities 	 Misrepresentation of investment decisions (especially those related to hiring staff or expanding assets) The selection of suitable indica- tors, the study of sectoral profitabil- ity, the analysis of the correlation between indicators and estimated in- come requires appropriate resources No tax reduction for losses The system requires appropriate external data that may not be avail- able.

Digital Kazakhstan: achievements of tax administration of the Republic of Kazakhstan ...

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Type of system	Differentiation	Countries where the system is used	Benefits	Limitations
A system based on turnover	Turnover	Kazakhstan, Brazil, France (for micro- business), Russia, Tanzania, Ukraine, Cuba (for micro- business), etc.	mode, since turnover is also a decisive element in the standard	 High risk of declared turnover High risk of corruption The system is beneficial for businesses with a high level of profitability and vice versa, disadvantageous for low-profit and high – cost enterprises In economies with significant cash flows, it is difficult to control the objectivity of declaring
Agreement system	Indicators plus an agreement between the taxpayer and the tax administra- tion	Syria, Israel, formerly France	The system takes into account the specifics of the taxpayer	 Extremely high risk of corruption and conspiracy The system requires intensive data collection and analysis, time and cost

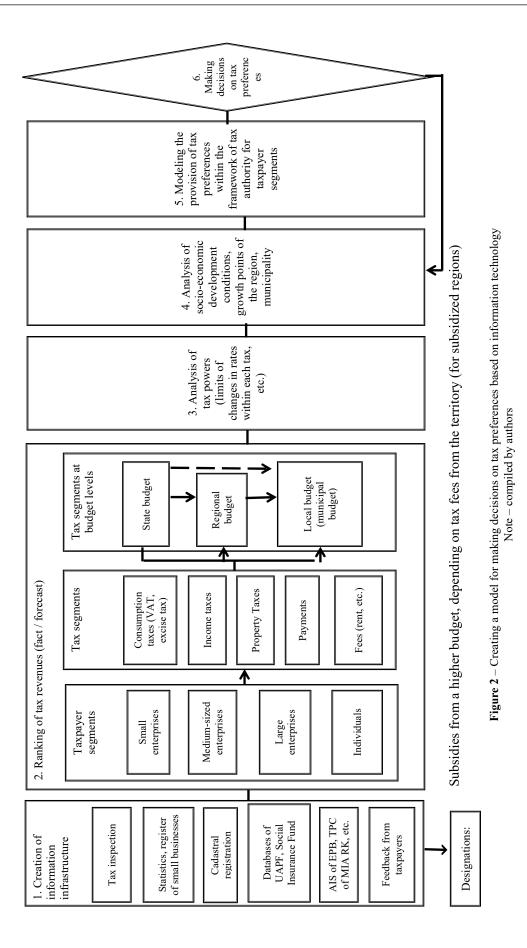
For modeling, form simulation models based on information technology (Figure 2).

Such models will allow us to calculate the consequences of tax changes for budget if, under the influence of crisis or to stimulate the economic growth of certain segments, we plan to provide preferences within the framework of our tax powers. The information infrastructure for forecasting tax revenues should be not only the data of tax authorities on actual tax revenues, but also the databases allowing forecasting tax flows – databases of the pension fund, cadastral registration, register of small business entities, Traffic Police Committee of the Ministry of Internal Affairs of the Republic of Kazakhstan and others.

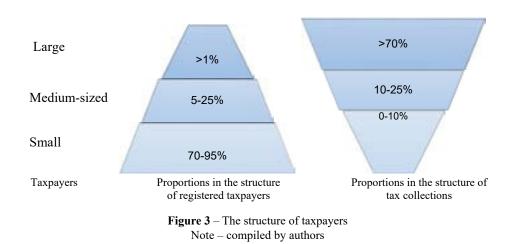
If we want to increase tax collection, to effectively control the adequacy of assessments to the market in declared transactions, we should ensure information interaction with the databases of the Agency of the Republic of Kazakhstan on Statistics. To calculate tax liabilities, it is advisable to use official indicators for similar types of activities, in case of deviation from which tax inspectors can take a closer look at the taxpayer. For subsidized regions and municipalities, the model should be clarified by financial flows from higher budgets if they are dependent on tax fees in the territory. The simulation results of such territories can be used to justify anticrisis proposals to the regional administration.

When modeling preferences, special attention should be paid to the small business segment. First, small enterprises are not the main taxpayers under the Pareto law and bring no more than 20% of all tax revenues (Figure 3). Therefore, the high costs of collecting taxes from these enterprises should be compared with tax revenues. Secondly, small and medium enterprises are a key factor in long-term social stability and economic growth. This segment has high potential as a more dynamic segment than large enterprises, especially in the field of services and innovations, which form the main potential for economic growth. Here enterprises of high-tech industries are formed (nanotechnologies , biomedicine, information technologies, etc.), which are crucial for the economy and its global competitiveness. In the small business segment, the bulk of jobs are being created.

Thirdly, tax preferences, modern forms of tax administration are relevant to reduce tax discrimination of micro and small enterprises and their formalization. Tax discrimination is expressed, first of all, in the increased effective tax rate as a result of the predominance of variable costs, lower tax deductions (e.g., depreciation), high relative tax return costs in the absence of an internal need for such complicated accounting, difficulties in calculating indirect taxes with a large assortment of goods. Thus, the costs of tax administration of enterprises are inversely proportional to size and place a disproportionate burden on small enterprises. The difference in expenses related to the fulfillment of tax requirements, such as the share of taxes paid and the share of turnover, for small and large enterprises is more than 10 times.



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On the other hand, tax evasion entails significant additional costs that are necessary to avoid a fine, access to investment credit resources, government contracts, and small business support programs. In these cases, official taxes are replaced by corrupt payments. In order not to attract the attention of tax authorities, an enterprise can exclude the use of advertising, which will reduce the potential for growth in demand and the possibility of hiring qualified personnel. In addition, informal enterprises cannot fully refund the VAT they pay on deliveries. The level of such indirect taxation depends on the size of the supply of goods, services from suppliers paying VAT. There are obstacles in trading with the formal sector, which can only buy from registered VAT payers. Failure to dispute or receive certain types of refunds leads to overpayment of taxes in some cases. To participate in public procurement tenders, obtain licenses and other actions, a small business must provide a certificate from the tax authorities about the absence of arrears in the payment of taxes and fees, or an appropriate request is made from the state structure. Tax audits concentrating on larger enterprises and a high level of tax violations in the small business segment lead to a disproportionately high tax burden on medium-sized enterprises. If the company is not registered as a VAT payer and can deduct this tax from its tax liability, final consumers will receive lower prices for equivalent goods or services, thereby reducing the market share of the formal sector. The same restriction occurs with a simplified taxation system for small businesses that do not require VAT. The increased tax press can also be expressed in imbalances in wages, deprivation of social protection, incentive to work part-time. Failure to comply with tax requirements increases the risk of ignoring other laws and requirements (environmental standards, safety standards). Therefore, it is necessary to conduct constant monitoring of small enterprises in order to prevent these negative consequences of the "absence of a tax middle", the "inverted U-form" of the tax press.

For preferential taxation of small enterprises, international space should be explored on the basis of information technology. For example, a primary Internet survey indicates the use of the following tools: introducing a tax-free minimum, lowering tax rates or exempting part of taxes, a simplified tax collection scheme, and tax holidays for new businesses. Each tool has its advantages and limitations (table 2). Setting a threshold for annual income below which a small business may not pay VAT is one of the common forms of support for small businesses. The main argument for establishing such an exemption for small enterprises is the excess of the total costs of tax administration of enterprises and administrative bodies over tax revenues.

It is also possible to construct a model using IT to determine the optimal level of income threshold for VAT:

$$Z = \frac{\partial A + C}{(\partial - 1)\tau \nu} \tag{1}$$

where \vec{a} – the coefficient of significance of net losses for the government; A – administrative expenses for collecting VAT from each company; C – the costs of tax administration of the enterprise; τ – VAT rate, v – value added per unit of issue.

Privilege	Opportunities	Limitations	The use of information technology to overcome limitations
1	2	3	4
VAT exemptions for revenue below a threshold.	 Reducing the cost of paying taxes Eliminating the regressive nature of VAT administration costs for small firms Reduced administrative costs Opportunity for tax authorities to concentrate resources on countering high-risk evasion 	 The inability to refund the VAT paid on purchases Decrease in creditworthiness, as many enterprises prefer to deal with suppliers VAT payers. Enterprises with a turnover close to the threshold may be motivated to lower the declared income in order to obtain the benefits of VAT exemption Distortion of competition between registered and unregistered VAT payers 	Expanding the capabilities of small businesses in fulfilling government orders through electronic auctions, increasing the transparency of trading platforms, etc. Forced electronic cash registrars, credit card incentives
Reduced Direct Tax Rates	Compensation of high tax administration costs for enterprises Improving Small Business Competitiveness	Reducing the value of incentives with a general tendency to lower interest rates on enterprises The risk of abuse of the system of preferences by large businesses Potential obstacles to small business growth that has reached the threshold of system application	Using information technology for a flexible tax system to reduce the difficulties of switching to standard mode
Tax holidays for new businesses	Stimulating the creation of new enterprises Support for small businesses during a loss period	Stimulating the termination of activities after tax holidays and the establishment of a new company under a different name to receive tax exemptions Not suitable for high yield new ventures The full tax exemption of small enterprises for a limited period of time impedes gradual integration into the tax system	Providing progressive rates and increasing reporting requirements in a simplified system through automation The use of <i>on-line</i> consultations, training, information campaigns to promote the use of financial statements for management and the transition to a standard tax regime
Forecast Taxation	Reducing the risk of underestimating the amount of revenue declared by small enterprises Low tax administration costs, including interactions with the tax administration High tax predictability Tax cut	Lack of incentives to improve accounting Lack of benefits in case of losses and damages Potential growth motivation Benefit Abuse Risk Violation of the principle of equal taxation for different segments of small enterprises	Electronic registrars, SMS- lotteries to stimulate the use of checks
Note – compiled by	authors		1

Table 2 – Opportunities and	l limitations of establish	ing tax incentives f	for small businesses
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In order to avoid restrictions on exemption from VAT, small businesses should be given the right to voluntarily pay VAT. Reduced VAT rates may compensate small businesses for the high costs of tax administration. However, this measure can also complicate the VAT system, increase the costs of enterprises and the state, and create new risks. Reducing the frequency of sending VAT information to small businesses is an important simplification measure. For example, in the UK, small businesses may choose an annual reporting scheme. In accordance with this scheme, it is possible to make the next installment monthly or quarterly, based on an assessment of the total VAT liability. A VAT report is made only once at the end of the business year. The benefits of this scheme are as follows: the absence of large VAT accounts, since payments are distributed by year, easier budgeting and cash flow planning, since the time and amount of payments are known at the beginning of the year, less time is needed to prepare a VAT report once per year. In addition, the small business has two months to fill out and send the annual VAT report instead of one according to the standard scheme. A similar scheme works in New Zealand, where taxpayers can select a report twice a year, which coincides with

the date of the general report. Small businesses may have difficulty paying VAT due to the obligation to pay tax before the payment of the taxable transaction has been received and the time lag in the cash flow. This difficulty can be overcome by allowing small businesses to pay VAT on receipt of payment from buyers, rather than at the time of the transaction. It is also necessary to avoid the demotivation of the growth of micro and small enterprises, the turnover of which is slightly higher or lower than the threshold value. The rules should reduce the risk of turning the threshold value of VAT into an obstacle to the growth of such enterprises. Introducing a flexible threshold is a simple measure to avoid a sharp threshold between the simplified and standard tax regimes.

In order to neutralize the risks of underestimating the declared revenue, reducing the turnover of cash, we can use special tools, such as compulsory electronic cash registers, the use of the banking system for payments in excess of a certain limit, stimulating the use of receipts, credit cards. For example, in the Philippines, a lottery is held every week to PR-support the use of receipts. To participate, it is necessary to send an SMS message with the number of the receipt for the purchase and its amount. The winning buyer must have the original receipt with a winning number, which is presented to them for the prize. In South Korea, to stimulate the use of credit cards, 20% of expenses made from credit cards could be deducted from the taxable income of the owner, a lottery was organized among credit card users.

To influence tax administration costs, tax collection, and reduce discrimination against small businesses, make modern tax collection and payment technologies widely available. Modern services can improve the comfort of interactions with tax authorities, reduce the complexity of tax reporting processing, and the number of errors. A quarter of all countries have already provided the opportunity to fill out on-line forms, and a third of all countries in the world use electronic payments for tax calculations. Companies in Norway, Sweden, Singapore, New Zealand, Portugal, the UK can send online tax reports for most major taxes. The Swedish Tax Administration has improved the tax filing system to such an extent that more than 70% of Swedish citizens only sign tax returns (if they wish, electronically or via SMS). For this, informational interaction of tax authorities with banking organizations was established. In developing countries, tax applications delivered by mobile phone allow citizens and companies to file reports and pay taxes even in remote areas, which contributes to increased tax collection. For example, in the Philippines, such a project was launched in collaboration with banking institutions. After registration in the system, a taxpayer can pay his tax liabilities through a simple text message (SMS).

The advantage of such technologies is the lack of queues, the availability of the service 24 hours a day, 7 days a week, 365 days a year, the relevance of tax forms, formalization of the tax reporting verification procedure, feedback between the regulatory body and the business entity.

To realize these advantages, create an environment of protected legally significant electronic document flow of taxpayers with tax authorities. Each document circulating in the system must be certified with an electronic digital signature (EDS), which makes it legally equivalent to a paper document. In order to protect information from unauthorized access, loss or distortion, the technical requirements for such systems should provide for the encryption of confidential documents transmitted between participants in such a document flow using certified means of cryptographic information protection (CIP). An electronic digital signature serves as a legally significant means of certification of documents circulating in the system. Logging all movements of information will allow us to record the sending and receiving of documents, to respond quickly to all delays, interference that arise in the document management system. Clients of the system are also banks, for example, when transferring information on opening accounts to legal entities and individual entrepreneurs to the tax authorities (Goncharenko, 2009).

The scheme works as follows.

1. After an automated check, the Taxpayer sends a report (tax return, financial statements), signed by the digital signature of an authorized person of the organization, in encrypted form to the tax office through a specialized telecom operator. Encryption is performed by certified means of CIP to protect against unauthorized access by third parties.

2. A specialized telecom operator sends a confirmation of the fact of sending a report certified by the electronic signature of the operator. The taxpayer signs a confirmation of his digital signature and sends it to the operator. The confirmation is an analogue of the receipt received by handing over the reporting by registered mail by mail through the offices of the Federal Postal Service. This document can be used in the proceedings of any disputes related to the determination of the fact and time of transmission of the report.

3,4. The inspection through a specialized telecom operator sends a receipt for the receipt of electronic reports via telecommunication channels and an encrypted protocol for incoming inspection of the report signed by the EDS of the tax authority. The receipt is the report itself, certified by the EDS of the taxpayer and the EDS of the tax authority. The input control protocol contains information on the results of the inspection by the tax office of the taxpayer report. The protocol may arrive at the same time as the receipt or a little later.

5. The input control protocol is signed by the taxpayer's digital signature (as confirmation of the fact that the taxpayer received the documents and his consent with the contents of these documents) and returned to the tax authority at the place of registration through a specialized telecom operator.

Results and Discussion

The use of public-private partnership mechanisms for the development of modern technologies for the provision of tax services. It is not rational for agencies to develop their programs, since the user will have to use a separate program for each report. In addition, investments are needed in the creation of a support infrastructure (call center, consultants, providing version updates, updating directories, classifiers, etc.), which are not core functions of the department. It should be borne in mind that in the market of specialized operators there are high entry barriers, due to the long payback period, the necessary significant investments to promote services, build a customer base. To reduce the corresponding costs, the S + S strategy (software and services) can be applied, in which the vendor provides a software and hardware platform for the development and application of services, a trusted services portal (certified cryptographic tools for encryption, digital signature verification), a round-the-clock call center, a system for protecting information during its transmission, processing and storage. Various government and commercial web services can be built on this site.

The S + S strategy will allow implementing the electronic "one window" mechanism, providing the user with the opportunity to import data directly from their accounting systems, without clogging them several times in various forms and without leaving the familiar interface. The essence of the "single window" is that the user can implement all

types of reporting on one software and in a single interface. The conditions for the implementation of "one window" are the interaction rules unified in all regions, report forms, CIP, the ability to use one certificate or a set of certificates, roaming between specialized operators (the ability to submit reports to inspections of one region through the server of a specialized telecom operator in another region). Related services are information services for taxpayers, reconciliation of personal accounts, i.e. the ability of the taxpayer to send a request to the tax authority to receive an information extract from the personal account and receive information messages about the status of the personal account of the taxpayer in the tax authority in electronic form or to order the relevant certificates on paper. For the basic service, tax reporting via the Internet, it is necessary to increase the reporting to the UAPF, the Agency for Statistics, Social Insurance, medical insurance, foreign economic activity, subsoil use, provide regular access to data from state bases, such as a unified state register of legal entities (USRLE). To simplify the registration of an enterprise as a taxpayer, it is necessary to combine filling out forms with the same data not only when setting up an enterprise, paying taxes, but also throughout the entire life cycle (change of address, owners, legal form). It is also necessary to reengineer, optimize and computerize the operations associated with obtaining a business identification number (BIN) to accelerate the start of a formalized new enterprise.

Examples of such solutions are the Unified Electronic Document Management System (UED-MS) (www.nitec.kz), «Taks.kz» (www.taxkz.kz), «CBIT++ Electronic reporting» (www.1cbit.kz) and etc. As part of the implementation of the UEDMS, a number of problematic issues were resolved, and an appropriate technical base was provided in government bodies. In the period of formation, the UED-MS is integrated with the following components of the "Electronic Government" of the Republic of Kazakhstan: 1. Web portal of the "Electronic Government" egov.kz; 2. Internet portal of government agencies; 3. Certification center of state bodies; 4. National certification center of the Republic of Kazakhstan.

Thus, the analysis of the data presented on this and other resources of the international space shows that in recent years many countries have undertaken tax reforms. In almost 50% of countries more than one tax or payroll tax is levied, in 27% – more than one law governing income tax, and in 41% – more than one property tax. The multiplicity of taxes increases the costs of tax administration, both for taxpayers and for tax authorities. Among the OECD countries, Poland has the highest administrative tax collection costs of 2.62% of revenue, and Switzerland has only 0.59% of revenue since all tax payments began to be paid on-line. In the countries of Eastern Europe and Central Asia, the procedures are the most labor-intensive (Figure 4).

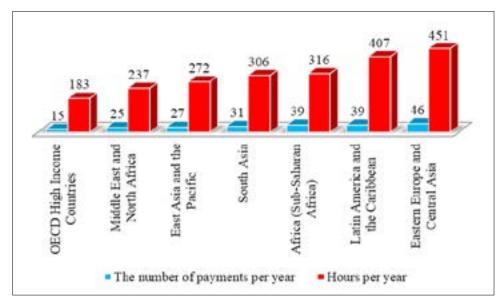


Figure 4 – Characteristics of the ease of tax administration by region of the world Note – compiled by authors

There is a correlation – the more taxes and the more difficult it is to make tax payments, the smaller the formal sector. It was also noted that the easier it is to pay taxes and fees, the higher the level of employment and less unemployment among women. The reason for this situation is that the burdensome tax system affects, first of all, small businesses, especially in the service sector, where most of the women work.

When developing measures to reduce the administrative costs of tax administration, attention should be paid to the tax systems of Singapore, Hong Kong, Ireland and New Zealand, which occupy the top positions in the rating of countries by tax climate.

In addition to increasing the transparency of tax systems in the international space, new methods of doing business and generating income (ecommerce, telecommuting, virtual offices) have appeared that require new methods of tax control. The development of modern information and communication technologies, e-commerce, globalization, the Internet, and the erasing of geographical boundaries make it difficult to determine the subjects, time and place of on-line transactions for tax purposes. The owner of the portal can be registered in one country, the server can be located in another, and customers and employees, especially specialists in the field of information technology, are scattered around the world, including in countries where the seller or employer may not even have a physical representative and registration. With the development of broadband Internet, without even getting up from the table, a specialist can work in different countries of the world. At the same time, profits and taxes from these activities will provide corporate and state revenues to the budgets of other countries.

The new knowledge-based economy allows optimization of taxation due to online business and virtual offices, fast, cheap and anonymous movement of financial flows. Instruments for anonymous payments via the Internet are special non-bank plastic cards of various nominal values, designed to pay for goods (services) purchased using the Internet using individual numbers and codes that are indicated when paying for goods (services) purchased using the Internet. Examples of such cards are Kazakhstan mastercard.kz, yandex-money, CyberPlat, in France – Easysmartcodes, international cards WebMoney and many others. The problem of anonymity of transactions on the network is associated with the identification of the Internet seller – it is sometimes impossible to determine the owner or location of the electronic trading platform using the domain name alone.

The difficulties of global taxation of on-line transactions are associated with differences in the tax systems of countries (Table 3). So, in the USA there is no value added tax and sales tax is levied, while in Kazakhstan – vice versa. In order to prevent double taxation in EU countries, it is based on the fact that sales to final consumers are subject to VAT in the country of origin. In the event that goods are shipped from countries where export shipments are exempt from VAT or from the United States, the exporter is in a better position. To eliminate this discrimination, exceptions were introduced for services provided electronically (hosting, software and up-

dates, distance learning, multimedia products, etc.). The company exporting such products must register in one of the EU countries in which it sells and pay tax on the amount of sales at the rate applicable in that country. Such rules discriminate against exporters from non-EU countries, including the Russian Federation, in which electronic services are subject to export VAT. Double taxation of VAT for exporters from Kazakhstan puts them in an unequal position with exporters from EU countries. The problem also remains the location of the buyer for tax purposes. The method of determining the location of the bank is applicable if the buyer pays by credit card, but does not work when using an online wallet. Thus, the choice of the subject and object of taxation, the tax base, double taxation in international on-line transactions remains a problem.

Table 3 – Approaches to taxation of subjects of electronic economic activities

Description of Approach	Countries applying approach	Disadvantages of the approach
The regime of minimal state intervention in the electronic segment of the national and world economy (the principle of self-regulation of electronic commerce), benefits, moratorium on the introduction of new taxes	USA, Canada, Australia, South Korea	 Stimulating the development of Internet services in the leading countries Budget losses, tax evasion
Bridging the gap of taxation in the field of electronic economic (economic) activities, priority of budgetary and tax interests, introducing the principle of the country of origin in electronic commerce, identifying and controlling the largest electronic e-commerce sites, introducing identification marks of entities registered with tax authorities	Member States of the European Union	Transferring hosts to other countries, changing the place of registration of an Internet company, creating "electronic offshore zones", double taxation of enterprises from countries that use the opposite principle of taxation
Note – compiled by authors		

Solving the issues of taxation of on-line services in isolation in one country is hampered by the easy transfer of hosts to other countries and the change in the place of registration of an Internet company. The difficulties of tax administration are associated with increased requirements for the qualifications of tax officials when identifying "electronic emigrants", the need for appropriate investments in training, infrastructure, and the development of technological instruments of state control. The problem of tax administration is also associated with the taxation of goods purchased via the Internet and then sent by mail or via the network (music, software, videos). In addition, companies that sell goods on-line in another country and do not have registration there or refuse to conduct it do not fall under the direct jurisdiction of local courts, and the means of influence on them are minimal. In addition, the exemption of e-commerce and B2B transactions from taxation stimulates the transition of traditional suppliers to the Internet and can lead to a significant reduction in budget revenues.

As the results of our study have shown, a solution to the above problems is the priority of taxation of objects that can be easily measured (land, property, roads, consumption, etc.), as well as the introduction of new objects. Such non-traditional objects of taxation may be radio frequencies, Internet access as a percentage of the monthly fee (partial tax) or of the amount determined by traffic ("bit-by-bit" tax), taxation of Internet access during work and for business (commercial purposes), creation mechanisms for identifying e-commerce entities that allow consumers to verify the entity's registration with tax authorities. At the same time, from the economic point of view, the Internet can be regarded as a means of production for the purposes of taxing the latest tax. In this case, the object of taxation will be the time during which the legal entity's computer was connected to the Internet and was used to carry out business activities.

To inform and increase the transparency of taxation of electronic commerce and international settlements, build up relevant knowledge bases according to the rules in different countries of the world, provide access to this knowledge through tax portals for all levels of government. An example of such a base is the Kazakhstan's tax portal nalogikz.kz, kgd.gov. kz, which shows the features of international trade in various countries.

Conclusion

Thus, in order to optimize tax administration, it is necessary to determine key indicators for measuring the effectiveness of decisions, create an information infrastructure for the receipt of the necessary data, and model the impact of decisions on key indicators. To make decisions on tax rates, provide benefits and other preferences, use information technology to build models that segment tax revenues by taxpayers and allow us to predict the impact of our decisions on tax fees. For the reliability of the forecasts of the tax base, the analysis of deviations of the plan/fact, the increase in tax collection, create an information infrastructure that provides the necessary on-line data from the information systems of the tax inspection, cadastral registration, technical inventory bureau, register of small business entities, registration of vehicles of the TPC of MIA RK, etc.

In addition, tax reforms should be combined with improving the quality of public services and their delivery. Consider the inverse relationship between how revenue is collected and the quality of government and its transparency. Tax reforms should be considered in conjunction with administrative reforms. Enterprises that pay taxes are more demanding on the effectiveness of public administration. The process of reconciling interests is based on the principles of mutual obligations more than coercion. If governments don't depend on taxes to finance spending, they are less accountable and responsible to taxpayers and have less incentive to spend effectively.

References

Aliev B. Kh., Alimirzoeva M. G., Ilyasbekov I. A. Improving tax administration in modern conditions // Economy and Entrepreneurship. – 2017. – No. 7. – p. 555-559.

Barros, C. P. (2007). Technical and allocative efficiency of tax offices: A case study. International Journal of Public Sector Performance Management, 1, 41–61.10.1504/IJPSPM.2007.013838

Blueprints, F. (2007). A path to a robust, modern and efficient tax administration. European Commission, Luxembourg.

Brondolo, J., Silvani, C., Le Borgne, E., & Bosch, F. (2008). Tax administration reform and fiscal adjustment: the case of Indonesia (2001-07). IMF Working Papers, 1-70.

Buchanan J. The Constitution of Economic Policy / J. Buchanan // Economic Issues. -1994. - No. 6. - p. 35.

Clark, G. L., Feldman, M. P., Gertler, M. S., & Wójcik, D. (Eds.). (2018). The New Oxford Handbook of Economic Geography. Oxford: Oxford University Press.

Gill, J. (2000). A diagnostic framework for revenue administration (World Bank technical paper No. 472).

Gonzalez, X. M., & Mile, D. (2000). Eficiencia en la Inspección de Hacienda [Efficiency of tax inspectorate]. Revista de Economia Aplicada, 8, 203–219.

Gordana Savić, Aleksandar Dragojlović, Mirko Vujošević, Milojko Arsić & Milan Martić (2015) Impact of the efficiency of the tax administration on tax evasion, Economic Research-Ekonomska Istraživanja, 28:1, 1138-1148, DOI:10.1080/133167 7X.2015.1100838

Huda, M. K., Hernoko, A. Y., & Nugraheni, N. (2018). The Problematic of Provincial Tax Collection as Local Own-Source Revenue in Indonesia. Journal of Legal, Ethical and Regulatory Issues, 21(1).

International Monetary Fund. (2020). Revenue administration's fiscal information tool. Washington DC: The IMF.

International Tax Dialogue. (2010). Revenue administration in Sub-Saharan Africa. ITD Comparative Information Series, France.

Keen, Michael & Slemrod, Joel, 2017. "Optimal tax administration," Journal of Public Economics, Elsevier, vol. 152(C), pages 133-142.

Kurbanova, K., Mukhametzhanova, Z., Saparbayev, A., & Supugalieva, G. (2020). Analysis of the financial stability of the Kazakhstan's economy. In E3S Web of Conferences (Vol. 159, p. 06004). EDP Sciences.

Madina Serikova, Lyazzat Sembiyeva, Amina Mussina, Nurilya Kuchukova and Aldanysh Nurumov (2018). The institutional model of tax administration and aspects of its development. Investment Management and Financial Innovations, 15(3), 283-293. doi:10.21511/imfi.15(3).2018.23

Mansfield, Charles, Y. (1987). Tax Administration in Developing Countries: An Economic Perspective. International Monetary Fund Staff Papers. 35(1): 181-197

Meyer, S., Wagener, M. & Weinhardt, C. Politically Motivated Taxes in Financial Markets: The Case of the French Financial Transaction Tax. J Financ Serv Res 47, 177–202 (2015). https://doi.org/10.1007/s10693-013-0189-8

Moesen, W., & Persoon, A. (2002). Measuring and explaining the productive efficiency of tax offices: A non parametric best practice frontier approach. Tijdschrift Voor Economie en Management, 47, 399–416.

PEFA. (2020). Public expenditure and financial accountability. Retrieved from www.pefa.org

Petmesidou, M., & Guillén, A.M. (Eds.). (2015). Economic Crisis and Austerity in Southern Europe: Threat or Opportunity for a Sustainable Welfare State (1st ed.). Routledge. https://doi.org/10.4324/9781315722726

Petuhova Rimma Alekseevna, & Grigor eva YAna Aleksandrovna (2019). Nalogovoe administrirovanie v usloviyah cifrovoj ekonomiki. Vestnik Tomskogo gosudarstvennogo universiteta. Ekonomika, (46), 303-316.

Pronina, A.Y., Svetlova, A.V., & Chistik, O.F. (2018). The analysis of economic indicators of countries before and after crisis in 2015. Regional Development: Electronic Scientific-Practical Journal, 1(25), 1-45.

USAID. (2020). U.S. agency for international development. Retrieved from www.usaid.gov

Raul Felix Junquera-Varela & Marijn Verhoeven & Gangadhar P. Shukla & Bernard Haven & Rajul Awasthi & Blanca Moreno-Dodson, 2017. "Strengthening Domestic Resource Mobilization," World Bank Publications, The World Bank, number 27265, November.

Wicksell K.A. «New Principle of Just Taxation» in James Gwartney and Richard Waguer (eds.), Public Choice and Constitutional Economics (Greenwich: JAI Press, Inc.). 1988 p. 98.

World Bank. (2020). Integral tax administration assessment model. Washington DC: The World Bank.

Гончаренко Л. И. Налоговое администрирование коммерческих банков России: монография / Л. И. Гончаренко. – М. : Цифровичок, 2009. – 168 с.

Петухова Римма Алексеевна, & Григорьева Яна Александровна (2019). Налоговое администрирование в условиях цифровой экономики. Вестник Томского государственного университета. Экономика, (46), 303-316.

Указ Президента Республики Казахстан от 15 февраля 2018 года № 636 «Об утверждении Стратегического плана развития Республики Казахстан до 2025 года и признании утратившими силу некоторых указов Президента Республики Казахстан» (с изменениями от 10.09.2019 г.) https://online.zakon.kz

References

Aliev B. Kh., Alimirzoeva M. G., Ilyasbekov I. A. Improving tax administration in modern conditions // Economy and Entrepreneurship. – 2017. – No. 7. – p. 555-559.

Barros, C. P. (2007). Technical and allocative efficiency of tax offices: A case study. International Journal of Public Sector Performance Management, 1, 41–61.10.1504/IJPSPM.2007.013838

Blueprints, F. (2007). A path to a robust, modern and efficient tax administration. European Commission, Luxembourg. Brondolo, J., Silvani, C., Le Borgne, E., & Bosch, F. (2008). Tax administration reform and fiscal adjustment: the case of Indonesia (2001-07). IMF Working Papers, 1-70.

Buchanan J. The Constitution of Economic Policy / J. Buchanan // Economic Issues. -1994. - No. 6. - p. 35.

Clark, G. L., Feldman, M. P., Gertler, M. S., & Wójcik, D. (Eds.). (2018). The New Oxford Handbook of Economic Geography. Oxford: Oxford University Press.

Decree of the President of the Republic of Kazakhstan dated February 15, 2018 No. 636 "On approval of the Strategic Development Plan of the Republic of Kazakhstan until 2025 and invalidation of some decrees of the President of the Republic of Kazakhstan" (as amended on 09/10/2019) https://online.zakon.kz

Gill, J. (2000). A diagnostic framework for revenue administration (World Bank technical paper No. 472).

Goncharenko L. I. Nalogovoe administrirovanie kommercheskih bankov Rossii: monografiya / L. I. Goncharenko. – M. : Cifrovichok, 2009. – 168 s.

Gonzalez, X. M., & Mile, D. (2000). Eficiencia en la Inspección de Hacienda [Efficiency of tax inspectorate]. Revista de Economia Aplicada, 8, 203–219.

Gordana Savić, Aleksandar Dragojlović, Mirko Vujošević, Milojko Arsić & Milan Martić (2015) Impact of the efficiency of the tax administration on tax evasion, Economic Research-Ekonomska Istraživanja, 28:1, 1138-1148, DOI:10.1080/133167 7X.2015.1100838

Huda, M. K., Hernoko, A. Y., & Nugraheni, N. (2018). The Problematic of Provincial Tax Collection as Local Own-Source Revenue in Indonesia. Journal of Legal, Ethical and Regulatory Issues, 21(1).

International Monetary Fund. (2020). Revenue administration's fiscal information tool. Washington DC: The IMF.

International Tax Dialogue. (2010). Revenue administration in Sub-Saharan Africa. ITD Comparative Information Series, France.

Keen, Michael & Slemrod, Joel, 2017. "Optimal tax administration," Journal of Public Economics, Elsevier, vol. 152(C), pages 133-142.

Kurbanova, K., Mukhametzhanova, Z., Saparbayev, A., & Supugalieva, G. (2020). Analysis of the financial stability of the Kazakhstan's economy. In E3S Web of Conferences (Vol. 159, p. 06004). EDP Sciences.

Madina Serikova, Lyazzat Sembiyeva, Amina Mussina, Nurilya Kuchukova and Aldanysh Nurumov (2018). The institutional model of tax administration and aspects of its development. Investment Management and Financial Innovations, 15(3), 283-293. doi:10.21511/imfi.15(3).2018.23

Mansfield, Charles, Y. (1987). Tax Administration in Developing Countries: An Economic Perspective. International Monetary Fund Staff Papers. 35(1): 181-197

Meyer, S., Wagener, M. & Weinhardt, C. Politically Motivated Taxes in Financial Markets: The Case of the French Financial Transaction Tax. J Financ Serv Res 47, 177–202 (2015). https://doi.org/10.1007/s10693-013-0189-8

Moesen, W., & Persoon, A. (2002). Measuring and explaining the productive efficiency of tax offices: A non parametric best practice frontier approach. Tijdschrift Voor Economie en Management, 47, 399–416.

PEFA. (2020). Public expenditure and financial accountability. Retrieved from www.pefa.org

Petmesidou, M., & Guillén, A.M. (Eds.). (2015). Economic Crisis and Austerity in Southern Europe: Threat or Opportunity for a Sustainable Welfare State (1st ed.). Routledge. https://doi.org/10.4324/9781315722726

Petuhova Rimma Alekseevna, & Grigor eva YAna Aleksandrovna (2019). Nalogovoe administrirovanie v usloviyah cifrovoj ekonomiki. Vestnik Tomskogo gosudarstvennogo universiteta. Ekonomika, (46), 303-316.

Pronina, A.Y., Svetlova, A.V., & Chistik, O.F. (2018). The analysis of economic indicators of countries before and after crisis in 2015. Regional Development: Electronic Scientific-Practical Journal, 1(25), 1-45.

USAID. (2020). U.S. agency for international development. Retrieved from www.usaid.gov

Raul Felix Junquera-Varela & Marijn Verhoeven & Gangadhar P. Shukla & Bernard Haven & Rajul Awasthi & Blanca Moreno-Dodson, 2017. "Strengthening Domestic Resource Mobilization," World Bank Publications, The World Bank, number 27265, November.

Wicksell K.A. «New Principle of Just Taxation» in James Gwartney and Richard Waguer (eds.), Public Choice and Constitutional Economics (Greenwich: JAI Press, Inc.). 1988 p. 98.

World Bank. (2020). Integral tax administration assessment model. Washington DC: The World Bank.