

Development of the methodology of taxation of agricultural enterprises in the context of digitalization

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Abstract. According to the norms of Russian legislation taxpayers by default fall under the general system of taxation. Developing financial and economic activities, enterprises, including agricultural enterprises can apply different tax regimes: the transition, for example, to a simplified taxation system, unified agricultural tax, patent system, etc., is carried out at the initiative of the payer, i.e. is of notification nature. Since for the business owner the decisive moment is the total tax payments (tax burden), the issues of its optimization are of particular relevance. In the course of work we analyzed and systematized the norms of tax legislation of the Russian Federation and the Republic of Tatarstan, processed data on taxes and fees posted on the official website of the Federal Tax Service of Russia, using the economic and statistical method. The result of the research is the choice of optimal tax burden for agricultural enterprises of small business including the use of information technologies in order to increase the efficiency of their activities.

1 Introduction

In today's environment, the advantage of streamlining tax processes for certain types of businesses, stimulating growth and easing administrative burdens is recognized worldwide [1-4].

Simplified tax systems are designed to provide a simple and more accessible approach to taxation, especially for small and medium-sized enterprises (SMEs) [5-7]. These systems aim to reduce complexity, administrative burdens and compliance costs, allowing businesses to devote more resources to their core activities. Although the specifics vary from country to country, the fundamental principles of simplicity and efficiency unite these systems [8-11].

Since small businesses form the backbone of the Russian economy, entrepreneurs should strategically navigate the country's tax system to ensure financial efficiency and

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sustainability [12, 13]. The optimal tax regime for small businesses in Russia depends on various factors, including business structure, size and growth plans [14, 15].

At the present stage, the regulatory legislation of the Russian Federation provides for various forms of support for small businesses. One of them is the creation of favorable or special taxation conditions in the form of simplified taxation system (STS) At the same time, the current tax legislation sets certain restrictions on the application of special tax regimes. There is a mismatch between the criteria for classifying business entities as small businesses and the criteria for applying special tax regimes for SMEs. This significantly narrows the circle of small business entities that have the right to use tax preferences in the form of special tax regimes [16].

The tax liabilities of small businesses on the simplified taxation system (STS) are now higher than those of medium and large businesses enjoying sectoral benefits under the general tax regime, so the question of choosing a taxation regime always remains relevant. This is due to the constantly changing tax legislation, as well as the cancellation or introduction of new taxes provided for by it. An entrepreneur should analyze the amount of tax burden when registering his business, launching a new type of activity, planning investments [17-19]. Assessment of the correctness of tax calculation can also be carried out in the course of internal control - for example, based on the results of the audit of the financial results of the enterprise can be decided to change the taxation regime from the beginning of the next calendar year, if it does not contradict the requirements of tax legislation [20-22]/

The simplified taxation system (STS) is a simplified and popular tax regime designed for small businesses with annual revenues below a certain threshold.

The simplified taxation system is one of the effective tools of tax incentives for small businesses. Application of this system of taxation allows to create favorable conditions for the functioning of an economic entity. As a consequence, the solvency, financial stability, competitiveness, investment attractiveness of the enterprise increases/

The simplified taxation system, being a regulator of the tax system, fulfills the role of one of the key sources of replenishment of the state budget. Application of the simplified taxation system contributes to the fact that the tax administration system is simplified, the number of taxes to be paid is reduced, tax and accounting accounting is simplified.

A unified agricultural tax is provided for the enterprises of the agrarian sphere of economy. It simplifies the conditions of taxation, as a result of which the activity of agricultural organizations is stimulated. Payers of the unified agricultural tax are exempted from a number of taxes. In addition, under the conditions of application of the unified agricultural tax, the volume of financial and tax reporting is simplified and reduced. As a result, the costs of tax and financial accounting are optimized.

2 Materials and Methods

Two types of tax regime can be distinguished in the tax system of the Russian Federation: general and special (Fig. 1, Table 1).

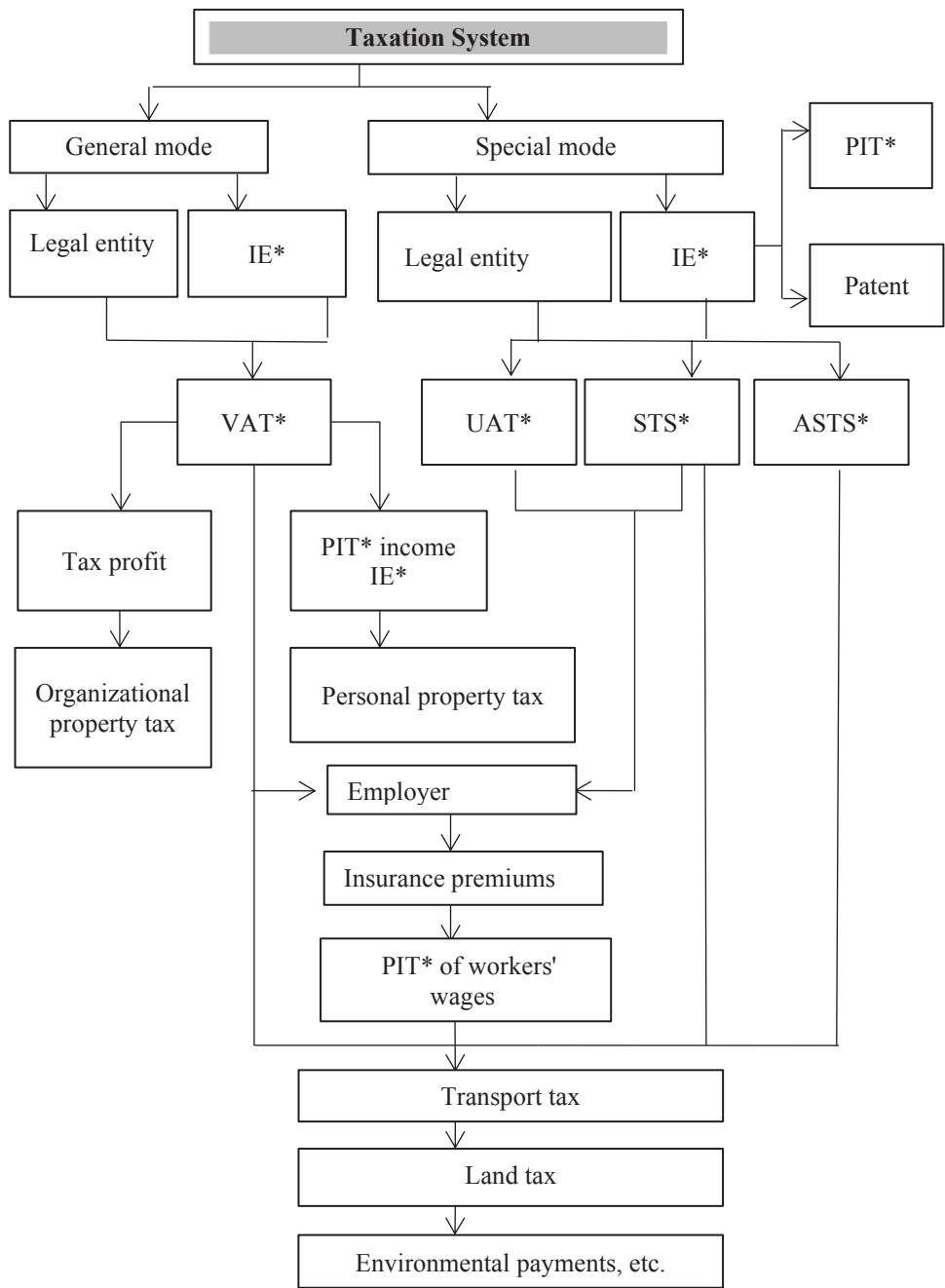


Fig. 1. Taxation system in the Russian Federation.

*IE - individual entrepreneur, PIT - professional income tax, VAT - value added tax, UST - simplified system of taxation. VAT - value added tax, UAT - unified agricultural tax, STS - simplified taxation system, ASTS - automated simplified taxation system, PIT - personal income tax. simplified taxation system, ASTS - automated simplified taxation system, PIT - personal income tax.

Table 1. Receipts of taxes and fees and other mandatory payments to the budget system of the Russian Federation for the period from January to November 2022.

Type of tax, fee	Accrued, mln rubles	Specific weight, %	Received by the RF budget, mln rubles	Specific weight, %
Profit tax (Chapter 25 of the Tax Code of the Russian Federation)	5 283 548,29	19,15	5 592 229,89	20,46
Personal Income Tax (Chapter 23 of the Tax Code of the Russian Federation)	5 373 199,27	19,48	4 369 882,99	15,99
Value Added Tax (Chapter 21 of the Russian TC)	5 534 170,71	20,06	5 483 325,55	20,06
Tax on property of organizations (Ch. 30 of the Tax Code of the Russian Federation)	993 526,88	3,60	969 478,28	3,55
Transportation tax (Ch. 28 of the Tax Code of the Russian Federation)	42 142,65	0,15	113 227,72	0,41
Land tax (Ch. 31 of the Tax Code)	155 503,14	0,56	157 967,56	0,58
STS (Ch. 26.2 of the Tax Code of the Russian Federation)	3999,05	0,01	822 115,50	3,01
Unified Agricultural Tax (Ch. 26.1 of the Tax Code of the Russian Federation)	19 688,55	0,07	19 464,46	0,07
Patent	19 464,57	0,07	29 107,97	0,11
PIT	32 237,07	0,12	18 713,02	0,07
ASTS	11,77	0,00	10,94	0,00
Other taxes and levies	10 132 915,20	36,73	9 754 434,41	35,69
Total	27 590 407,15	100	27 329 958,29	100

Source: compiled by the authors based on official data of the Federal Tax Service of Russia.
 URL: <https://www.nalog.gov.ru/rn77/>

As can be seen from (Fig. 1), legal entities and individual entrepreneurs who have not switched to special tax regimes are obliged to pay taxes and fees under the general taxation regime in accordance with the norms of the Tax Code of the Russian Federation.

It follows from the data (tab. 1) that for the period from January to November 2022 in the structure of tax revenues to the budget of the Russian Federation the greatest specific weight is occupied by taxes on profit, value added and personal income. To "other" we include taxes, fees and regular payments for the use of natural resources, excise duties, state duty, etc., as well as other taxes. Thus, due to the high tax burden and complexity of accounting, most entrepreneurs do not consider the general system of taxation. It is believed that an effective method of state support of small business is the use of special tax regimes. The most popular among entrepreneurs for a long time was a unified tax on imputed income (UTII), effective from January 1, 2002 to 2020 inclusive, the main advantage of which was considered independent of the actual income tax amount, which could be reduced by the paid insurance premiums; the possibility of combining UTII with other taxation regimes was also attractive.

At the same time, according to the Government of the Russian Federation, UTII was also used for tax evasion purposes, which significantly reduced budget revenues.

It is no secret that in practice special tax regimes are used to minimize the tax burden.

An alternative to UTII for individual entrepreneurs was the patent system of taxation ("PST"), introduced on January 1, 2013, according to which the amount of tax is also calculated not from the actual but from the potential income, but PST can not be used by legal entities.

The introduction of a new special professional income tax (PIT) regime for self-employed citizens from January 1, 2019, allowed many Russians not only to legally engage in their business, but also led to an increase in tax revenues to the budget. As part of the experiment, the PIT was first introduced in Moscow, Moscow and Kaluga regions and the Republic of Tatarstan; and from July 1, 2020 - throughout the Russian Federation.

The Republic of Tatarstan is also participating in the pilot project for the introduction of the automated simplified taxation system (ASTS) from July 1, 2022, which is the result of digitalization of the entire Russian tax system. The main fundamental difference of this regime is the automatic calculation of tax based on income data received by the tax inspectorate in online format, which allows businesses to be freed from tax reporting and tax accounting. Among the positive aspects of the ASTS can also be attributed to the fact that during its application employers are not obliged to pay insurance contributions from the salaries of employees (zero rates are established), and entrepreneurs - "fixed contributions" and contributions from income over 300 thousand rubles. At the same time, there are problems in implementing such a system. In our opinion, one of the main negative factors is rather high tax rates compared to other special regimes. Thus, if the object of taxation is income, reduced by the amount of expenses, the rate for ASTS is 20%, while for STS - it is 15% (in the Republic of Tatarstan it is reduced to 10%, and for certain types of activities even - to 5%). If you choose income as the object of taxation, for ASTS the rate is 8%, and for STS - 6%. From the point of view of the legislator, the increase in rates for ASTS (compared to STS) is balanced by the possibility to refuse insurance contributions, but the results of our study show that exemption from this is not always an advantage in terms of the amount of tax burden.

3 Results

Producers in agriculture choose between the general taxation regime and a special one in the form of the unified agricultural tax ("UAT"). The unpopularity of other special regimes, as research has shown, is due to the lower rate of UAT (6%) on the difference between income and expenses (while for STS - 15%). In this regard, we have considered the methodology of choice between STS (Ch. 26.2 of the Tax Code of the Russian Federation) and ASTS, and proposed an algorithm for comparing these systems based on the analysis of tax legislation.

Equality of the tax burden when using both regimes, provided that the object of taxation is income reduced by expenses, can be presented in the form of a formula.

$$(I - EWp) * 0,2 = (I - EWp - P) * 0,15 + P \quad (1)$$

where I – is income from entrepreneurial activity accepted for tax calculation;

EWp - business expenses accepted for tax calculation without the amount of insurance premiums paid,

P - the amount of paid insurance premiums.

The left part of the formula reflects the tax burden equal to the amount of tax under AST: 20% of income reduced by expenses. The amount of insurance premiums is zero.

In the right part of the formula, the tax burden is defined as the sum of the STS tax: 15% on income reduced by expenses and the amount of insurance premiums paid on employees' salaries. By converting the formula, it is possible to determine at what value of insurance premiums the tax burden will be equal under both regimes (with the same income and expenses):

$$P = \frac{(1-EWP)*0,05}{0,85} \quad (2)$$

Here is an example: An organization received income of 4 million roubles in a tax period. Expenses amounted to 1 million roubles, but this did not include insurance contributions. Let us determine the amount of contributions at which the tax burden under the two regimes will be equal:

$(4000 \text{ thous. rub.} - 1000 \text{ thous. rub.}) * 0,05 : 0,85 = 176,47 \text{ thous. rub.}$

The tax burden under ASTS is calculated as follows:

Tax according ASTS = $(4000 \text{ thous. rub.} - 1000 \text{ thous. rub.}) * 20\% = 600 \text{ thous. rub.}$

The amount of insurance contributions is zero; hence the total amount of tax payments (or tax burden) is equal to 600 thousand rubles.

The calculation of the tax burden when applying the simplified taxation system is as follows:

$(4000 \text{ thous. rub.} - 1000 \text{ thous. rub.} - 176,47 \text{ thous. rub.}) * 15\% = 423,53 \text{ thous. rub.}$

Insurance premiums amount to 176.47 thousand rubles, and the total amount of tax payments (or tax burden) is determined by adding these values:

$423,53 \text{ thous. rub.} + 176,47 \text{ thous. rub.} = 600 \text{ thous. rub.}$

That is, if the amount of insurance contributions exceeds the calculated amount of 176.47 thousand rubles, the tax burden under the automatic simplified taxation system will be greater than under the simplified taxation system. For example, with insurance contributions of 200 thousand rubles, the amount of taxes under the simplified taxation system will be 620 thousand rubles.

To calculate the amount of contributions per employee for one month, we use the following formula:

$$P_{\text{emp. month.}} = (13890 * 0,302) + (RL - 13890) * 0,152 \quad (3)$$

where $P_{\text{emp. month.}}$ – the amount of premiums per employee for one month;

13 890 – amount Minimum wage in 2022 year, rub.;

RL - remuneration of labor, rub.

The total rate of contributions from the amount within the minimum wage will be 30.2% (22% - for compulsory pension insurance; 5.1% - for compulsory medical insurance; 2.9% - for compulsory social insurance in case of temporary disability and in connection with maternity; 0.2% - the minimum rate of contributions for «traumatism »).

The total rate of contributions from the amount of payments to employees that exceeds the minimum wage (since small businesses apply a reduced rate of insurance contributions) will be 15.2% (10% for mandatory pension insurance, 5% for mandatory medical insurance, 0% for mandatory social insurance for temporary disability and maternity, 0.2% - the minimum rate for «traumatism» premiums).

As of January 1, 2023, the government decision increased the minimum wage to 16,242 rubles; introduced a single tariff for mandatory pension insurance, mandatory health insurance and mandatory social insurance for temporary disability and maternity - 30%; retained the value of the preferential tariff for small businesses in the amount of 15% on payments exceeding the minimum wage.

Thus, the amount of the general tariff of insurance contributions remained the same, but the amount of contributions per employee per month changed due to the entrainment of the minimum wage:

$$P_{\text{emp. month.}} = (16242 * 0,302) + (RL - 16242) * 0,152 \quad (4),$$

Provided that an employee's salary is set at the minimum wage, the monthly amount of his insurance contributions is in 2023. 4906 roubles.

It is preferable for an organization to apply the STS option if the number of employees (when their salary is set at the minimum wage) does not exceed 3 persons, since the amount of insurance contributions per year will be: $(4906 \text{ roubles} * 12 \text{ month} * 3 \text{ human}) = 117 744 \text{ roubles}$, that is. less than 176,470 rubles. It should be noted that for both regimes the

concept of "minimum tax" is introduced by law, which the taxpayer must pay to the budget, even if the amount of tax calculated by him will be less, or if he incurs losses.

Under the simplified taxation system, the minimum tax is 1% of the amount of income, and under the automatic taxation system - 3% of the amount of income.

When using the simplified taxation system, the amount of expenses (including insurance premiums) will be calculated according to the formula:

$$(I-P)*0,15=I*0,01 \tag{5}$$

where I – income, thousand rubles,

E - expenses, thousand rubles.

$E = I*0,14:0,15$, which is 3,733 thousand rubles.

The tax of the organization in question under the simplified taxation system is calculated as follows:

$(4000 \text{ thous. rub.} - 3733 \text{ thou. rub.}) * 15\% = 40 \text{ thou. rub.}$,

and the minimum tax is determined as follows:

$4000 \text{ thous. rub.} * 1\% = 40 \text{ thous. rub.}$

That is, if the organization's expenses exceed 3733 thousand rubles. The simplified taxation system will be more favorable when the amount of insurance premiums does not exceed 80 thousand rubles:

$$I*0,03 = I*0,01+P \tag{6}$$

where I – income, thousand rubles,

P - insurance premiums, thousand rubles.

$P=I*0,02$, that is 4,000 thousand rubles*0.02=80 thousand rubles.

For the organization, the STS option will remain the most preferable, if 1 person will be employed at the rate of the minimum wage, because the amount of insurance premiums for the year will be 58,872 rubles (4906 rubles *12 months), which does not exceed 80 thousand rubles.

Tax loads corresponding to both regimes (provided that the object of taxation is income) can be presented in the form of an equality:

$$I*0,08 = I*0,06 *0,5+P \tag{7}$$

The left part of the formula determines the amount of tax under ASTS (with 8% on income). The amount of insurance premiums is zero.

In the right part - the amount of tax under the simplified taxation system (with 6% of income), reduced by ½ of the amount of insurance premiums (but not more than 50%). By converting the formula, you can determine at what amount of insurance premiums the tax burden will be equal for both regimes (with the same amount of income).

$$P=I*0,05 \tag{8}$$

where I - income from entrepreneurial activity accepted for tax calculation, thousand rubles;

P - the amount of insurance premiums paid, thousand rubles.

In our example, with income in the amount of 4000 thousand rubles and with insurance premiums in the amount of 200 thousand rubles, the tax burden will be equal under both regimes.

4 Discussion

As the global economy evolves, tax systems are adapting to the diverse needs of different sectors of the economy. Special tax regimes, designed to provide targeted incentives and reduce administrative burdens for specific sectors, are currently undergoing a digital transformation with the integration of information technology (IT) [23-25].

Special tax regimes have long been recognized as a tool to stimulate growth, innovation and competitiveness in specific industries. These regimes are tailored to the unique

challenges faced by businesses in sectors such as technology, agriculture, research and development. In recent years, the introduction of information technology into these regimes has opened up new opportunities to optimize processes and outcomes [26, 27].

Information technology enables the automation of compliance processes, reducing the administrative burden on enterprises operating under special tax regimes. Automated systems can efficiently handle data collection, verification and reporting, ensuring the accuracy and timeliness of compliance with regulatory requirements [28, 29].

IT tools provide tax authorities with the ability to quickly analyze huge amounts of data. This facilitates data-driven decision-making, allowing governments to monitor the effectiveness of special tax regimes, identify trends and make informed adjustments in real time to achieve optimal policy outcomes [30, 31].

Information technology promotes transparency by providing real-time visibility of financial transactions and tax liabilities. With blockchain and secure databases, tax authorities can maintain immutable records of transactions, ensuring a high level of accountability and minimizing the risk of fraud or manipulation [32, 33].

Special tax regimes often have specific requirements unique to certain industries. ETOs enable the development of customized software solutions to meet these specific needs. Customized software allows businesses to easily navigate the complexities of special tax regimes, optimizing compliance and reporting.

Information technology facilitates seamless communication between businesses and tax authorities through digital channels. This not only speeds up information exchange, but also allows businesses to request clarifications, resolve issues and receive updates in real time, fostering a collaborative and responsive environment.

Many countries are introducing special tax regimes focused on digital services. Information technology plays a crucial role in tracking online transactions, determining tax liabilities and ensuring compliance with the unique requirements of the digital economy.

Blockchain technology is revolutionizing special tax regimes, especially in industries with complex supply chains. The decentralized and transparent nature of blockchain ensures traceability and accuracy of tax calculations throughout the supply chain, reducing the risk of error and fraud.

As information technology continues to evolve, integration with special tax regimes is expected to deepen. Governments must take into account the changing landscape of technology and continuously update regulations to keep pace with innovation. Cybersecurity measures are becoming paramount to protect sensitive tax-related data, ensuring the integrity and confidentiality of information exchanged between businesses and tax authorities.

The use of information technology in special tax regimes represents a significant step forward in creating a more efficient, transparent and flexible tax environment. By leveraging automation, analytics and secure communication channels, special tax regimes can better achieve their intended objectives by providing targeted support to industries critical to economic growth. As governments and businesses embrace this digital transformation, the synergy between information technology and special tax regimes promises to foster innovation, sustainable development and resilient economies on a global scale.

5 Conclusions

At present, the government is pursuing a policy of supporting small businesses by easing the tax burden through the introduction of special taxation regimes into the tax system, including the use of IT-technologies. The transition to automatic taxation, where there is no need to keep tax records and prepare tax reports, is perceived by taxpayers ambiguously.

One of the reasons is the higher rates compared to the simplified taxation system. The methodology developed by us allows small businesses to compare the tax burden of different special regimes and make optimal decisions on the choice of the most suitable one. We hope that the results of our research will find approval in the scientific community and legislative branches of power.

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