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DIGITAL FISCAL TRANSFORMATION AS A FACTOR OF INCREASING THE EFFICIENCY OF SUPPORT FOR ECONOMIC SECTORS

Mardonov Kamoliddin Karamiddinovich
Researcher at Tashkent State University of Economics

ABSTRACT

The article examines priority directions for increasing the efficiency of fiscal instruments used to support economic sectors under conditions of digital fiscal transformation. The study substantiates that the modernization of tax-budget mechanisms is no longer limited to the redistribution of public financial resources, but becomes a system of targeted incentives, digital monitoring, KPI-based financing and performance-oriented public expenditure management. Special attention is paid to digital fiscal administration, electronic tax and budget platforms, Big Data analytics, targeted funds, compensation mechanisms and sector-specific incentives for industry, agriculture, construction materials, logistics and high value-added digital services. The article argues that the transition from input-based budget support to result-oriented fiscal management enables the state to strengthen transparency, reduce administrative costs, increase the return on public expenditure and stimulate sustainable sectoral growth. The proposed approach considers fiscal instruments as an integrated mechanism combining resource allocation, incentive design, risk-based control and evaluation of economic outcomes.

KEYWORDS

Fiscal instruments; digital fiscal policy; tax incentives; budget expenditures; subsidies; targeted funds; economic sectors; KPI-based financing; fiscal efficiency; public expenditure; digital administration; investment activity; economic growth.

Introduction

In the current stage of global economic transformation, the effectiveness of fiscal instruments has become one of the decisive factors of sustainable sectoral development. Tax incentives, budget subsidies, interest rate compensation, state guarantees, targeted funds and public investment programs influence not only the financial condition of enterprises, but also the quality of structural modernization, technological renewal and employment. Therefore, the problem of improving fiscal support mechanisms is directly related to the competitiveness of national industries, the expansion of export potential and the stability of public finances.

Digitalization fundamentally changes the logic of fiscal policy. Traditional fiscal support was often evaluated by the volume of allocated resources, whereas modern fiscal management increasingly focuses on measurable results, transparency of spending and the economic return on public resources. Electronic tax administration, digital budget platforms, integrated databases and automated monitoring

systems allow public authorities to identify the real needs of sectors, reduce informal activity, improve targeting of support measures and assess the effectiveness of each instrument in a timely manner.

The relevance of the research is determined by the need to transform fiscal policy from a fragmented set of benefits and expenditures into an integrated mechanism of sectoral support. This mechanism should combine tax incentives with budget financing, digital control with trust-based administration, and direct financial support with KPI-based evaluation. Such an approach is especially important for developing economies, where limited budget resources must be used in a way that maximizes production growth, investment activity and long-term fiscal sustainability.

Literature review

The theoretical basis of fiscal support for economic sectors is rooted in the works of J. M. Keynes, who emphasized the stabilizing role of public expenditure and taxation in stimulating aggregate demand. In the Keynesian tradition, fiscal policy is a countercyclical instrument that helps the state mitigate crises, support employment and activate investment processes. This approach remains important for sectors that face temporary liquidity constraints, weak demand or high investment risks.

R. Musgrave developed the functional interpretation of public finance and distinguished allocation, distribution and stabilization functions of fiscal policy. From this perspective, fiscal instruments should not be assessed only through the prism of budget revenues or expenditures. Their effectiveness also depends on whether they correct market failures, improve resource allocation, support socially significant sectors and provide macroeconomic stability. This logic is particularly relevant for subsidies, tax preferences and targeted public funds.

Institutional economists, including D. North and J. Stiglitz, stress that the efficiency of public intervention depends on rules, incentives and the quality of administration. If fiscal support is provided without clear criteria, monitoring and accountability, it may produce weak results, create dependency and distort competition. Conversely, when fiscal instruments are linked to transparent rules and measurable outcomes, they can become a powerful driver of innovation, investment and structural transformation.

Modern studies by international organizations increasingly associate fiscal efficiency with digitalization. Digital tax administration, electronic invoices, online cash registers, budget transparency portals, integrated public finance management systems and data analytics make it possible to reduce administrative costs and increase the accuracy of fiscal decisions. Therefore, in contemporary research, digital transformation is considered not only a technical modernization of public administration, but also a methodological condition for improving the quality of fiscal policy.

Research methodology

The methodological basis of the study is formed by a systematic approach to fiscal policy as an integrated mechanism of state regulation. The research uses comparative analysis, institutional analysis, logical generalization, grouping of fiscal instruments by their economic functions and qualitative assessment of expected outcomes. The analysis focuses on the interrelation between fiscal instruments, sectoral development objectives, budget sustainability and digital monitoring tools.

The study also applies a result-oriented approach, according to which the effectiveness of fiscal support is evaluated not by the amount of budget resources allocated, but by the achieved economic effects. These effects include investment growth, expansion of production capacities, increase in exports,

creation of jobs, higher tax base, better compliance and lower administrative costs. This makes it possible to interpret fiscal instruments as elements of a single performance-based management system. The empirical and conceptual basis of the article is formed by materials related to the improvement of fiscal instruments in supporting economic sectors, including the modernization of tax-budget mechanisms, digitalization of fiscal administration, support for IT services, agriculture, construction materials, logistics and the use of targeted funds. The proposed analytical framework is adapted to the conditions of a developing economy, where fiscal resources must be used selectively and transparently.

Analysis and results

Digital fiscal transformation creates a new model of interaction between the state and economic sectors. In this model, the state does not merely allocate financial resources, but manages information flows, evaluates risks, monitors the use of support measures and measures the economic return of public expenditures. Electronic tax systems, digital budget platforms and integrated databases allow fiscal authorities to move from ex-post control to preventive and analytical management. This improves the quality of decisions on tax benefits, subsidies and compensation mechanisms.

One of the key areas of modernization is the use of digital fiscal instruments to support high value-added sectors. The experience of stimulating IT services and export-oriented digital businesses shows that long-term predictability of tax conditions can significantly increase investment attractiveness. When tax incentives are linked to export performance, employment and value creation, they become not a general privilege, but a targeted development instrument. Such an approach reduces the risk of ineffective benefits and strengthens the connection between fiscal support and measurable economic outcomes.

Table 1. Conceptual directions for improving the efficiency of fiscal instruments in supporting economic sectors

Conceptual direction	Economic content	Key instruments	Expected result
Digital fiscal administration	Transformation of tax and budget management into a data-driven system	Electronic tax systems, e-budget platforms, Big Data, risk analysis	Higher transparency, lower administrative costs and stronger compliance
Targeted sectoral incentives	Support for sectors with high value added and export potential	Tax benefits, VAT preferences, dividend tax incentives, special regimes	Investment growth, export expansion and higher competitiveness
KPI-based budget support	Allocation of public resources according to measurable results	Performance indicators, monitoring dashboards, result-based financing	Greater accountability and increased return on public expenditure
Compensation mechanisms	Reduction of financial burden on enterprises implementing priority projects	Interest rate compensation, subsidies, concessional financing	Improved access to capital and faster implementation of investment projects
Targeted funds	Concentration of resources for strategic sectoral development	Development funds, credit support funds, agricultural support funds	More transparent and accountable use of budget resources

Another important direction is the transition to KPI-based budget financing. In agriculture and agri-logistics, public resources should be connected with concrete indicators: export volume, storage capacity, processing depth, packaging quality, reduction of losses and number of jobs created. This approach changes the role of budget expenditures. They become an investment into measurable structural results rather than simple compensation of current costs. KPI-based financing also increases accountability and allows the state to compare the effectiveness of different support programs.

Fiscal instruments are especially important for sectors where enterprises face high financing costs. Partial compensation of credit interest expenses can reduce the financial burden on firms and stimulate investment projects in industry, construction materials and processing sectors. However, such support should be selective and conditional. It should be provided to projects that demonstrate clear economic effects, such as production expansion, localization, import substitution, export potential or technological modernization. Otherwise, compensation mechanisms may increase budget costs without producing sustainable growth.

Table 2. Digital fiscal transformation and its expected economic effects by sector

Sector / area	Main fiscal instrument	Digital management tool	Expected economic effect
Digital services and IT export	Long-term tax preferences and stable fiscal conditions	Digital registration and monitoring of resident status	Growth of export revenues and attraction of foreign investment
Agriculture and agri-processing	Subsidies for sorting, processing and modern packaging	KPI monitoring of packaging, storage and export indicators	Higher added value and reduced product losses
Construction materials industry	Partial compensation of credit interest expenses	Digital verification of project implementation and credit use	Expansion of production capacity and localization
Agri-logistics infrastructure	Budget resources linked to measurable infrastructure indicators	Electronic monitoring of storage, processing and logistics capacity	Improved export readiness and logistics efficiency
Public development programs	Targeted financing through funds	E-budget, performance dashboards and digital reporting	Greater accountability and stronger multiplier effect of expenditures

Targeted funds represent another mechanism for improving the efficiency of public expenditure. Compared with general budget allocations, funds can ensure better targeting, specialized management, separate accounting and clearer monitoring of results. When resources are directed through funds for agriculture, infrastructure, credit compensation or development programs, it becomes easier to evaluate whether the allocated resources have achieved the expected impact. This strengthens fiscal discipline and reduces the probability of inefficient spending.

The overall logic of improving fiscal instruments is based on the integration of incentives, digital control and performance evaluation. Tax incentives should stimulate desired behavior; budget expenditures should finance priority projects; digital platforms should provide transparency; and KPI indicators should measure the final results. Only the combination of these elements can ensure that fiscal policy supports economic sectors without undermining budget stability.

Discussion

The findings indicate that the effectiveness of fiscal support depends primarily on the quality of institutional design. A tax benefit or subsidy becomes economically justified only when it is connected with a clear development objective, measurable indicators and a transparent monitoring mechanism. In this regard, digital fiscal transformation gives public authorities an opportunity to distinguish productive support from ineffective spending. This is particularly important in the context of limited budget resources and increasing demand for public investment.

The proposed framework also shows that fiscal policy should balance three objectives: sectoral development, budget sustainability and administrative simplicity. Excessive benefits may weaken budget revenues, while excessive fiscal pressure may reduce investment incentives. Therefore, an optimal fiscal mechanism must combine predictability for business, sufficient revenue for the budget and strict evaluation of outcomes. Digital tools make this balance more achievable because they provide timely information about actual performance.

The transition to result-oriented fiscal management requires a change in the culture of public finance. Instead of evaluating programs by planned expenditure, authorities should evaluate them by economic effects. For example, subsidies in agriculture should be linked to export growth and reduction of losses; support for IT should be linked to export revenue and high-skilled employment; credit compensation should be linked to production capacity and localization; and development funds should be linked to measurable infrastructure outcomes.

This approach also has an important anti-corruption and governance dimension. When public support is distributed through transparent digital platforms and evaluated according to objective indicators, discretionary decisions are reduced. This increases trust between the state and business, improves the investment climate and makes fiscal policy more predictable. As a result, digitalization becomes not only an administrative reform, but also an institutional condition for sustainable economic growth.

Table 3. Priority mechanisms for strengthening fiscal support and expected institutional results

Improvement mechanism	Problem addressed	Institutional logic	Expected effect
Digitalization of tax and budget administration	Fragmentation of fiscal information and weak monitoring	Integration of tax, budget and statistical data	Better targeting and faster decision-making
KPI-based financing of sectoral projects	Low accountability of budget expenditures	Linking funds to measurable development indicators	Higher efficiency of public spending
Long-term tax incentives for export-oriented sectors	Insufficient predictability for investors	Stable fiscal rules conditional on export and value creation	Increased investment and export potential
Interest rate compensation for priority industries	High cost of borrowed capital	Sharing financial burden between state and business	Expansion of investment projects and production capacity
Targeted funds for strategic sectors	Inefficient general allocation of resources	Specialized management and separate performance reporting	More transparent and accountable fiscal support
Big Data and risk-based control	Administrative burden and uneven compliance	Analytical selection of risks instead of universal inspections	Lower compliance costs and stronger fiscal discipline

The digital economy sector requires long-term and predictable fiscal conditions because investment in software, platforms, outsourcing centers and human capital is strongly sensitive to regulatory

uncertainty. For this reason, tax incentives for IT Park residents and export-oriented digital service providers should be interpreted as a strategic instrument aimed at creating a stable environment for high value-added activities. The expected fiscal result is not only immediate tax revenue, but also the formation of new taxable bases through employment, exports and related service markets.

In agriculture, fiscal instruments should be focused on the transformation of raw material production into value-added chains. The support of sorting, packaging, cold storage and logistics infrastructure allows agricultural products to move from low-margin sales to standardized export supplies. This has a direct influence on farmers, cooperatives, processors and exporters. Therefore, subsidies in this sector should be connected with concrete outcomes, including the volume of processed products, export contracts, reduction of post-harvest losses and creation of stable rural jobs.

In the construction materials industry, the central problem is often related to the cost of capital and the need to renew production equipment. Interest rate compensation can support modernization, but it should not be provided automatically to all borrowers. The most effective approach is to grant compensation to projects that increase localization, reduce import dependence, improve energy efficiency and expand capacity. For logistics and infrastructure, public fiscal support has a multiplier effect because transport, storage and distribution networks serve many sectors at the same time. Investments in logistics reduce transaction costs, increase the reliability of supply chains and improve export readiness. Digital monitoring of infrastructure projects is essential because such projects require significant resources and may involve high implementation risks. KPI-based monitoring should therefore include not only the amount of allocated resources, but also actual capacity, utilization rate, service coverage and impact on export flows.

The industrial sector demonstrates the need to balance labor-related fiscal burdens and competitiveness. A high tax burden on wage funds can increase production costs and weaken the ability of enterprises to compete in domestic and foreign markets. At the same time, reducing the burden without evaluating fiscal consequences may negatively affect budget revenues. The optimal solution is to use targeted and temporary relief measures for sectors that demonstrate productivity growth, formal employment expansion and investment in modernization.

Table 4. Sectoral focus of fiscal instruments and performance indicators

Sector	Priority fiscal instrument	Performance indicators	Strategic effect
Digital services	Long-term tax incentives and export-oriented regimes	Export revenue, skilled jobs, number of resident companies	Formation of high value-added digital economy
Agriculture and processing	Subsidies for packaging, storage and logistics	Processing depth, export contracts, loss reduction, rural jobs	Expansion of value chains and rural income
Construction materials	Interest rate compensation for investment loans	Capacity growth, localization, product range, tax base	Modernization and import substitution
Logistics infrastructure	Targeted budget investment through funds	Storage capacity, service coverage, utilization rate	Lower transaction costs and stronger export readiness
Industry	Optimization of labor-related fiscal burden	Employment, productivity, production volume, wage growth	Improved competitiveness and formalization

An important methodological issue is the choice of criteria for evaluating fiscal efficiency. In many cases, fiscal policy is assessed mainly through the amount of revenues collected or expenditures allocated. However, this approach is insufficient for sectoral support because the final purpose of fiscal instruments is to generate wider economic outcomes. Therefore, fiscal efficiency should be measured through a combination of budgetary, economic, institutional and social indicators.

Budgetary indicators include the growth of tax revenues, expansion of the tax base, reduction of arrears and sustainability of public finances. Economic indicators include investment activity, production volume, export growth, value-added creation and productivity. Institutional indicators reflect administrative costs, speed of procedures, transparency of allocation and quality of digital monitoring. Social indicators include job creation, income growth and regional development effects. Only the integrated use of these criteria can provide an objective assessment of fiscal support measures.

The introduction of KPI-based evaluation is especially important because it makes public support conditional on performance. For example, a subsidy for packaging should not be assessed by the number of applicants alone; it should be evaluated by the volume of products prepared for export, reduction in spoilage and increase in revenues. Similarly, tax preferences for digital firms should be evaluated by export growth, employment and foreign investment. This approach helps to avoid passive consumption of benefits and transforms fiscal support into an active development mechanism.

Another evaluation criterion is the fiscal multiplier. Public support is justified if one unit of budget cost generates a larger effect in terms of private investment, additional output, employment or future tax revenues. This does not mean that every program must produce immediate fiscal returns. Some strategic sectors require long-term support. Nevertheless, even long-term support must be accompanied by measurable intermediate indicators and regular review.

Table 5. Criteria for assessing the efficiency of fiscal support measures

Group of indicators	Assessment focus	Examples of indicators	Management implication
Budgetary indicators	Impact on public finance sustainability	Tax revenue growth, arrears reduction, broader tax base	Determines fiscal affordability of support
Economic indicators	Contribution to production and investment	Output growth, investments, exports, productivity	Shows real sectoral development effect
Institutional indicators	Quality of administration and transparency	Processing time, digital coverage, monitoring quality	Helps reduce administrative costs and corruption risks
Social indicators	Impact on employment and regional development	New jobs, income growth, rural employment	Reflects inclusive development outcomes
Multiplier indicators	Return on budget resources	Private investment per unit of support, future tax revenues	Shows long-term justification of fiscal measures

The practical implementation of an effective fiscal support system should follow a phased model. At the first stage, the state should conduct a full inventory of existing tax benefits, subsidies, compensation mechanisms and targeted funds. This step is necessary to identify overlapping measures, ineffective privileges and instruments that do not have clear objectives. Without such inventory, it is difficult to create a coherent fiscal policy.

At the second stage, all support measures should be classified by sectors and expected results. Each instrument must have a clearly defined target group, eligibility criteria, expected output and monitoring procedure. This is particularly important for sectors with different economic structures. The needs of IT services, agriculture, construction materials and logistics are not identical; therefore, fiscal support must be differentiated while remaining transparent.

At the third stage, digital platforms should be used for application, approval, monitoring and reporting. A unified digital infrastructure would allow enterprises to submit documents electronically, while public authorities could verify information through integrated databases. Such a model reduces the administrative burden for businesses and strengthens the analytical capacity of fiscal authorities.

At the fourth stage, a regular evaluation cycle should be established. Fiscal support programs should be reviewed annually or every two years depending on their scale. Measures that achieve expected results may be extended or expanded, while ineffective measures should be redesigned or terminated. This creates a feedback mechanism and prevents the accumulation of outdated or inefficient fiscal preferences.

At the final stage, the results of fiscal support should be integrated into strategic planning. Data obtained through monitoring and evaluation should inform the preparation of future budget programs, tax policy decisions and sectoral development strategies. In this way, fiscal policy becomes an adaptive system that learns from results and adjusts to changing economic conditions.

Despite the advantages of fiscal support, several risks should be taken into account. The first risk is the excessive expansion of tax benefits, which may reduce budget revenues without producing adequate economic effects. To avoid this risk, each benefit should have a limited duration, clear eligibility criteria and measurable performance indicators.

The second risk is the misuse of subsidies and compensation mechanisms. Digital verification, electronic reporting and interagency data exchange are necessary safeguards against this problem. When information on beneficiaries, contracts, loans, exports and tax payments is integrated, the state can identify inconsistencies more quickly and reduce the probability of inefficient spending.

The third risk is unequal access to support measures. If procedures are complicated or information is not publicly available, small and medium-sized enterprises may be less able to use support instruments than large firms. Therefore, digital platforms should be designed in a user-friendly way and accompanied by methodological guidance. Transparency of criteria and open reporting are essential for fair access.

The fourth risk is the persistence of support after the original problem has disappeared. Some fiscal instruments are necessary only at the initial stage of market formation or during periods of economic stress. Continuous support without review can weaken competitiveness. For this reason, sunset clauses, periodic evaluation and performance-based renewal should become mandatory elements of fiscal policy design.

Scientific and practical recommendations:

First, fiscal instruments should be systematically classified according to their purpose: revenue formation, investment stimulation, compensation of market failures, support for exports, reduction of financing costs and development of infrastructure. Such classification will make fiscal policy more transparent and help avoid overlapping or contradictory support measures.

Second, tax incentives and subsidies should be linked to sectoral performance indicators. For export-oriented sectors, the key indicators may include export revenues, export geography and the share of high value-added products. For agriculture and processing, indicators should include storage capacity, packaging quality, processing depth and reduction of losses. For industrial projects, indicators should include production growth, localization, employment and tax base expansion.

Third, digital platforms should become the basic infrastructure for fiscal support. Applications for subsidies, tax preferences, interest compensation and targeted financing should be processed through transparent electronic systems. This would reduce administrative barriers, shorten approval time and create a unified database for monitoring the results of support measures.

Fourth, the evaluation of fiscal efficiency should be institutionalized. Every major tax or budget support program should include an ex-ante justification, current digital monitoring and ex-post assessment. Programs that do not generate measurable economic outcomes should be revised, limited or replaced by more effective instruments.

Fifth, targeted funds should be managed according to principles of transparency, accountability and performance orientation. The allocation of resources through funds must be accompanied by public reporting, measurable indicators and clear responsibility for achieved results. This will increase trust in fiscal policy and improve the economic return on budget resources.

Conclusion

The improvement of fiscal instruments in supporting economic sectors requires a transition from traditional expenditure-based support to digital, targeted and result-oriented fiscal management. In this model, tax incentives, subsidies, compensation mechanisms, targeted funds and budget expenditures function as interconnected elements of a single development mechanism. Their effectiveness depends on the extent to which they are linked to measurable economic outcomes and supported by digital monitoring systems.

The analysis demonstrates that digital fiscal transformation increases the transparency, speed and accuracy of public financial management. Electronic tax systems, digital budget platforms, Big Data analytics and risk-based monitoring enable the state to identify priority sectors, allocate resources more efficiently and reduce administrative costs. At the same time, these instruments strengthen tax discipline, improve the investment climate and increase the predictability of government support.

The practical significance of the proposed approach lies in the fact that it can be used to design fiscal support programs for industry, agriculture, construction materials, logistics, IT services and other strategically important sectors. By linking public resources to KPIs, sectoral performance and digital accountability, fiscal policy can become a powerful tool for stimulating sustainable growth, improving competitiveness and ensuring long-term budget stability.

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