



## Ways of Modeling the Effectiveness of Tax Incentives for Enterprises

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**Abstract:** *In order to adequately assess the effectiveness of tax incentives, the authors of the system, in order to eliminate problems in the system, consider the production capabilities and time interval of enterprises when applying tax incentives to a number of enterprises, the results of the application of tax incentives in enterprises, not only foreign investors, but also the enterprises themselves. suggestions and recommendations were made on the importance of stimulating investment in production and modeling the effectiveness of tax incentives given to enterprises*

**Keywords:** *tax credits, assessment, impact, efficiency, modeling, forecasting.*

### INTRODUCTION

It is not that in the conditions of further liberalization of market relations, more attention is paid to the incentive function of taxes, because due to the performance of this function, priority sectors of the economy can be developed, production and entrepreneurship can be supported, and some social issues in the society can be solved.

Effectiveness of the incentive function of taxes, in turn, depends on the effective use of tax incentives. At this point, the following comments of the President of the Republic of Uzbekistan, Sh.M. Mirziyoev, are noteworthy: based on the principle of "Taxman - helper", entrepreneurs will be given the opportunity to receive information about their business partner's tax liability<sup>1</sup>. Judging from these opinions expressed about the tax policy of our country, it is assumed that these two tasks facing the tax policy will be fulfilled at all times. Today, one of the most effective tools in the development of the market economy is the system of tax incentives aimed at reducing the tax burden on enterprises, for which it is necessary to improve the mechanism of taxation and minimize the negative internal and external factors affecting it.

### Main part

It should be said that, in general, as a result of the implementation of tasks related to reducing the level of the tax burden on the economy determined on the basis of the tax concept in our country, as well as eliminating the disparity in the level of tax burden between business

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<sup>1</sup>Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis on December 29, 2020 <https://president.uz/uz/lists/view/4057>



entities that pay taxes according to the simplified and universal system of taxation, only from 2017 to 2022, indirectly it is positive that the share of taxes fell by 19.2 points (54.6-35.4)<sup>2</sup>.

In the reforms carried out in our country, great attention is paid to modernization of enterprises, technical and technological re-equipment. The main purpose of this is to provide the system with new technologies that will enable the production of competitive and export-oriented products.

As a result, the demand for the products produced in our country will increase in the domestic and foreign markets. In this case, the economic importance of tax benefits is great.

At the moment, one of the factors hindering the development of enterprises in our country is the high level of tax burden on business. In the conditions of market economy and high financial risks, one of the most powerful factors of investment and innovation development is important to create a system of tax incentives sufficient to cover these risks.

It should be noted that the system of tax incentives and preferences must be developed in accordance with the goals of the state economic policy and the requirements of the changing economic system. It is important to create the normative legal basis of the list of the single base of tax benefits, to use tax benefits more actively as a tool that meets the needs of enterprises at the stage of today's reforms.

**Table 1. Analysis of tax benefits used by taxpayers by tax types in 2017-2021<sup>3</sup>(billion soums)**

T/R	Tax types	Years				
		2017	2018	2019	2020	2021
1.	Value added tax	8 450.4	14,989.5	25 318	25,902.1	27 637.9
2.	Turnover tax	1 216.8	1 325.70	164.8	146.8	111.1
3.	Profit tax	496.1	1 700.4	2 012.2	2 102.1	1 117.4
4.	Land tax	99.8	1 154.0	439.2	1 340.8	3 221.5
5.	Charges for using water resources	1 512.4	798	541.8	699.6	836.2
6.	Property tax	2 781.9	897.3	382.4	477.6	678.6
7.	Uniform land tax	198.9	29.6	129.1	-	-
8.	other types of taxes	322.2	495.8	148.5	396.6	489.3

Based on the data of Table 1, we continue our research by analyzing the tax benefits used by tax payers by tax types. In 2017, the amount of tax benefits provided for value added tax was 8,450.4 billion. amounted to 14,989.5 billion soums in 2018. soums, 25,318 billion in 2019. soums, 25,902.1 soums in 2020, 27,637.9 billion soums in 2021. amounted to soum. In 2017, 1,216.8 billion soums and 14,989.5 billion soums were provided in terms of turnover tax. soums, 164.8 billion in 2019. soums, 146.8 billion in 2020. 111.1 billion soums in 2021.

The fact that most of the tax incentives currently provided in our country go to free economic zones, small economic zones and large tax payers is a clear proof of this.

<sup>2</sup>President of the Republic of Uzbekistan Decree No. PF-5468 of June 29, 2018 " On the concept of improving the tax policy of the Republic of Uzbekistan"

<sup>3</sup>Author's calculation based on the information of the State Tax Committee.



In fact, the tax credit is an effective tool for enterprises to develop their production base, introduce new technologies, and encourage investment of income.

Firms shape their financial attitudes toward income redistribution based on many factors, such as the fairness of the firm's interests and the level of inequality, as well as prior beliefs about the level of redistribution they actually face in the economy. Understanding whether enterprise has a distinct effect on income distribution and redistributive support is important for assessing the sustainability of tax policy support with respect to these measures. In recent decades, the steady growth of business income inequality, economic stability, and measures that increase the financial comfort of businesses include changes in the tax burden and redistribution of benefits among individuals, from which some individuals benefit and others lose.

Targeted reduction of tax credits in enterprises will increase the country's tax competitiveness, improve the investment climate and stimulate the flow of new investments. This should lead to an increase in tax revenues to the budget due to the growth of the tax base, as the volume of production and the tax base will increase, enterprises will be attractive for investments, they will have financial resources and favorable conditions for innovation. Advanced developments, in turn, ensure high labor productivity and product quality, competitive tolerance of production. Equal distribution of tax benefits to the economic system among economic entities should be gradually reduced, first of all, by canceling unjustified and ineffective benefits.

The concept of "efficiency" is one of the central concepts in economics. Efficiency is inherently objective as it relates to limited resources. Knowing his wants, available resources, and technologies for transforming resources into goods, the consumer could organize production to satisfy his needs as much as possible and act efficiently. However, in practice, economic processes affect the interests of many consumers, both citizens and enterprises, and there is a system of distribution of benefits. It is no coincidence that monitoring and evaluating the effectiveness of tax incentives and investment activities in the main areas of tax policy has been one of the main tasks for several years.

Approaches to the establishment of tax benefits are reflected in the main directions of tax policy as measures to ensure fiscal stability. Thus, certain conditions must be observed in the strategic planning of tax policy:

- when determining and introducing tax incentives, planned indicators must be determined for further analysis of their achievement and appropriate assessment of the effectiveness of these incentives in the budgetary, economic and (or) social direction. For these purposes, it is required to introduce tax incentives only for a limited period, which depends on the characteristics and purpose of the incentive. Extension or termination of pension is possible only after evaluating its effectiveness. Accordingly, it is possible to make a decision on canceling, correcting or extending tax credits only based on the results of the assessment;

- when tax relief is introduced, it is required to create a financial resource in an amount comparable to the estimated lack of income from its application (the corresponding values should be indicated in the material-economic justification for the introduction of the relief). For example, as a resource, ineffective benefits can be canceled (termination).



The above rules should be reflected in the main directions of tax and budget policy, as well as be included in the budget process for the next financial year and planning period from the point of view of assessing the structure and dynamics of budget tax expenditures. The lack of a systematic approach to the provision and assessment of the impact of tax incentives given to enterprises leads not only to the low efficiency of their application, but also to the lack of a clear understanding of the results. This reveals systemic problems in adequately assessing the effectiveness of tax policy.

In order to overcome the above problems, first of all, it is necessary to create a certain unified mechanism for the development of a project of tax credits and an algorithm for their introduction. First of all, this includes clearly formulating the objectives and expected results of the benefits. Develop a consistent report based on information on taxation as well as benefits. This creates the necessary statistical basis for assessing the effectiveness of benefits.

The proposed methodology allows not only to model the expected consequences of tax incentives, but also to make decisions about the expediency of introducing these tax incentives. Perhaps for forecasting, as well as for evaluating tax incentives, the actual results of its application and their comparison with the planned indicator, in turn, will allow to make a reasonable decision on the need to correct the mechanism of incentives, apply it in the next financial year or cancel it.

As a result of the researches of foreign and local authors on the modeling of the effectiveness of the tax incentives given to enterprises, important researches have been carried out on the possible methods of assessing the effectiveness of tax incentives and modeling their consequences. Taking into account the lack of relevant information on the tax costs resulting from the introduction of tax incentives, as well as the shortcomings in the mechanism of the development of incentives and their application, we propose to evaluate the impact and effectiveness of the application of these tax incentives. Tax credits based on the simulation method, which is the most suitable tool for studying complex systems controlled under conditions of uncertainty <sup>4</sup>.

the simulation model, which allows for real-time modeling, dynamic feedback models, and visual output using various input data. The model itself is organized in the form of IT program, during its execution; a system of finite difference equations is solved using Euler's method. A model representation is an easy-to-read flow diagram of variable relationships that describe the various subsystems of the modeled entity <sup>5</sup>.

In order to demonstrate the possibilities of simulation modeling of the consequences of the introduction of tax incentives, a model aimed at solving problems of a social nature is proposed. The general idea of the model can be described as follows: industrial enterprises are provided with exemption from profit tax (reduced tax rate, volume tax benefits and volume tax discount) on the condition of reducing the selling price of finished products.

The difference between the amount of tax payable to the budget in preferential and basic taxation regimes is the fiscal effect, and the difference between the net profit of the

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<sup>4</sup>Shannon R. Imitation modeling system - art and science / M.: Mir, 1978. 423 p.

<sup>5</sup>Nikiforova O. V. The use of simulation tools for fiscal regulation of disproportions in the development of socio-economic systems / Modern Science: Actual Problems of Theory and Practice. 2013. No. 01–02. 36–42 p.



enterprise in different taxation regimes is the economic effect. In this case, the social effect is the difference in the cost of purchasing products in different tax regimes of the population.

The most attractive for manufacturers is the volumetric tax credit, which is proven by economic efficiency values. At the same time, in almost all cases considered, this benefit is unacceptable for the state, because it has the longest repayment period. This is objectively related to its mechanism of action, which leads to a significant reduction in the amount of taxpayers' tax liabilities, which poses a great threat to the economic stability of the state. Consequently, the introduction of such a benefit should be supported by some "financial" mechanisms that ensure stable compensation of state losses at the expense of other sources of budget revenues.

It should be calculated with further economic and statistical processing of the obtained data. However, due to the lack of necessary statistics on tax administration costs and tax approval costs, it is not possible to make appropriate calculations at this stage and should become one of the directions for further research.

Fiscal effectiveness of a tax benefit is the ratio of the fiscal effect obtained from the provision of benefits received in period  $t$ , when the real effect of the benefit is manifested, to the amount of tax expenses in that period.

Social efficiency can be expressed as the result of social indicators exceeding the corresponding indicators in the absence of it in the conditions of providing benefits for a period of  $t$ . In order to have a social effect, this difference must be greater than the amount of tax expenditures, because in the absence of this difference, it is more beneficial for the budget to achieve this effect on the money that should come in the form. The social efficiency of the pension, in turn, is defined as the ratio of the social efficiency to the amount of tax expenses.

The budget effect is an integral indicator of the three effects listed above and is manifested by the increase of budget revenues due to the expansion of the tax base and the saving of budget funds necessary for solving social and economic problems. The budget efficiency of tax incentives is determined by the ratio of the amount of tax, social and economic benefits to tax costs from the provision of benefits received in the period  $t$  when the real effect of this benefit begins to manifest itself.

In fact, the importance of how tax incentives affect the level of tax burden in enterprises is confirmed by the opinions expressed by economists in scientific research.

### Conclusion

In conclusion, it is permissible to pay special attention to the general aspects:

- if the production capabilities and time period of enterprises are not properly taken into account when applying tax incentives to enterprises, it may lead to inefficiency;
- the fact that the results of applying tax incentives in enterprises are important as an incentive not only for foreign investors, but also for the enterprises themselves to invest the incentives in their production in order to get more profit;
- the use of properly organized tax incentives in the activities of enterprises for technical and technological renewal of production, having a direct effect on the cost of products, allows to produce competitive exportable products on the market.



Above- mentioned points, we must conclude that the effect of tax benefits on the tax burden indicators in enterprises is of great importance. Today, in the development of the economy of enterprises and industrial sectors, the use of tax incentives is not only positive, but also provides an increase in the amount of tax revenues to the state budget.

In conclusion, it can be said that in order to apply tax benefits in our tax system, it is appropriate to use the methods of assessing the effectiveness of tax benefits after studying foreign experiences.

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