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Budget Policy of Social Development

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Abstract

The monograph is devoted to the development of methodological and institutional framework for the formation of fiscal policy to ensure social development. The essence and role of budget regulation in supporting the processes of endogenous economic growth are revealed. The experience of the implementation of fiscal policy in countries with developed and transformational economies is systematized. The directions of increasing the efficiency and strengthening the regulatory potential of the state tax policy are proposed. An assessment of the tax burden on labor and consumption in 2001—2017 is carried out; a comparative analysis of the values of the corresponding indicators in Ukraine and the European Union member countries is carried out. The factors that affect the fiscal significance of the value added tax, excise tax, income tax, personal income tax are identified. Provisions for enhancing the effectiveness of the institutional architectonics of the budget system are improved. Directions for improving the efficiency of budget expenditures are substantiated. The analysis of the influence of the main factors on the dynamics of changes in the ratio of public debt to GDP is carried out; it is established that inflation affected the most, and the exchange rate influenced the increase. An approach to assessing the state of debt security of the country is proposed, the conceptual framework for managing the budget deficit and public debt is defined. Provisions for the implementation of long-term budget planning and forecasting are developed. Institutional framework for the formation of the budget strategy is improved. The conceptual foundations of state financial support for human development are defined. A long-term budget strategy is developed, taking into account the cyclical nature of economic development. The conducted scientific research allows identifying the possibilities of positive influence of the budget policy on social development in the context of improving the quality of the institutional environment.

Keywords

Budget, fiscal policy, budget strategy, tax system, tax burden, labor taxes, consumption taxes, budget revenues, budget expenditures, budget deficit, public debt, fiscal consolidation, medium-term budget planning, economic growth, social development.

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Preface

Current financial science pays considerable attention to studying the impact of fiscal policies on social development. The quality and timeliness of decision-making on issues of formation and implementation of fiscal policy affect the balance of public finances, the level of effectiveness of state regulation over social-economic processes.

Budget policy influences the effectiveness of financial and economic transformations in the system of public finance, provides funding for restructuring of the economy, stimulating the development of its priority sectors, accelerating the intensification of production and the level of development of the society. As a versatile tool of state regulation over social-economic processes, budget policy defines the directions for development of budgetary relations and makes it possible to effectively implement institutional financial and budgetary instruments aimed at creating conditions for ensuring the socio-economic development of the country taking into consideration the dynamic character and cycles of economic processes. The level of effectiveness of institutional support in the public sector depends on the substantiation of fiscal policy.

Economic transformations and strengthening of globalization processes predetermine the development of effective principles and approaches regarding the institutional basis of fiscal policy, which will provide the opportunity to align the institutional components in budget space, which define the level of dynamic balancing among budgets of different levels, to improve budgetary architectonics taking into consideration the dynamics of social and cycled economic processes. Important tasks are to develop fiscal policy with regard to the institutional principles of budgetary relations; to improve the mechanisms, tools, and levers of fiscal policy over long term, aimed at accelerating the pace of economic growth and human development.

At present, foreign countries, regardless of the level of economic development, employ the diversification of financial and budgetary instruments in order to stimulate competition at both the national and the international level, which promotes sustainability in the socio-economic development of society. The countries that apply general world standards at national level have a rather low level of transaction costs and a more effective fiscal policy. Under the influence of globalization, the social function of fiscal policy is being transformed, aimed at social security of citizens. The new tasks of fiscal policy imply adherence to fiscal discipline, improving the efficiency

of the mechanism to manage budget risks, taking into consideration global financial risks, improvement of the architectonics in revenue and expenditure parts of state and local budgets.

Strategic objectives of fiscal policy under modern conditions are: creation of conditions for ensuring macroeconomic stability and to promote structural economic restructuring, improvement of the instruments of budget forecasting, enhancing the validity and accuracy of the predictive calculation of budget performance, improving the fundamentals of budgeting, in particular medium-term, the efficient formation of the system of tax revenue, based on a combination of principles for tax legislation of fiscal sufficiency and social justice, the strengthening of financial and budgetary control over the efficiency and effectiveness of the use of budget funds, improving the mechanism and tools to manage a state debt, development of the system of budgetary control, its methods and tools. Solving these tasks would contribute to ensuring social development.

Along with this, the development of the institutional provisions for the formation and implementation of fiscal policy implies the alignment of activities by financial and budgetary institutions that arose evolutionarily and formed a budget space. When assessing the effectiveness of institutional support in the public sector, it is important to consider interactions between components of the institutional environment; to ensure coordination and adequacy of budget regulatory measures to the changes in economic environment; as well as transparency in the formation and implementation of state and local budgets; to enhance the level of responsibility of state and local governments to achieve the stated objectives. It is expedient to note that the level of effectiveness of institutional support for the development of budgetary relations is interconnected with the dynamics of transformation of economic processes.

When substantiating the priority tasks on fiscal policy and the ways of their implementation, it is important to take into consideration globalization processes, to assess their impact on the robustness and stability of components of the system of public finance, including taking into consideration world tendencies of the institutional transformations in the budget environment. Along with this, modern conditions necessitate the use of effective tools of fiscal policy that will make it possible to properly respond to the changing socio-demographic trends in the development of society, the cyclic character and dynamism of economic transformations, while maintaining the appropriate indicators of sustainability and stability of the budget system.

Achieving strategic objectives in the socio-economic development of the country depends on the degree to which budget policy accounts for trends in the development of institutional environment of the financial and fiscal space, dynamics of social development. Increasing the effectiveness of fiscal policy and its relationships with financial institutions at the present

stage of development of the system of public finance predetermines the need for deepening the studies into budget architectonics, for development of the concept of its institutionalization based on the substantiation of optimal interrelations among budgetary, tax, social, monetary and government debt components, which define the budget space. Enhancing the level of substantiation of the tax burden implies analysis of the uniformity and proportionality of its distribution in the regional context, the evaluation of a possible change in the level of the tax burden depending on the effects of exogenous and endogenous factors. Important in this case is the reliability of the forecasts of macroeconomic parameters, assessment of the probability of their changing, reasonable forward-looking financial and economic indicators.

Taking rational management decisions on the use of budgetary funds is advisable based on the results of monitoring and evaluation of the effectiveness and efficiency of budget programs taking into consideration the extent to which they are substantiated on the basis of strategic modelling of socio-economic processes, the medium-term planning for the financial security of budget institutions. An important task is to improve the instruments of the state financial auditing and control over budget process by running a systematic analysis and assessment of management of financial resources and assets of the state; to form a balanced structure of state financial audit bodies, taking into consideration the clear delineation of their authority and effective interaction. Of increasing importance is the improvement of a system of medium- and long-term budget projections, which provide an opportunity to make informed, rational decisions, to assess their effects in the future. The achievement of the strategic objectives of fiscal policy will be contributed to by developing the toolset to estimate and monitor budget programs that would make it possible to ensure the relationship between achieved results and the volume of budget funds used, to identify factors that provide the possibility to execute a budget program at the required level and ensure the achievement of planned effective indicators, to substantiate directions for improving the efficiency of decision making by bodies of the public administration aimed to ensure the efficiency and effectiveness of the use of budget funds.

We hope that the research undertaken in this monograph will be useful both for the development of scientific thought, as well as practical application, will have a further effect on the robustness and stability of the system of state finances and the development of societal relations.

Chapter 1
Theoretical and methodological foundations of budget policy of social development

1.1 The essence of budget regulation for ensuring economic growth

Budget policy is a tool of influence on investment and consumer demand; it exerts a long-term effect. Under modern conditions, it is expedient to further develop provisions concerning the assessment of possibilities to apply measures for discretionary fiscal policy, their volume and structure, in order to accelerate the pace of economic growth. Relationships between the components of the system of budget-tax regulation are constantly adapted to the stages in an economic cycle, to priorities in the socio-economic development of the country. Under conditions of economic downturn, in order to restore the positive dynamics of the real gross domestic product, it is expedient to employ the mechanism of state regulation in the sphere of budget expenditures. At the same time, the growth of weight index of budget expenditures is related to the increased tax burden on the economy and the increase in the budget deficit, which hinders the processes of economic recovery. In addition, the size of the state debt and expenses for its maintenance reduce the possibilities of stimulating effect from appropriate budgetary measures. In view of the above, the mechanism to control the budget deficit should be based on the principles of functional finance in terms of achieving financial sustainability of the budgetary system. It is important to implement the institutional limitations of indicators for investment and social component of the budget, the budget deficit, and the structure of sources of its funding.

Budget policy in subsequent budget periods must create favourable conditions for the level of development of human capital as an endogenous factor in ensuring intensive economic growth. The volume of financing the institutions in social sphere must directly depend on the indicators of their performance, which should comply to the generally accepted international standards. In addition, a further stage of development is required by the policy of granting wider autonomy in the sphere of financial management

to institutions of education, science and health. In the field of financial support for programs of social protection, it is a relevant and necessary task to improve instruments for targeted allocation of social benefits based on the elucidation of categories and verification of their recipients.

The level of substantiation of decisions in the field of collecting and regulating taxes affects the investment activity of economic agents, the amount of shadow economy, prospects for the socio-economic development of society. Studying the processes of formation and implementation of tax policy requires the use of a balanced approach based on the dualism of tasks for financial institutions: ensuring the appropriate level of funding budget expenditures and creation of fundamental conditions for sustainable economic growth. Institutional changes in tax policy should provide additional investments into the real sector of economy. Further advancement of provisions related to the development of tax policy will make it possible to increase the degree of the adaptivity of the impact of taxation on the socio-economic environment. Taking into consideration the impact of informal institutions on the development of modern fiscal relations, evaluating the possibilities for their improvement, will improve fiscal efficiency and the regulatory potential of tax system.

Budget policy acts as an important component of state financial regulation and as an effective instrument for the implementation of the economic policy of the country to ensure macroeconomic equilibrium under conditions of institutional transformations. The purpose of budget regulation is to form an appropriate social environment for sustainable economic growth and the development of effective institutional relations regarding the prioritization in the execution of fiscal and tax policy, improvement of methodological principles for financial and budget planning and forecasting, allocation and reallocation of existing financial resources, implementation of effective control over their use, implementation of basic tasks and strategic goals of social development. It is important to adapt fiscal policy to the trends of a cyclic economic development, which implies the formation of modern financial institutions, balancing the fiscal burden, maintaining indicative values for budget deficit and public debt while promoting the innovative restructuring of economy.

An important function of the state is to achieve stability, dynamics, and balance in the processes of economic growth, taking into consideration all the characteristics of sustainable social development. At the present stage of economic transformations, there is a need to implement such budget regulation, to seek ways, strategy and tactics of activities, various instruments for their practical implementation, which would shape the favorable conditions for solving the existing economic, socio-cultural and other tasks of the country, could provide its residents with guaranteed rights to decent and high-quality level of life and activity, including social security, work, housing, education, health protection.

Budget policy defines the place and role of the state in regulating micro- and macroeconomic growth, serves an important component of financial policy and an effective tool for the implementation of the economic policy of the country. The indicators of optimality and effectiveness of the budget mechanism largely affect efficiency in the implementation of management functions in the country. Thus, budget regulation related to ensuring economic growth should be seen as a multidimensional process that implies the modernization and reorientation of the economic and social system of the country, through the use of budget methods and financial mechanism. In this case, economic development characterizes the capability of the country's economy, which was in a state of relative static equilibrium or recession, to develop economic impulses and to maintain its pace of growth, which in turn requires the modification of the socio-economic system. That is why the strategic priorities and aspirations of Ukraine to be integrated into the world economic space predetermine the need for the development and implementation of such a fiscal policy that would conform to the principles of sustainable social and economic development of the country.

Revealing the essence of budget control in the system of economic growth implies a characterization of its concepts in the world financial science and analysis of various approaches by domestic and foreign scientists to defining its concepts. In this case, it is worth noting that in the process of formation and development of a financial thought, budget control, as a subject of separate research and analysis, was not represented in the theoretical and practical concepts of different scientific schools and directions. A given concept was either studied in the context of the development of the system of public finance, specifically budget, expenditures and revenues of the state, its taxes, or was equated to financial or fiscal policy.

The first significant theoretical and practical provisions related to budget regulation were stated by the representatives of classical political economy. Thus, A. Smith and D. Ricardo formed the basic theoretical and practical positions regarding the implementation of a state policy in the system of revenues and expenditures, developed an efficient mechanism of their allocation. When examining public expenditures, A. Smith defines them as unproductive costs of society, which is why a state should take measures to reduce and limit them to political functions only[1]. D. Ricardo defined in his studies that the basis of financial policy of the state is formed by taxes as a universal mechanism for the allocation and redistribution of wealth. For citizens, in this case, taxes were a price to pay for certain future benefits that the payer might get in the future. His work is important in the field of establishment of the system of monetary circulation and monetary policy, in determining the place and role of international trade in the national economy[1].

Representatives of the German historical school A. Wagner[1], M. Weber[2], G. von Schmoller considered budget regulation through the mechanism

of state intervention in the economic system, because only the state can effectively use resources available to it with the purpose of accumulation of capital and to ensure economic development. Formation of such resources is achieved by concentrating in a state budget of a share of the annual income of the country with its further investment in priority industries. An important achievement of the German historical school is the theory that describes a positive role exerted by an increase in the share of the state sector within the economy and government spending on all the processes of economic development of the country. Based on this, A. Wagner stated the following causes for the growth of state spending: social-political, which are characterized by historical expansion of social functions that the state adopts (pension insurance, aid to the population during natural disasters and accidents); economic, predetermined by the necessity of expanding budget expenditures aimed at investment projects, education, scientific and technical progress; historical — by using the tools of borrowing to finance unforeseen expenditures, a country faces the growth of indicators of public debt and funds for its maintenance.

Significant contribution to the evolution of fiscal policy was made by the representatives of the marginalist theory. The works by E. von Bohm-Bawerk[1], L. Walras, W. Jevons, K. Menger developed and substantiated the use of mathematical methods of analysis into various financial and economic processes and phenomena, which enabled them to form an effective analytical apparatus in order to analyze and characterize financial indicators. Special attention was paid by the marginalists to the issue of taxation that led to the emergence of the concept of a «marginal tax rate» underlying a progressive scale of taxation.

Research into financial and budgetary regulation was also the focus of attention by the well-known British economist J. M. Keynes. His work «The general theory of employment, interest and money» established important elements of the state financial policy[1]. By using the concept of «effective demand», which characterizes the economic balance between consumption and production, income and employment, he improved approaches to the financial system of a country, defined the role and place of the basic categories of public finance in the system of economic development. Budget policy was defined as the primary tool for regulating the economic and financial processes in a country. Thus, the main task of the state was to ensure the employment of the workforce, as well as economic development, through the use of the financial and budgetary mechanism.

It is very important to consider the view by J. M. Keynes on the necessity to increase government spending through a state's mechanism to attract loans. In this case, public investment predetermines a growth in the susceptibility to invest while increasing the current state spending makes it possible to increase domestic consumption. Debt is an important part of the state regulation over effective demand in the country, whose implementation

source is the market of loan capital. The deficit of a state budget, in this case, becomes one of the main ways to regulate economic growth.

Alternative views to those by J. M. Keynes were the approaches by M. Friedman, G. Simons, J. Stigler[1], F. Knight. They initiated a new direction in economic theory, that acquired the title of monetarism. Monetarism has no recipes for economic development and full employment. Its basic goal is to provide stability by adjusting monetary circulation, freeing market structures from excessive regulation, creating an atmosphere when a person finds economic freedom while an entrepreneur seeks investment and innovation. Underlying an uneven distribution of wealth is free choice, advantage, capability to take risks. Trends for levelling form where a society does not want to take any chances and prefers poverty instead.

The basis of budget regulation, according to views by M. Friedman, should be control over prices, because it has very important implications for economic growth in the country. Prices are not only the instrument of measurement, they also play an important role in the economic process itself. There is an inextricable link between a state's monetary policy and inflation. Monetarists also propose to narrow the range of government regulation, «the less government spending in GDP, the better the people's life», «problems and crises that occur in economy come from outside, have an exogenic character, and their main cause is the state's influence that blocks the action of natural forces and, at the same, time increases fluctuations of the economy[1] [59, p. 8].

In contrast to monetarists, representatives of neo-Keynesianism noted the need for a state to influence the financial system through the use of the mechanism of public debt and budget deficit. However, most of those who insisted on a budget deficit considered that in the process of a cyclic development of economic systems, the state budget needs the cyclic balancing.

Significant contribution to the development of the theory of budget regulation was made by the representatives of the Stockholm School, who argued that the annual balancing of budget is unnecessary. Budget policy in this case should be directed to that a state budget is deficit-free within a cycle, which becomes possible by increasing the financial resources that form during periods of rise and prosperity. These views led to the emergence of budget policy, which implied the long-term programming of a budget, that is, its adaptation to the respective economic cycle. In this context, R. Harrod proposed to develop not only national, but also international fiscal policy, with the purpose to coordinate budgetary deficits and surplus in different countries in order to implement an effective anticyclic policy[1].

The budgetary policy of economic development of a country was also considered by such representatives of neoclassical economic school as A. Marshal[1] and A. Pigou[2]. Thus, in their view, a state, in order to borrow, should implement a financial policy, which would be aimed at reducing the tax burden on the private sector of the economy, which could make it

possible to form certain internal sources of investment in a country. Government spending should be aimed at promoting scientific and technological progress, the development of education and science, which in the long run would bring greater economic benefits compared to conventional investing. Important attention is also paid to taxes as a means of direct influence on the formation of savings that determine the magnitude of investments in the long and short term.

Representatives of neoliberalism stated the concept of ensuring the well-being of society by using such elements of budget regulation as a budget, taxes, government spending and state credit. In this case, significance of the state fiscal policy increases considerably, it should be aimed at solving tactical and strategic goals of economic and social development of the country. Budget policy should be effective and rational, which would make it possible to ensure meeting the interests of all subjects within an economic system with taking into consideration national interests and priorities. Budget control is crucial in terms of financial support for a growth of the gross national product and economic development in general.

At present, of growing significance is the institutional theory represented by D. North, R. Coase[2], G. Stigler[3], P. Milgrom[4], and others. Budget policy in this case is analyzed in the framework of transformation processes that occur in the economic system, which necessitates its improvement and adaptation to the basic goals of both economic and social development.

The source of institutional transformations in the field of budget control is a change in the formal and informal rules, appropriate restrictions, the degree of effectiveness of their forced execution. A transition from the principles of planned-centralized to the market economy implies the need to change respective institutions, as well as their organization taking into consideration the challenges of socio-economic development, which, in turn, requires considerable resource expenditure.

Modern budget policy aims to form the long-term fundamentals for economic development, which is an important task on financial regulation. However, approaches to defining the concept of «economic development» and its role in the functioning of the state are different, therefore, their historical analysis would make it possible to identify the basic elements of a given system of relations.

Economic environment, being a complex dynamic open system, is characterized by variability, mobility, and the uncertainty of the state in future. Given the ongoing transformation of the economic subsystem of society both globally and at the country level, industries and businesses, it is an indisputable necessity to study those already existing, as well as those emerging, new effective directions and mechanisms of development. Primarily, in order to identify theoretical approaches and to develop the mechanisms of development of a country's economy under conditions of transition to a post-industrial society, such categories need to be refined

as «economic growth», «economic development», «development of economy», «social development».

The theory of economic development founded by R. Harrord[5] implies that a country achieves a certain level of functioning of its productive forces and financial system based on the ratio of savings to investments within it. Basically, the vision of economic development is equated to the notion of «economic growth», and means a quantitative representation of an increase in the relevant indicators, which include gross domestic product, gross national income, national income, and national wealth.

The authors of work «Economics: principles, problems and politics», K. McConnell and S. Bru[5], characterize economic development through an increase in the real volume of manufactured products or its volume per capita. However, the quantitative growth of production indicators does not make it possible to fully reflect the situation in a country's economy. It is important to consider the qualitative indicators that take into consideration inflation rate, the real purchasing power of population, its size and composition, quality of the manufactured products, as well as non-economic factors that can help identify trends in society. Thus, the factors that characterize economic development of a country include: factors of proposals, describing the capability of an economic system to increase production volumes, respective amount of resources, required for this; demand factors that reflect an adequate level of consumption of goods, operations, and services at a respective stage; effectiveness factors that reflect the functioning of an optimal production structure and maximally efficient utilization of resources; socio-cultural, institutional, and other factors, that form stimulating pulses in other areas of economic relations.

When considering economic development as a process that characterizes the improvement of certain structural elements of public relations, material-physical components of the society, or social-economic and financial systems in general, a transition to the fundamentally new qualitative characteristics, it is necessary to understand that a given process cannot occur independently, and be separated from the measures that predetermine it.

In this sense, development should be understood as a multidimensional process of deep modernization and reorientation of the entire economic, as well as social, system. It implies, along with a growth of income and production, the implementation of radical changes in the institutional, social and administrative structures. Development is the capability of economy that for a long time was in a state of relative static equilibrium to generate impulses and to maintain stable annual growth rates of GDP at the level of 5—7 per cent, and this requires the appropriate modification of the socio-economic system[5].

Thus, by having examined the evolution of the concept of budget regulation, we can conclude that in the process of economic development of a country there is a change in the priorities and forms of fiscal policy implementation. When analyzing the approaches by domestic and foreign

scientists to defining the concept of «budget policy», it was established that the vision of the elemental composition of the system of budgetary control, highlighting the peculiarities and its conceptual foundations in the system of state's impact on economic growth, is not unified with many issues remaining unresolved. That was why, while characterizing the basic principles of fiscal policy, S. Bulgakova correctly notes that «the essence of the task on building an effective fiscal policy implies its scientific substantiation, as well as defining the extent to which it is based on the fundamental theoretical principles, emanating from a certain socio-economic policy of the state»[6].

Legal definition of fiscal policy in Ukraine is presented in the Economic Code of Ukraine and is regarded as a policy aimed at the optimization and rationalization of income formation and the use of public financial resources, at improving the efficiency of state investment in the national economy, at coordinating the national and local interests in the field of inter-budgetary relations, at managing public debt and ensuring social justice during reallocation of the national income.

Based on the studies and generalization of key interpretations of the concept of budget policy, it is possible to distinguish the basic approaches: targeted — when a budget policy is regarded as a set of objectives, activities and tasks of budget regulation to ensure the economic and social development of a country; institutional — a set of the institutional components of budget environment[7].

In his works, V. M. Oparin considers budgetary policy as «the activity of a state in the field of forming and using budgetary funds, aimed at maintaining a high level of employment, stability of economy, growth of gross domestic product»[8]. S. I. Yury and V. M. Fedosov treat a budget policy as «the activity of public authorities, state administration, and local self-government, aimed at defining a strategic goal, as well as directions, objectives, and priorities in the development of budgetary relations, budget tactics, in order to achieve them, as well as the implementation of these tools»[9]. One of the most general is the definition by V. M. Fedosov, who considers a budgetary policy as «the activity of state authorities related to the formation, implementation, and regulation of the state budget of a country in order to ensure the socio-economic development and strategic priorities of the state». In this case, budget policy is expressed in the forms and methods to mobilize budgetary resources and use them for different needs of the state (including taxes and tax benefits, sanctions, budgetary incentives in the form of grants and subventions), defined sources of funding budget deficits, the principles of relationships between separate parts of the budget system. Thus, when considering a budgetary policy through the prism of the state and its activity one can quite clearly highlight the key forms and methods in the implementation of fiscal policy and to identify its major goal.

Therefore, underlying the targeted approach to the interpretation of a fiscal policy is determining the main goals of the state and the development

of measures for achieving them. O. D. Vasylyk believes that budget policy implies a set of measures by a state regarding the organization and the use of finance to ensure economic and social development[10]. M. M. Yermoshenko and S. A. Yerokhin represent a budgetary policy through a set of priorities (national interest), scientific approaches and specific measures related to the targeted activity of a state aimed to control the budget process and to use budget system in order to address economic and social tasks of a country[11].

Truly justified is also the opinion by T. M. Bogolib who represents a budgetary policy through a set of measures within the financial policy, which is formed through the allocation and redistribution of financial resources of a state (by employing the levers of budget control) within the existing legal-normative base aimed to achieve strategic socio-economic goals of society at a particular stage of state development. In practice, the budget policy is implemented via budget management — a set of interrelated functions, techniques and methods, which aim to control budget resources and relationships that arise in the process when budget flows change[12].

The essence of the institutional approach implies determining a fiscal policy through a set of institutions that affect the economic and social development of a country. V. V. Zymovets states that the institutional support for economic development is achieved not directly, but through respective organizations: government bodies, corporate and other entrepreneurial structures, state-owned enterprises, specialized government institutions in the field of finance, innovation, etc.[13] Organizational aspects are closely related to the tradition of neo-institutionalism and theory of the firm by R. Coase, under which creation of organizations (companies) occurs in order to save transaction costs. Thus, attention is drawn also to the problems of forming effective organizational structures in the real sector of Ukraine, adequate to present-day challenges, problems of interaction between public institutions and market agents; as well as the institutional aspects of innovative development[14].

L. V. Lysyak characterizes a budgetary policy as a totality of relevant forms of interdependences and mutual influences of economic, legal, political, institutional components of the budget space and the institutional environment of society in the process of forming a budget and using budget funds to achieve strategic objectives and main tasks in the development of society, which makes it possible to improve the level of balance and effectiveness of the system of budgetary control over the socio-economic development of a country[15]. The author notes that «for the choice of the most relevant, under today's socio-economic and institutional conditions, target objective of fiscal policy and for defining its priorities, of significant importance is to examine the possible list of goals in the mechanism of aligning economic interests by various subjects of fiscal policy. The main components of this mechanism are the subsystems of regulatory, social and fiscal objectives of fiscal policy. These include, in the subsystem of regulatory objectives of budgetary policy:

adjusting the level of business activity in separate markets; regulation of the process of redistribution of financial resources among sectors of the national economy; control over the level of meeting public needs on the part of the national economy in general; promoting structural shifts in the economy; ensuring the necessary conditions for economic development and investment in the national economy; constructing a fair tax system in relation to taxpayers (who are in different economic conditions) and efficient in terms of budget fulfillment; adjusting the level of tax burden on taxpayers: stimulation through tax instruments of positive structural shifts in the economy; ensuring favorable conditions for economic development and investments in the national economy; regulating via taxes, individual tax regimes, or by methods of tax regulation, the development of market infrastructure, national production, and economic growth»[16].

N. M. Ivanova considers a budget policy through a set of goals, tasks, decisions and activities, which are taken and implemented by authorities in the field of budgetary relations. Important is the definition by L. V. Yermoshenko that represents a budgetary policy as the «purposeful activity of a state related to the regulation of a budget process, to the control over balance of a budget, as well as the use of the budgetary system to implement objectives of economic policy in a country»[17]. In this interpretation, budget policy acts as an instrument of economic regulation to maintain a certain level of GDP, employment, and social security.

Significant is the approach by I. Ya. Chugunov, which considers a budgetary policy as a «policy that is formed in the course of a budget process, implies defining the goals and objectives in the field of finance, development of a mechanism to mobilize funds to the budget, the choice of directions to use the financial means, financial management in the public sector, the application of financial and budgetary instruments to regulate the organization of economic and social processes»[18].

The concept of «institutional architectonics of a budgetary system», proposed by A. A. Gritsenko, is a set of basic rules, norms, laws and regulations, specialized institutions, which ensure the optimal budget ratio, in particular, such as the specific share of the revenue and expenditure parts of the budget, deficit (surplus) of the budget, the amount of government debt in the gross domestic product, structure of income, expenses of the budget, public debt, sources to finance the deficit of a budget, the level of fiscal centralization, coefficients of inter-budgetary regulation. In this case, it is proposed to use the adaptive budget architectonics, based on the system of budget regulation and taking into consideration the optimal ratio between its elements and the cyclical nature of socio-economic development[19]. Budget regulation as a complex multilevel system is implemented in the interaction of institutions of tax and non-tax payments, budget, budget expenses, public debt, inter-budgetary relations, an institute of funding a budget deficit, etc.

Important is the characteristic of the budget-tax regulation, which is defined by I. Ya. Chugunov to be one of the important instruments in economic policy of a state, implemented by identifying the main objectives, tasks, qualitative and quantitative parameters for forming the income and expenditure of a budget, for public debt management. Achieving strategic objectives of socio-economic development of the state in this case depends on the degree to which the budget-tax policy takes into consideration special features of the institutional environment. Important tasks of the budget-tax policy are to improve the standards of living and welfare of citizens; to restructure the national economy in the direction of an innovative model by creating an attractive investment climate, proper conditions for entrepreneurship development, to improve the efficiency of using fiscal instruments to achieve the assigned parameters for the development of the country, as well as the timely response to changing socio-economic environment. Given the institutional transformations, with the aim of carrying out effective fiscal and tax policy, an approach is required that would integrate the trends and features in the socio-economic development of the country[20].

There is also a vision of fiscal policy as an instrument for regulating the economy of a country to maintain a certain level of gross domestic product, employment, and social security. However, such an approach does not account for the systemic signs of policy in a general sense, meaning that it includes measures, activities, priorities, and results.

The main tasks of budget regulation are to form and support the effectively acting system to manage budget resources at all stages of the budget process, to define priority areas to spend budgetary resources, to improve the efficiency of using budget resources as a result of the effectiveness of fiscal policy, to organize processes of regulation and stimulation of the enhanced reproducibility of an economic system by budgetary means. Thus, the result of analysis into the main tasks for implementing a fiscal policy in Ukraine is the conclusion on that the basic criteria for effectiveness and efficiency of such a policy are obtaining the maximally possible advantages and benefits at minimal use of resources from the state and its authorities, ensuring the growth of indicators of economy, improving the welfare of people.

The basis for the formation of a fiscal policy is budget. Economic science provides many different approaches to defining the concept of a budget, for example, given that the budget is quite a multi-faceted phenomenon, economics provides different views related to the definition of this concept, depending on its essential characteristics: as an economic category, as the main financial plan of a country, as a centralized fund of monetary resources. Budget as an economic category is a set of economic relations that arise between the state and other actors of social production, namely legal entities and individuals, in the field of allocation and redistribution of the GDP value in order to form and subsequently use the centralized fund of financial resources required for the implementation of duties that a state is responsible for.

The concept of a budget as the main fund of financial resources is based on the use of budgetary resources by the state authorities in order to perform functions, which are attached to it by law. Budget as a plan for forming and using resources of the country, and all of its territorial units, makes it possible for all state authorities and local governments to fulfill tasks in accordance with acting legislation. In the Budget code of Ukraine, the concept of a budget is represented as a plan to form and use financial resources in order to ensure fulfillment of functions assigned to the bodies of state and local governments, over a certain budget period[21].

The budget, as the main instrument of implementation of the regulation of the country's economy, the main source of achieving stability of financial support to state policy, occupies a prominent place in the general system of economic development of the country, in the formation of appropriate financial framework to accelerate development and progress of all its industries, achieving macroeconomic balance under the dynamic conditions of economic changes. According to the adopted financial policy of the state, which should be based on the main priorities in the economic and social development, the budget has to control the allocation and redistribution of the indicator for a gross domestic product among all sectors of the national economy and administrative-territorial units.

A capability to predict the budget policy serves the main factor characterizing the overall macroeconomic stability. The budget must be an instrument for the implementation of structural reforms, as well as to support a variety of positive processes in many areas and sectors of economic activity. In order to comprehensively and completely solve major challenges faced by bodies of state administration in the public sector, it is quite important to properly understand the concept of fiscal regulation and the essence of a mechanism for its implementation. Therefore, the development of an effective mechanism for the rational selection of the most important areas of funding and effective approaches in relation to the existing proportions in the allocation of funds among the defined priorities is the primary and main task.

Budget control requires professional knowledge and skills regarding its implementation, while the results affect all citizens of the country. Thus, in addition to the choice of an objective, tasks, and proportions in the allocation of available resources, there is a need to analyze specific indicators, based on which it would be possible to assess the practical implementation of tasks for fiscal policy. There must be a constructed and practically implemented integrated indicator for estimating various measures related to fiscal policy. In addition, a prerequisite is the process of harmonization and coordination of fiscal policy with the tax, monetary, and credit policy, in the process of whose implementation one should take into consideration the existence and impact of various external and internal factors on its resulting performance indicators.

Consequently, a budget policy, which is an integral part of the financial policy, is a specific activity of bodies of state power and local self-government regarding the choice of the most rational methods and means to use the existing limited budgetary resources, the effect of which should be aimed at funding priority areas of social development.

The main goal of budgetary control is based on ensuring a sustainable and long-term economic growth and a high index of the quality of life of citizens, through the social and structural-innovative reorientation of the economic system, formation of a favorable investment environment. Rather important is to ensure the most effective use of budget resources in all areas of the country's budget system. The implementation of basic tasks of fiscal policy depends on the choice and practical implementation of methods for budget regulation, which is why it is important in the process of forming a fiscal policy to clearly develop priorities that should be achieved in the process of its implementation[22].

The main functions of budget control are closely interconnected and manifest themselves in a combination, their parity would improve effectiveness of the entire budgetary system in general, for example, a fiscal function is observed in the directions for implementation of the fiscal policy in the system of revenues in order to fully financially support the fulfillment of tasks and functions assigned to bodies of state power and local self-government. Control function manifests itself in the mechanism for implementation of budgetary policy in the area of expenditures, in a variety of inter-budgetary relations; stimulating function — in the capability of fiscal policy to exercise influence on the socio-economic character of the country's development.

The process of implementation of the tasks relating to the formation of socially-oriented and structurally-innovative direction of the country's development includes a variety of stages: creating the institutional, financial, and organizational prerequisites for large-scale qualitative changes in all spheres of country's life; formation of conditions for faster economic development, based on a comprehensive modernization of all enterprises and institutions, adjusting relations concerning property; establishment of sustainable economic growth of the economy, the implementation of main tasks in the integrational direction of Ukraine. The processes of medium-term budget planning serve the main instruments to regulate the social, regional, economic, scientific, and many other areas of activities in the country. The introduction of such a system of budget planning is a long-term and iterative process, where the methods and tools for planning and forecasting must be gradually improved and modernized[23].

In the process of implementation of the prospective budget planning, the conditions form for solving the major tasks that affect the economic development of the country. The need to ensure the coherent functioning of all existing elements of the current budget system and to timely solve urgent

economic problems predetermines that the budget process also acts as an object of state's influence. A system of the medium-term budget planning is the main part of the system of state regulation of the economy and is a large set of different functional, financial, budgetary, and economic components: the revenue and expenditure part of the budget, deficit (surplus) of the state budget, national debt, tax legislation, existing inter-budgetary relations, the economic processes in the country, state of the external economic environment, and the basic relationships between these components[24]. At present, quite important is the future organization and improvement of efficiency in the functioning of a system of budget control; the development and achievement of strategic goals and priorities related to the development of administrative-territorial units, their further consideration in the process of budget planning, the search for an effective system of indicators, which would make it possible to assess the indicators for a fiscal policy in terms of achievement its objectives.

Budget control is a complex and multifaceted process that is characterized by different approaches to the theoretical substantiation of its essence, to the definition of a goal and ways to achieve it. All this testifies to a certain complexity, uniqueness, and specificity of the fiscal policy. Therefore, effective practical and theoretical improvement of scientific concepts of fiscal policy would make it possible to ensure the high level of economic and social development of the country, both in the short and in the long term.

Thus, the economic essence of a fiscal policy for economic development as a means of state financial regulation of public relations implies the interaction between institutional, economic elements of the budget system and the components of financial architectonics, which, in the process of development of the main directions for forming and using budget funds creates the conditions for achieving the tactical and strategic goals of the state. The system of budget control includes revenue and expenditure part of the budget, deficit (surplus) of the budget, direct and guaranteed public debt, a system of inter-budgetary relations, tax and customs policy, exogenous and endogenous factors of economic environment and the relationships between them.

Budget policy is one of the main components of the toolset for the state intervention in the economy. Its tasks related to creating the necessary economic, legal, and organizational foundations for forming and optimal allocation of financial resources among different parts of the budget must be coordinated with the strategic objectives for a sustainable inflation-free growth of the state and for enhanced living standards, while the means and tools of public administration are aimed at ensuring macroeconomic stability, establishing optimal structural proportions in the economy, solving social problems, forming modern market financial institutions.

Contemporary processes in the socio-economic development of Ukraine's regions are characterized by the presence of multi-vector trends, while differentiation in the levels of development demonstrates a stable

character. In this context, the budget policy, which is a key component of the state financial policy and defines the extent of the initial allocation of GDP, affects the structure of savings and the debt dynamics, and, as a consequence, is an active element of the system of government regulation, potentially acts as the most effective and efficient means to solve the key tasks of socio-economic development and must become a tool for implementing the internal potential of growth.

Budget policy is an important instrument of state regulation of social development, because in the process of its formation there is a development of the main directions for using budget funds, guided by the necessity to solve tasks faced by the society at the present stage of its development. That is, the budget policy reflects public interests, and, owing to it, the functions and tasks of the state are implemented; it is formed in the course of the budget process and implies determining the goals and objectives in the field of public finance, the development of a mechanism for filling a revenue part of the budget, as well as selection of directions for using budget funds, financial management in the public sector, regulating economic and social processes employing the financial and budgetary instruments.

Budget relationships are characterized by a series of specific features, among which, first, is their imperative character, predetermined by the participation of the state, personalized by respective state organizations; second, is their subordination relative to the social production of material goods and services; third, the connection to the formation and use of budget funds at all stages of the budget cycle; fourth, their quantitative and qualitative certainty. Given that budgetary relations reflect only part of redistributing relations within the society, they can only adjust the relations of production and allocation.

Ukraine has at present a favorable environment to reform and improve fiscal policy, which aims to create opportunities and provide conditions for the maximally effective use of budget resources in accordance with priorities for sustainable human development. The principles of effective budgetary control under modern conditions are characterized by systematic-situational provisions, which include: carrying out budget reforms based on scientific justification and coordination of activities, improving the quality of forecasting macroeconomic indicators; taking into consideration the world experience of budget reforms with the aim of harmonization, unification, and simplification of the financial system of the country and its institutions, improving its transparency, overcoming the controversy, lack of certainty, and the duality of functions in state management, caused by the complicated system of bodies involved in the budget process; a comprehensive approach to reforming a budget process both at the state and local levels, and at the level of inter-budgetary relations; improving the effectiveness of budget expenditures through the use of program-targeted fundamentals of operations, orientation of the budget system to achieve specific results[25].

When selecting the areas of budget control, one should proceed from the strategic objectives of state policy — creation of economic conditions for innovative development. To this end, a budget policy must transform the state budget into a mechanism to promote innovation and economic growth, to implement a rational structural adjustment of the economy. Stabilization and improvement of the efficiency of national economy, directing budget funds towards achieving strategic and tactical goals and objectives in the development of society is possible by using a progressive budget policy.

The result of the substantiated budgetary policy is the effective functioning of the budgetary system, which, in turn, must ensure alignment between expenditures and the availability of appropriate resources; necessary rights and incentives to mobilize revenue from local budgets; implementation by authorities and control bodies of their power in the legislative and executive spheres when fulfilling a requirement for their financial independence; control over the state and utilization of natural resources and environmental potential as the basis for existence of the country and supporting life activities of its population; stimulating business activity; the implementation of structural reforms; improving investment attractiveness of the country and individual regions[26].

O. I. Lyuty selects and substantiates economic instruments in the mechanism of fiscal policy based on the efficient use of the budget mechanism itself in terms of those changes that are related to the dynamics of a macroeconomic situation, that is, the use of different economic instruments depends on the cyclic economic development, market conditions, and, consequently, on the adaptation of the state's budgetary policy to the trends and patterns in its development. This approach makes it possible to distinguish the following basic economic tools for fiscal policy: optimizing the structure of budget revenue; optimizing the structure of budget expenditures; changing a policy of inter-budgetary relations; a budget deficit and a state credit[27].

This toolset, according to acting legislation, can be applied annually, when forming and implementing a budget process, by adapting a budgetary policy to the actual economic situation in the country. Thus, a fiscal policy could be used as an effective mechanism of influence on the macroeconomic processes in general, that is, the implementation of economic instruments of fiscal policy must provide for the macroeconomic effect, and, from a standpoint of budgetary strategy, the long-term dynamics in the stability of socio-economic development.

An objective assessment of budget control as a phenomenon can be given only under conditions of applying the generally recognized criteria and indicators. Most domestic economists propose, in different interpretations, to apply such criteria for efficiency of the budget control as: the level of accumulation of budgetary income in general and taxes in particular; the level of execution of budget obligations; the amount of a budget deficit, its parameters and the rate of growth of a public debt; the volumes

of financial resources being diverted to service the public debt; the level of monetization of a budget deficit; the amount of foreign currency reserves, which are used to finance a budget deficit; the dynamics of GDP; the level of unemployment; the degree of fulfillment of normative legal acts on the budget; the scale of government's issuing of monetary surrogates of various kinds; the amount of budgeted debt as a result of existing non-payment of tax liabilities; the magnitude of prolonged debt payment for salaries due to lack of budgetary funding; the amount of prolonged debt for public-funded establishments due to their under-funding; the value of prolonged debt for financing a state order; the level of implementation of legislative and similar acts on the budget[28].

To improve the efficiency of budget control in Ukraine, it is proposed to strengthen the use of indirect levers of fiscal policy, namely, ensuring the structural adjustment of the commercial complex; creation of appropriate material base both in the public and in the private sector of the economy; improvement of the potential of local producers and strengthening their competitiveness; creation of an adequate market economy and infrastructure; formation of fair relations between a business and salaried employees; improving the stimulating role of remuneration, as well as the effectiveness of state regulation of economy; weakening the centralization of economic development and strengthening the economic potential of regions.

Budget policy as a process is seen through a set of relations between economic, legal, and institutional budgetary components, associated with the selection of main directions and priorities in the implementation of tax and fiscal policies, development of plans and forecasts for major budgetary indicators, developing a budget, using available budget funds and controlling their use in order to achieve a variety of tactical and strategic goals of the state. In recent years, Ukraine has been fairly consistent in implementing the measures to reform and improve the country's financial system, which have mainly focused on the implementation of financial stabilization through the improvement of the tax system in Ukraine, the introduction of a system to control expenditures of the state budget, improvement of all inter-budgetary relations.

Given that the budget serves the main part of the system of financial control over the country's economy, the indicators of its balance, optimality, are rather important conditions for economic growth, which is why a budget policy should be formed based on the scientifically-substantiated concept of development of budgetary relations as part of the financial policy that is aimed at the creation of the required conditions for improving the quality of public services, social and economic development of regions, improvement of life of people.

The state budget of Ukraine occupies a decisive place in the budgetary system of the state. It is employed to fund expenditures for the implementation of national measures in the system of social, cultural trends, defense,

to provide financial resources for the state and local executive authorities. For the purpose of economic alignment of all regions within the state, the budget, via methods for the use of subventions, subsidies and grants, that is, official transfers, allows for the redistribution of a certain part of financial resources by local authorities.

At the present stage of development, budgetary control in Ukraine implies the application of a program-target method in the budget process. Program classification of expenditures and crediting the budgets of all levels is created by the Ministry of Finance of Ukraine, and local financial bodies, based on the proposals submitted in the form of budget requests by the main allocators of budget funds in the process of drafting a law on the state budget of Ukraine, as well as the draft decision about a local budget. Such a program classification of expenditure and lending to local budget is formed taking into consideration the main standard classification of expenditure and lending to local budgets, approved by the Ministry of Finance of Ukraine.

Budget policy is an integral part of financial policy, it is a specific activity of bodies of state power and local self-government related to choosing the most rational methods and means to use existing limited budget resources, the effect of which should be aimed at financing the priority directions of social and economic development of the state, supporting the sustainable development of society[29].

Given the above, it is expedient to apply a structural-functional model of the impact of budget policy on the socio-economic development of the country, based on the totality of financial relationships and institutional combination of components in the tax, customs, debt policy and the system of inter-budgetary relations, using the tools to ensure macroeconomic stability, which would make it possible to improve the efficiency of financial resources management under conditions of economic transformations.

The application of a given model makes it possible to improve the efficiency of managing the financial resources of the country and to create incentives for the long-term balanced system of public finance. The main methodological principles of budgetary regulation are based on the combination of components of the financial mechanism in the system that forms the country's budget revenues, planning and implementation of expenditures, in the system of inter-budgetary relations, effective management of government debt, taking into consideration the cyclical nature of economic development of Ukraine and economy in general — the state of public finances, which in turn would promote the effectiveness of fiscal policy as the primary means of influence on the social and economic relations in society.

In the vast majority of the world, the most common are three basic concepts of budget policy. The first of them implies that an annual budget should be balanced, that is, the balance between revenues and expenditures must be maintained, thus the balanced budget is the main purpose of a given fiscal policy, which is implemented through a budgetary mechanism. The

second concept is aimed at balancing the budget over a respective economic cycle. The third concept is based on views on functional finance, that is, the main purpose for the implementation of fiscal policy is achieving the balance of the economy of the country, rather than the budget as a basic financial plan. At present, significant dynamic changes in social and economic processes in the system of budgetary relations necessitate the development and implementation of exactly this kind of concept of the fiscal policy, which would fully account for the economic, social, political and institutional factors of the country's development.

Thus, while optimizing the allocation and redistribution of GDP when using a budget mechanism, the state power permanently regulates all socio-economic processes at any stage of its development, taking into consideration its characteristics, objective and subjective factors.

Budgetary methods, tools, levers, and their architectonics, define a possibility for the budget to quantitatively and qualitatively influence the social and economic environment. In this case, a quantitative impact is characterized by the volume and proportions of mobilized and redistributed budget funds. Depending on the volume and an object whose funds are extracted at the disposal of the state, the amount and area of direct appropriations, opportunities emerge to expand production, etc. A qualitative impact is associated with the possibilities to affect, via specific types of budget revenues and expenditures, economic interests of economic entities. The specified effect contributes to the transformation of budget revenues and expenditures into incentives to develop the economy, to improve its effectiveness. The purposeful use of parts, elements of the budget mechanism and the budget architectonics makes it possible to accelerate or slow down the socio-economic processes, to initiate the achievement of desired results[30].

Budgetary regulation determines the volume of the primary distribution of gross domestic product, impacts the structure of savings and debt dynamics, acts as an effective means to solve the main tasks of social development and must become a tool for the implementation of the inner potential of economic growth.

It is advisable to increase the degree of coordination between the components of budget policy in order to ensure financial stability and economic growth. Activation of structural changes in the economy implies the application of a balanced approach to the functioning of the budgetary system. Budgetary policy should adaptively respond to the economic cycles when it is required to maintain the indicative values for a budget deficit and a public debt. Improving the effectiveness of budget expenditures requires the coordination between the objectives of budget programs and the priorities of the country's socio-economic development, the use of effective forms of state financial support. Of particular importance are the issues related to the implementation of a system for medium-term and strategic budget planning. It is expedient to undertake institutional changes in the financial

support for social protection, and deepening the insurance principles of the pension system. It is important to improve the effectiveness of control and auditing of the use of budget funds, which necessitates further development of its methodological principles, refinement of criteria to assess the degree of achievement of the planned objectives and tasks by the main authorized bodies that allocate budget funds.

It is important to ensure a sustainable financial situation regarding a balanced budget and the feasibility of its indicators. Stability of the budget increases due to the application of qualitative economic forecasts and preconditions that underlie budget planning. In this case, it is important to conduct the annual assessment and to compile an inventory of existing spending commitments. The indicator of efficiency and effectiveness of the use of budget funds must be characterized by the achievement of an economic and a social effect at minimum volumes of budget funds used. In this case, optimizing the budget funds should not affect the quality and level of providing a budget service. Budget expenditures should be focused on creating conditions for the development and modernization of the economy, efficiency of the public administration, for implementing the strategic goals of economic growth in the country, which would make it possible to improve the level and the quality of life for people[31].

One of the important tasks to form an effective mechanism of budget regulation is the creation of appropriate conditions to stimulate the development of basic industries of highly technological modes and the modernization of key sectors of the national economy, which would provide the prerequisites for long-term economic growth taking into consideration the priorities in macroeconomic policy. Important is the concentration of budgetary resources at critically significant amounts to enhance the state innovative-investment activities related to the modernization of extractive industries, fuel and energy complex, agriculture, aviation industry, transportation infrastructure, the development of nuclear power industry, nanotechnology[32].

The formation of special institutional conditions in order to form and implement effective budget regulation requires the use of an effective and adaptive system of fiscal policy, which should contribute to the balanced social and economic development of the state. Independence of budgets at all levels is ensured by assigning some of their own revenue sources to them, and the respective right to choose the most promising directions for using these financial resources, in accordance with existing legal acts that take into consideration basic national interests.

Thus, a budget policy is an effective tool of state control over the country's social-economic development. The system of budgetary regulation is based on the comprehensive totality of financial and economic relations, various institutional budgetary elements concerning the choice and implementation of the main directions in the implementation of budget policy,

planning, and forecasting major budgetary indicators, areas of using budget resources, conducting control operations regarding the fulfillment of budget indicators, achievement of the planned socio-economic goals and objectives. A priority is also the application of a regulatory mechanism of budgetary policy, which is based on a combination of budgetary regulation in the system of budget revenues and expenditures, inter-budgetary relations, and national debt. To develop and implement financial-budgetary regulation over a certain period, the budget policy should be developed based on the cyclic nature of the financial system development, the state of public finances and such estimated value for stability reserves in this budget system whose significant decrease could lead to complications in the implementation of an effective budget regulation in terms of positive effect on the indicators for economic growth.

1.2 Institutional bases for the formation of a budget strategy for the country's socio-economic development

Scope of studying the institutional bases for the formation of a budget strategy for the country's socio-economic development, ensuring its substantiation, implies the investigation of the institutional environment of a budget space. Different approaches existing in the economic literature to the content of the institutional process imply the development of theoretical bases of budgetary relations taking into consideration the stages and directions in the development of institutionalism.

The theory of institutionalism originated at the beginning of XX century in the United States. The most prominent representatives of this theory were T. Veblen, J. Commons, W. Mitchell. Institutionalism predicted a wider use of the descriptive-statistical and historical-genetic method as the basic category of the institution — a set of legal norms, traditions, etc.

Thus, institutionalism defined a system of rules and views on society and the economy, the basis of which are the institutions that affect socio-economic processes and are the driving force of social development. These rules and views, on the one hand, limit and stimulate the activities of subjects of economic relations, and, on the other hand, provide for the possibility to make rational choices and predict their consequences.

The essence of the institution is a combination of formal, fixed in the framework of legislation, which structure the interaction among individuals in the economic, political and social spheres, rules that perform the function of constraints in the behavior of economic agents and align interactions between them, as well as the appropriate mechanisms to control compliance with these rules; collective activities to control individual activity; a «verbal symbol for a better description of the group of social customs», a «way of thinking» that becomes a habit for a group of individuals or a tradition for people.

Financial and budgetary institutions are understood to be the totality of subjects of financial-budgetary relations, which act based on formal and informal principles, rules, norms. The formal ones include a system of law, financial and organizational structures (Ministry of finance, Ministry of economic development and trade, State treasury, Accounting chamber, State fiscal service, National bank, etc.), institutions for the institutional implementation of budgetary policy. The informal ones include: values, standards in the operation of a financial-fiscal environment, stereotypes in the financial-budgetary management.

The effectiveness of formal principles, rules, norms depends on the extent to which participants in the budget process comply with their orders and exercise control over their execution. When assessing the impact of informal principles, rules, norms, it is important to take into consideration the compatibility of objectives, for which they are used, as well as the expected results.

It is important to consider institutional inertia, which determines the stability of financial-budgetary institutions in their institutional development. A budget strategy defines institutional benchmarks for economic actors. However, the transformation of financial-budgetary institutions is an important step in the process of development of the system of public finance, bringing the system to the new, more qualitative level pf development.

Based on the theory of institutional changes by D. North, institutional environment, or institutions, can be represented by a group of individuals who are involved in this activity. Constraints imposed by the institutional structure define a lot of opportunities. Business units that have the objective function will accumulate knowledge and experience that will enable them to strengthen their positions in order to survive in the context of competition and to minimize transaction costs, which, in the opinion by D. North, are the major deterrent factor of economic development and emerge in relation to that the information is distributed asymmetrically between the exchanging parties, so the institutional structure decides what types of knowledge are required to obtain the maximum output, while competition encourages continuously to invest in obtaining knowledge and experience.

Thus, economic theory focuses on the rules and constraints, within which the economic agents interact and which make it possible to predict evolutionary trends in the development of institutions, including the financial-budgetary ones. However, the development of financial-budgetary institutions is affected by the totality of factors, whose influence level may vary depending on the socio-economic and political processes.

It is important to note that the development of financial-budgetary institutions that determine the features of the institutional environment for the formation and implementation of fiscal policy occurs in the process of mutual alignment and complementarity of each other.

Institutionalism considers this phenomenon as a process to form informal rules that govern financial interaction between state authorities, local

authorities, and society. A significant role in this case belongs to political institutions: compatibility of interests of private and public structures. In this case, the effective financial-budgetary institutions, as seen by proponents of this theory, include only those that contribute to reducing transaction costs.

Therefore, the basic lever in making institutional decisions is the legitimacy of power bodies endowed with appropriate authority. Accordingly, the institute of power defines a budget strategy.

It is worthwhile to note that the early institutionalism developed through three stages: the first stage (1920—30s), which is characterized by defining the basic concepts of institutionalism, defending the idea of social control and the need for a government intervention in economic processes; the second stage (up to 1960—70s), which is characterized by investigating the demographic problems, contradictions in socio-economic development of capitalism; the third stage (1960—70s), which is characterized by studying the role of economic processes to ensure development of society.

At the same time, one distinguishes three directions within institutionalism: social-psychological, socio-legal, and institutional-statistical. Specifically, T. Veblen linked the base of economic development to the influence of psychological factors. The most known work by T. Veblen is the «Theory of the Leisure Class», which does not consider a person to be a subject of value maximization. In his opinion, when making a decision, a person is guided only by the innate instincts: self-preservation, saving the genus, skills, competition, inheritance, curiosity. The basic contradiction of capitalism is, as he defines, the contradiction between an industry and a business. In this case, the goal of an industry is to improve production efficiency and to increase the wealth of society: industrialists are all the participants in production. The purpose of a business is to get profits; businessmen are financiers and entrepreneurs. According to T. Veblen, business has subjugated the industry. Accordingly, the contradiction between an industry and a business is the cause of all the failings of capitalism.

J. Commons considered that the basis of economic development of the society is formed by legal relations and legal norms. The main works by J. Commons are «Legal grounds for capitalism», «Institutional economic science», in which he highlights the provisions for resolving conflicts and achieving social cohesion through a legal procedure. Underlying his views is the theory of joint activity of people and their assessments in all the agreements by which the participants encourage one another to achieve unity. The concept of an agreement includes three elements: a conflict, that is, the clash of interests among participants of the agreement; an interdependence of interests among the parties to the conflict; an order — resolving the conflict and concluding an agreement. At the same time, the dominant idea is the idea of social world. According to which, the initial stage of a trading capitalism is followed by its entrepreneurial stage, by financial capitalism and by administrative capitalism. At the stage

of financial capitalism, prerequisites for meeting the interests of citizens are created.

W. Mitchell investigated economic processes in order to identify effective methods and instruments for lessening the negative impact of financial-economic crisis phenomena. According to his theory, a crisis could be considered to be a gradual slowdown in the rate of economic growth. Based on the extrapolation of the dynamic series of economic indicators, W. Mitchell designed a forecast for economic conditions. However, it is expedient to note that in the short term the level of reliability of that forecast was quite high, and in the long term — not significant.

At the same time, despite the different directions within institutionalism, they are characterized by common attributes: a critique of capitalism; dissatisfaction with the significant level of hiding the implementation details of a particular set of functional capabilities of economy; the desire to integrate economic theory with all social sciences; development of proposals for reforming the economy in terms of improving the effectiveness of its regulation and improvement of social control.

The propagation of institutionalism in other countries was predetermined by the evolution of economic theory in the United States. The positions of institutionalism were addressed in works by R. Aron, A. Berley, E. Bogart, D. Bernham, J. Eully, J. M. Clarke, G. Colma, A. Loouw, G. Minz, W. Rostow, J. Furaste, etc. At the same time, modern institutionalism (neo-institutionalism) has certain differences from the early institutionalism. Its ideas are covered in the studies by such economists as D. Bell, J. Galbraith, G. Myrdal, A. Toffler, J. Tinbergen, R. Hailbroner, etc.

Thus, the idea of synthesis of economic and sociological analyses is the basis of institutionalism, whereby the ways of thinking, customs and habits, are the root cause for ensuring socio-economic development of society. While defining the essence of the social structure, social development factors, the level of influence of property relations on the means of production is not significant, according to institutionalists; considerable attention is paid to revealing the mechanisms that cause changes in economic relations, to the substantiation of their dynamics and to determining the leverage on the economic processes. The evolutionary character of institutionalism ideas manifests itself in disclosing the socio-economic processes, the forms of organization of economic relations, construction of scenarios and forecasts for the development of society in the short and long term.

Among the important problems related to ensuring the development and modernization of economy, institutionalists highlight creation of the system of social control over economy, starting at the internal corporate level to the organization of social control at the macroeconomic level, the implementation of which is connected to the vigorous activity of bodies of state power. Institutionalists imply various forms of social control over the economy: reforms relating to large corporations, management of their

activities, government and regulatory measures that affect the mechanism of market competition, pricing, employment, state of the monetary-credit market, a system of public finance, etc. Important role in the organization of social control belongs to planning, including the creation of a state system of programming and indicative planning in order to develop and improve the state forms of management. Considerable attention is paid to the issues on the organization and stimulation of scientific and technical progress. Specifically, the American economist W. Rostow defined the modern stage to be «the fourth industrial revolution», which is associated with the introduction of microelectronics, new methods of telecommunication connection, laser technology and robotics, fundamentally new artificial materials, etc. Such a necessity is predetermined by that the efforts of private sector are not enough at present. It is the state that should stimulate the scientific and technological progress, to organize basic research, to improve the efficiency of education system, etc.

Under modern conditions, there are proposals to put forward provisions in order to supplement institutionalism (neo-institutionalism) with new elements and to reconsider the obsolete ones. Specifically, W. Rostow identified a model of the «civilized synthesis», which implies the maximum use of private enterprises, free market, combined with the administrative and financial support of initiative by public authorities. The idea of creating a new institutional economics has been substantiated, which implies strengthening of the methodological and theoretical foundations of institutionalism, creation of the «fundamentally economic concept of institutions». Supporters of this direction take into consideration the ideas by J. Schumpeter and F. Hayek, apply an evolutionary theory by R. Nelson and S. Winters, the legal concept of property.

Neo-institutionalism proceeds from the assumption on that social institutions are subject to analysis using standard tools from economic theory. The basis of the methodology of the neoclassical school is the principles of rational behavior and individualism. Among the theories of neo-institutionalism related to ensuring the development of the institutional environment for forming a budget policy, of significant interest is the theory of social choice by J. Buchanan and the theory of property rights by D. Galbraith and R. Coase.

The theory of social choice is based on three basic prerequisites: individualism: people act in the political sphere, pursuing their personal interests, and there is no boundary between business and politics. Accordingly, the important tasks are to study techniques and methods employing which government agencies are used for personal benefit; the concept of an «economic person», his rational behavior, that is, they compare marginal benefits and marginal costs; interpretation of policy as a process of exchange, in particular financial resources for public good. At the same time, they note the lack of rationality in this exchange, a mismatch between the amount of financial resources and the benefits obtained by different individuals.

Proponents of the theory of social choice note that it is not practical to rely on the results of voting, as they are to a considerable degree dependent on the specific rules for decision-making.

Thus, the paradox of voting is the contradiction that arises as a result of the fact that the vote based on the principle of majority does not make it possible to detect the advantages of society in terms of economic benefits. In the framework of the «political exchange», one distinguishes two levels of social choice: working out rules and procedures in a political game, in particular rules that govern a budget process, approval of laws, organization of a taxation system; practical activities of the state and its bodies based on the adopted rules and procedures.

The concept by J. Buchanan implies the reforming of existing system of redistribution of financial resources; the defined priority is not the justification of priorities in the financial policy and its components, but the ways to limit government regulation. At the same time, J. Buchanan argues that to balance the economic and political decisions, an important role belongs to the contractual and constitutional bases, fundamental rules of the political system. In this case, there are two conceptually different levels of social choice: the initial constitutional and post-constitutional. Study into the first level implies the development of economic theory of the constitution, the second develops economic theory of political institutions. The difference between the two levels of choice can be detected as an analogy of choice on which the fiscal justice depends. J. Buchanan proves that a deterrent in maximizing revenues by a government is fiscal decentralization. Therefore, the overall size of public sector should vary inversely in proportion to decentralization.

Thus, the activity of public authorities when taking into consideration the interests of maximizing their own revenues influences directly proportionally on the horizontal and vertical competition between state authorities and local self-government, which predetermines the level of their independence. It is possible to prevent the above only through a fiscal decentralization, which implies strengthening of local finance. At the same time, achieving a successful outcome when conducting a policy of fiscal decentralization depends on the required conditions (political autonomy, responsibility in terms of spending power, a considerable amount of revenue authority, budget autonomy, transparency) and the desired conditions (freedom from excessive control over expenditure by central government, a possibility to borrow, unconditional transfers).

According to the economic theory of property rights, any economic activity affects the interests of all members of society. In this case, it is important to take into consideration the external factors — costs and benefits that the individuals not directly involved in material or monetary expenditures obtain, while experiencing the side results of other people's activities. The market economy has the property to underestimate the external factors

and does not compensate for the related additional costs. According to R. Coase, despite studying market relations in general, the main focus is still given to determining prices, rather than the market as an institutional structure of the economic system. The result is not taking into consideration the role played by law in the behavior of firms and the functioning of markets.

The essence of the theory by R. Coase is the fact that the problem of side effects could be solved by agreement between the interested parties. The terms of the agreement are a clear definition of property rights and the relatively low cost of concluding the respective agreement, which involves a small number of people. If the property ownership is identified and delimitated, the parties could relatively easy arrive at a predefined result. They are capable to independently solve disputes, usually without a third-party intervention. At the same time, an agreement cannot be achieved without external intervention if the dispute involves a significant number of individuals. In this case, an important task is to determine the ownership rights for property and use, management and exclusion, ensuring the protection and inheritance, unlimited ownership and liability, eliminating harm to others, and the application of procedures to restore the ownership, the right to receive income and to receive compensation. If property rights are identified and followed, there is no reason for administrative intervention by public authorities. Accordingly, ownership rights can be combined, transferred from one to another individual. In this case, one should consider and include in the analysis the cost of information, control, execution of agreements (transaction costs).

Thus, the concept of the institutional approach changes with the development of public relations. A characteristic feature of institutionalism is the identification of institutions with the organizational forms of human activities — individual and collective. Individual activity is related to standards and rules of conduct, collective — relations between people. These aspects define approaches to the statement and implementation of a budget strategy. The theoretical task on defining the role of institutions in the regulation of financial-budgetary processes in Ukraine is complicated by that they evolved under conditions of unstable transformations.

Institutional environment for the formation and implementation of a budget strategy implies the existence of long-term, stable relations between financial-budgetary institutions that arose evolutionarily creating a budget space and is a system of interconnected and interacting formal and informal institutions, institutional rules, agreements and standards, mechanisms of financial control over their observance.

The institutional organization of a budgetary system affects its stability and balance. Financial-budgetary institutions define the institutional process of budgetary system development, which implies the creation of long-term stable relations between the institutions, which are formed evolutionarily. Improving the efficiency in the formation of a budget strategy

implies revealing the role of financial-budgetary institutions in ensuring stability and balance of the budget system. The institutional environment for the functioning of budgetary institutions is a complex unity of components, which has an integrational effect on the economy, defines directions and trends in its transformation. Such an environment includes: procedures and rules of conduct; imperative legislative and regulatory norms; administrative structures and establishments at all levels; institutions that combine market and corporate culture. Development of an institutional environment should be considered by taking into account the following aspects: the society's approval of rules and norms of business conduct (referring both to regulations and authorized structures, established traditions and the value system) in the areas that are typically associated with the activities of the network of budgetary institutions; establishment of institutional entities with a legal status and the existence of appropriate infrastructure that would ensure the implementation of their statutory functions and compliance with the earlier established rules; achieving social consensus, which is manifested by a specific attitude of the public towards the rules and organizational structures within the budget sector, the acceptance of the institutional order and the social cost of services.

Formal institutions at the macro level are personalized by a system of legislation, while at the level of business subjects they manifest themselves by the contracts and agreements concluded by them. Informal institutions at the macro level are represented via social norms, at the micro level — through results of arrangements between subjects. Despite the tight relationship between formal and informal institutions, differences between them remain fundamental. For example, control over the quality of services provided by public institutions can be regulated by standards and rules (formal institute). At the same time, a budget agency may resort to quality control also to build its own image, while providing low-quality services would mean a reputational loss in the community.

Formal institutional rules, developed and approved by authorities, are reflected in legal regulations. Informal institutional rules for the most part do not have direct authors. Their content is not documented, and if its legal registration occurs, such a document is not imperative for fulfillment. Observance of the informal institutional norms is based on the social capital, the assurance that other participants in the institutional environment know these rules and accept them, rather than various power tools of coercion.

Formation and updating of public requests regarding educational, medical, socio-cultural, administrative, and other types of services rendered by state institutions, occur under the direct influence of institutional habits and traditions. The development and improvement of the concept of financial support for budgetary institutions, one must take into account the proportionality between the cost of services rendered and their cumulative value, which underlies the corresponding social compromise.

Informal institutional norms are based on cultural traditions and values. The latter take roots in the axiological basis of society and are related to the reproduction of established behavioristic practices that transformed over time into habits. At this level, the repetition of everyday activities by subjects takes place semi-automatically, irrespective of the assessment of their effectiveness and importance. Informal institutions are endowed with high inertia, their participants for the most part resist any changes that breach the prevailing practice. Cultural traditions in economics and finance is not a simple mechanical repetition of similar operations. Their reproduction corresponds to specific models of economic life, algorithms of perception and interpretation of information, etc. These characteristics provide informal institutional norms with additional rigidity and stability.

Formal and informal institutions and economic traditions and values are complementary. Conscious changes to the formal component of the institutional environment of budgetary institutions should be undertaken with respect to likely consequences in the informal and value-custom segment.

Fundamentals of forming a budget strategy in the aspect of social life, given its philosophical, legal, social, psychological, cultural features, are directly dependent on such closely related factors as the economic behavior of business subjects and the factors that define it; the system and structure of incentives and motives of economic agents; norms, principles, rules of economic behavior. Under such circumstances, a reasonable budget strategy should be a determining factor to support the integrity of the budget system, its balance in the long term, and the formation of the working mechanism for effective impact on the progressive development of society. A budgetary strategy must be aimed at ensuring the adequacy of the regulatory measures to internal and external changes in the economic environment in order to develop the state and regions and, on this basis, to enhance the well-being of society.

Defining the ways for adequate, in terms of conditions and degree of development of society, engagement of the regulatory potential of components in the budgetary strategy necessitates further study into the relationship between budget relations and socio-economic processes. A budget strategy should be seen as a component of the system of institutions of society, and the development of the system of budget regulation will positively affect the implementation of the appropriate institutional changes in the modern economic environment.

It is worthwhile to note that institutions in the field of public finances are formed in the process of social development, certain functional relationships that are established between them become a base for the emergence of relevant financial relationships. Accordingly, the institutional environment reveals the impact of a budgetary strategy on the socio-economic indicators of the country's development. The institutional basis for the formation of a budget strategy is determined by the appropriate norms and acts, which regulate a procedure for the formation of the main centralized monetary

fund in conjunction with the directions and methods to use budget funds and ensure the possibility for the bodies of state administration, local governments to perform respective functions, they contribute to achieving the priority goals. In this regard, an important aspect is the existence of institutions that legislatively regulate a budgetary strategy. Rules, regulations, laws, procedures, authorities, and institutions collectively and purposefully form the institutional mechanism of a budget strategy, which is an effective tool in the system of state regulation and exerts a positive effect on the socio-economic processes. In this context, it is important to build the institute of budget strategy from the provisions of institutional architectonics.

Architectonics is a specialized science that explores general principles for constructing holistic systems, including institutional. The institutional architectonics of budget strategy in the system of state regulation includes a system of rules, regulations, laws, legislative and executive authorities, institutions and their optimum combination and ratio, which contribute to forming and implementing strategic and tactical goals aimed at ensuring the country's socio-economic development.

A system of budget regulation over economy is formed in a particular institutional environment and is a combination of financial-budgetary and economic components, such as the revenue part of a budget, the expenditure part of a budget, a deficit (surplus) of a budget, public debt, tax regulation, inter-budgetary relations, economic processes in the country, the external economic environment, and the relationships between them. The transformation of the system of budgetary regulation is largely associated with a change in the institutional environment of society; components of the budget strategy are improved based on the state of socio-economic development, economic strategy, and characterize adaptation capabilities in the architectonics of a budget system.

Study into the interrelationship between effectiveness of a budgetary strategy as an instrument to ensure socio-economic development and the characteristics of the country's institutional environment confirms that it is the institutional environment that to a large extent creates conditions under which, within the institutional architectonics of the economic system, its component is being formed — the institutional architectonics of a budgetary system. Such conditions largely depend on a series of attributes of the country, in the historic and socio-cultural aspects, the establishment of institutions in society, the characteristic of its institutional environment. In this case, there is a close interaction between the structure and the functioning of institutions within a market economy and fiscal policy institutions, as well as mechanisms of their impact on the socio-economic development.

A budget strategy cannot be separated from the institutions existing in the country that form a specific institutional environment, which defines the appropriate financial and economic relations, which arise as a result of

the state's activities and the subjects of the market mechanism; the state, while guiding the activities towards the improvement of basic institutions of economic development (property, management, labor), thereby creates the conditions for the formation and implementation of an effective fiscal policy both in short-term and long-term perspective.

A system of public finances requires adaptation to the dynamic processes taking place in society, which occurs in the conditions when those institutions that slow the progress of society and prevent the effective impact of a budget strategy on socio-economic processes are eliminated from the institutional environment. Thus, it is important to form a system of institutions that could ensure the development of public finances taking into consideration provisions for the institutional architectonics of the country's budgetary system.

A transition from a certain socio-economic order to another causes fundamental changes to the old system of rules and norms, generates a significant number of new institutions that match the changed conditions of society functioning. In the transition economy, an institutional environment is composed of various institutions, the contradictions between which create some uncertainty of the economic environment; transformation processes lead to the simultaneous existence of institutions corresponding to both the planned and market economy.

Achieving the medium- and long-term goals of economic development of a country depends on the degree to which the budget strategy accounts for features in the institutional environment of society, which is why the institutional architectonics of a budget strategy should imply the development of qualitative characteristics of budget institutions that would promote the development of a socio-economic component of the society. The above requires the improvement of the institutional environment of economic and budget space, preparation of appropriate institutional changes.

An important aspect of institutional changes that need to be considered in the formation of an adequate, in terms of institutional environment, budget strategy is the mutual integration of institutions (their close relationship creates a unified institutional system); a budget space within the institutional architectonics of a budget strategy is part of the national institutional environment; a change in one of the institutions without regard to the links in institutional system can lead to disruption of balance of the institutional environment. An institution, borrowed from the familiar environment and embedded into the dynamic environment of the architectonics of a fiscal strategy, may fail to produce the expected result, which needs to be considered when implementing respective institutional changes.

The concept of an institutional environment is an important aspect of the evolutionary approach to the development of countries if the specified environment is sustainable over a relatively long time; models for the behavior of economic entities would be predetermined by this medium,

which ensured the survival, adaptation, and development of public institutions. The evolutionary approach determines the importance of selection in the process of institutional changes, including between ineffective and advanced, new organizations that most closely match the requirements of social development.

Institutional environment defines the basic principles, provisions, according to which economic activity takes place; the behavior of economic subjects, the dynamics of supply and demand, economic growth, the functioning of administrative and market mechanisms, management over transactions, depend on the institutions that exist in society. Important is the possibility to adapt the institutions to the changing environment, because the operation of any sphere of economy is defined by the nature of its institutional framework, which consists of a complex of interconnected rules and constraints, which is why it is impossible, without altering the institutional model, to create appropriate conditions to direct society along a new trajectory of development. The transition from traditional rules to the modern ones contributes to the development of new institutions and agencies; to strengthening the constitutional basis of development, to regulation of relations in legislation, to ordering the institutional environment as a totality of political, legal, social and economic policies that define the limits, within which financial and economic activity takes place; to improving a fiscal space and budgetary mechanisms in order to increase the effectiveness of their impact on the socio-economic processes within society.

Economic rules determine the forms of organization of economic activity, within which economic actors form the institutional agreements and make decisions about the use of resources; in the budget and tax fields, these rules also include benefits, tax deadlines, funding rules, lending, organization of a budget process, etc. The state creates the institutional legal framework that regulates the economic behavior of subjects of the economy through appropriate regulatory and legislative acts that regulate the rules of formation, approval, and implementation of state and local budgets. The budget code governs social relations concerning the drafting, review, approval, and the approval of reports on the implementation of budgets at all levels, as well as monitoring their implementation. The required level of budget revenues at all levels is achieved through the effective functioning of the institution of tax policy, because a significant percentage of budget revenues both in the countries with the developed and transitional economies is made up of tax revenues; tax law as an institution of tax policy implies carrying out coordinated measures to ensure the planned level of revenues to budgets and to form an effective regulatory system that could impact the subjects of economic relations. The state control bodies that define the current system of taxes, benefits, government loans, conditions for public procurement, rules of allocation of transfers, collectively form the institutional environment, which is created as a result of financial activity of

the state and other subjects of economic relations and governs, organizes, regulates relations in a budget-fiscal space.

Thus, institutional environment of financial regulation can both promote and inhibit the influence of the state on the indicators of economy and society. The principles of market competition force entrepreneurs to operate in accordance with laws or to find a way to use informal, shadowy financial schemes and legal tax optimization, making use of the imperfection of acting legislation, which negatively affects the fundamentals of formation and implementation of effective budget strategy, reducing the tax base and increasing budget expenditures. Therefore, to conduct a rational policy of macro-economic regulation, an approach is required that would integrate economic activity at the micro-level with incentives at the macro level by the established institutional principles.

An important factor in effective budgetary strategy is the quality of institutional environment, whose change takes place, among others, under the influence of development of the economy information potential. The architectonics of budget strategy must create institutional conditions for the functioning of a budget mechanism with the purpose of effective influence on economic growth, comprehensive development of society, improvement of the well-being of people. The institutional structure of budget strategy as a significant component of government regulation is an effective tool for the country's socio-economic development. Given that economic activity is carried out within an appropriate institutional model, which is a set of interrelated institutions, the effective model of budget strategy must be based on the institutional environment of society as a system of basic economic, social, political, and legal provisions that are determined by the history, traditions, culture of the country.The establishment of appropriate institutional conditions for the formation and implementation of effective budget strategy requires the use of adaptive architectonics of the budgetary control system, which would contribute to achieving the balanced and sustainable socio-economic development of the state. The budgetary strategy reflects public interests, and, owing to it, with the help of financial-budgetary instruments to regulate economic and social processes, the functions and tasks of the state are implemented. A system of budget regulation characterizes the processes of redistribution of gross domestic product and is a powerful tool for the development of society; a budget strategy is capable of influencing the development of production, enhancing investment activity and is an effective mechanism, through which the state exerts a corresponding impact on economic growth.

Budget regulation as a significant component of the system of state regulation of social-economic processes is a set of functional financial-budgetary and economic elements, which include a revenue part of the budget, an expenditure part of the budget, deficit (surplus) in a budget, public debt, tax regulation, inter-budgetary relations, economic processes in the country, the external economic environment, and their interrelation.

Implementation of the basic tasks in a budget strategy requires consistency and balance in the tax policy, regulation of budget expenditures, inter-budgetary relations, internal and external public debt, financial policy in foreign-economic activity, budget price regulation, innovation.

Given that budget is one of the basic tools in the state regulation of economy, the establishment of an effective budget system is a necessary condition for achieving economic development by any country. A budget strategy, implemented through a system of budgetary mechanisms, must ensure budgetary balance and effective impact on the socio-economic processes. The mechanism that forms the volume and structure of budget revenues and expenditures is an important component of the budget regulation to ensure the all-round development of the society. It is particularly important to solve this task for the transitive economies, which are marked by the heterogeneity and dynamism of social environment, which is why it is necessary to strengthen the role of a budgetary strategy as an instrument that ensures the country's socio-economic development.

Implementation of the institutional approach to studying a budget strategy is important and includes defining the attributes for the institute of budget regulation, the institutional environment, which enables its operation, as well as transaction costs, applying the theory of public choice.

Theoretical and practical issues related to the transition to a developed socially-oriented market economy necessitate the scientific substantiation for the formation and implementation of a budget strategy based on the methodological toolset from the theory of institutionalism on order to gain a deeper understanding of the processes that take place not only in the area of public finance, but also in the economy in general, improving the effectiveness, efficiency of regulatory measures. The theory of institutionalism makes it possible to resolve the contradictions and uncertainties that accompany financial, economic, social, and political processes.

At the same time, there remain the insufficiently investigated issues related to building an institute of the budget strategy, which complicates it further improvement aimed at a substantial improvement of the quality level in the regulation of socio-economic development; improvement of the budget regulation system requires studying institutional changes in the society in general. Revealing the essence of budgetary relations and their derivatives must be based on the classic, Keynesian principles, taking into consideration the institutional features of the budget system. Institutionalism examines the significance of institutions, organizations from all areas of society, their interaction in terms of making economic decisions, explores the problems associated with institutional changes as a focused process that makes it possible to consider a budget strategy in the role of a socio-economic institute; thus, the institutional approach enriches theoretical foundations and improves efficiency of budgetary regulation in the system of socio-economic development.

The theory of institutionalism can adequately enough reflect the country's economic situation, takes into consideration the historical traditions, the level of legal organization and the system of value orientation of society, makes it possible to specify the components that regulate the budgetary relationships, to analyze the effectiveness of institutional transformations of the budgetary system. The institutional approach makes it possible to consider within the budgetary strategy the interrelation between economic, social, political and other factors, which contributes to increasing the level of budget balance in the system of state regulation of socio-economic processes.

Achieving strategic objectives of the country's economic development depends on the degree to which a budget strategy accounts for trends related to changes in the institutional environment of society; the institutional theory greatly expands the scope of research into budget architectonics based on a possibility of the existence of a plurality of financial-economic equilibrium. Institutions that act as traditions, rules, and regulations, create constraints for the functioning of an economic system of a certain type, its actors, models of behavior. Economic institutes form in the process of historical evolution and structure the interaction among people in the economic, political, and social fields. Institutions and organizations are quite closely interrelated, that is, an institution acts as a functional organization, which provides for the implementation of a specific system of similar institutions, while the types of organizations can be diverse: political organizations, parliament, government agencies, government, economic structures, public organizations, households, trade unions, enterprises, educational institutions, etc.

A given differentiation is important in methodological terms in order to carry out an institutional analysis: the interaction between institutions and organizations defines a direction of institutional changes in the budgetary and other fields. Under conditions of transformations, the activity of legislative and executive bodies of the state is to create new institutions, to replace those inefficient or to promote the establishment of appropriate external institutions within a national environment, which would predetermine a change in the institutional foundations of society. However, in an actual institutional environment, ineffective institutions are replaced by effective ones over quite a long period. Representatives of the institutionalism distinguish between the concepts of an institute and an institution, which is the content base of the institute; it renders it an attribute of functional properties, consolidating the organization of forms for specific functions, creates a system of the institutes in society.

An institutional form can be observed empirically: in particular, an organization with an appropriate order of operations, legal regulations, information flows, an institutional structure is a combination of institutional relations, reflecting economic processes. Establishment of the institutional structure of a society depends on the conditions for the state's development,

which is why, to understand the processes in the field of public finances, it is advisable to consider such institutional forms that make it possible to identify the socio-economic and socio-political interrelations. The essence of a budget institute demonstrates an institutional form, in the form of laws, decrees, orders, which require that participants of budget relations should perform the provisions embodied in them.

The emergence and development of the institute of a budget strategy are predetermined by the emergence and development of budget institutions, tax, in the process of the evolution of society. The budget institute is the basis of redistribution of resources according to social needs and is closely connected to other institutions and mechanisms for their implementation. The functions of a budget as an economic category are restricted to redistribution and regulation, a budget in the role of the institute serves as a tool that affects the combination of economic and social processes, it is formed and implemented under conditions of the institutional environment of society and interacts with it.

The institutes of a budget system are economic institutions, which have a complex internal structure of formal and informal norms, rules; the evolution of these institutions is closely linked to the development of institutions of state governance, macro-economic regulation.

The goal of a budget strategy is to provide the appropriate level of socio-economic development of society taking into consideration the balance of public finances, which is implemented through the institutions of budget regulation, state financial control. At the same time, a state, by guiding the activity on strengthening the basic institutions of economic development, namely ownership, management, labor, creates conditions for the development and implementation of an efficient fiscal policy, and when forming an institutional legal framework, it controls the behavior of subjects of economic relations. An institute of budget regulation is one of the most important socio-economic institutions and must define the rules and mechanisms for the formation and implementation of basic principles of fiscal policy; from the standpoint of institutionalism, a budget institute defines the economic rules and constraints and forms conditions for the interaction between participants of budget relations.

Development of a budget strategy should be based on the country's institutional development; a mismatch between its objectives and obtained results is a consequence of the inadequate consideration of the institutional environment of society. The formal institutions of society that define the processes of formation and distribution of budget funds must comply with the budgetary principles: non-compliance with this requirement, including the adoption of legislation to increase an expenditure part of the budget without determining the respective budget revenues, leads to the suspension of individual requirements of laws when approving of the budget for the next period with the aim of achieving a budgetary balance, which

indicates the inadequacy of institutions that provide for the implementation of a budget policy.

Rules, regulations, laws, state authorities, institutions, collectively and purposefully form the institutional mechanism of a budget policy, which, taking into consideration the provisions of the institutional architectonics, is capable of effective functioning in the system of state regulation and can exert a positive impact on socio-economic processes.

The institutional structure of a budget strategy evolves along with the institutional matrix of state mechanism, which is part of the institutional system of the society. According to the theory of institutionalism, institutional changes do not occur discretely, they are characterized by a gradual transition from the old to the new institutions; dependence on the trends of earlier development defines the institutional stability of society. The mutual influence is observed between the institutional environment of the society and the budget policy of the state. Positive results of the planned institutional changes would contribute to improving the effectiveness of mechanisms of budget policy in the system of state regulation, otherwise one may experience the states of the system of budgetary control, which manifest themselves in the formation of institutional cavities, gaps, which negatively influences socio-economic development.

Based on the provisions of economic architectonics, a modern institutional model of the budget strategy must combine the social and innovative budget components, which will ensure high-quality operation of the country's financial and economic system.

The degree of development of an institutional environment affects the magnitude of transaction costs, transparent institutions ensure the efficient operation of market mechanisms, reduce transaction costs that are required, in particular, to collect and analyze information in order to make appropriate management decisions, to monitor their fulfillment. The mechanism of functioning of the institute of a budget strategy requires taking into consideration the transaction costs, whose change can occur under the influence of the state on the institutional framework of the system of budgetary control, which would make it possible to ensure the creation of economically efficient and socially equitable institutions in society.

Thus, it is required to undertake further scientific research aimed at defining the main directions and mechanisms for the implementation of a budget strategy in the system of state regulation taking into consideration the patterns in the institutional environment of society, which would contribute to better determination of the essence of financial-budgetary relations as an important tool for the country's socio-economic development.

Ensuring comprehensiveness in measuring the effectiveness of the institutional environment for the formation and implementation of a budget strategy implies studying the relationships and the role of financial-budgetary institutions in economic growth. Important is to develop the theoretical

bases for designing a budget strategy taking into consideration the formation of new institutions under conditions of transformations.

An institutional process of the development of an effective budgetary strategy implies accounting for the dynamic fundamental and cyclic changes in budget relations, predetermined by the influence of a complex of formal and informal institutions.

At the same time, according to theory by V. Pareto, the efficiency level of a budget policy will be better if no one is able to do better without having to degrade something else, and all actions are seen under conditions of strict institutional constraints. In this connection, N. Kaldor and J. Hicks proposed a principle of compensation, a criterion according to which a transition from one state of the system of public finance to another contributes to an increase in the general welfare, if the members of society who benefit at this transition can compensate for the losses of those for whom a situation deteriorates. The specified criterion makes it possible to distinguish changes in the level of efficiency in the process of redistribution of financial resources.

The specified issue to ensure the effectiveness of a budget policy is connected to the principle of «second best», proposed by R. Lipsey and K. Lancaster. According to the theory of the second best, if one of the conditions for optimum by V. Pareto cannot be satisfied, the second-best optimum is achieved only by diverting from all the other conditions for an optimum. As a result, the optimal policy is a «step-by-step policy of the second best» according to which the state gradually defines and introduces optimal deviations from the Pareto efficiency in those sectors of the economy where it is possible, in the case when the level of Pareto-efficiency cannot be reached in at least one of the sectors.

Modern budget relations play an important role in the socio-economic and socio-political processes. In this regard, the range of use of definitions for a «budget policy» and a «budget strategy» has been significantly expanded, while the concepts themselves acquire additional content, which is predetermined by the transformation of socio-economic relations, the development of a budgetary system. Currently, a budgetary policy is significantly influenced by globalization processes. To a certain extent, there happens the unification of national principles of functioning of a budgetary system, their improvement in the direction of strengthening the stimulating role of the budget. The development of budgetary institutions defines the features of an institutional environment for the formation and implementation of a budget strategy.

Experience in the development of systems of public finance in countries both with the developed and transformational economies demonstrates the efficiency of budgetary institutions, but at the same time the need to ensure the stability of an institutional environment for the formation and implementation of a budget strategy. The priority tasks for the country's fiscal

policy under conditions of institutional transformations are to create conditions for macroeconomic stabilization of the economy, to promote its structural restructuring and development of investment and innovation activity, to provide for the consistency of socio-economic, fiscal and monetary policy, to improve the system of medium-term budget planning, to rationally form the system of tax revenues, based on the combination of approaches related to the fiscal and stimulating functions of taxes, to strengthen control over the efficiency of using budget funds, to improve the effectiveness of state debt management, to improve the system of inter-budgetary relations, to provide financial support to the comprehensive and dynamic development of administrative-territorial units.

A budget strategy is the basis for determining effective institutional financial mechanisms to provide stability and balance in the budget system taking into consideration the transformational changes. The tools of a budget strategy must be considered as a means to form an institutional environment of the budget space. The transformation of budget institutions is an important step in the process of quality development of the system of public finances. The institutional environment of the formation and implementation of a budget strategy affects stability of the country's macroeconomic development, it is necessary to improve the efficiency of an institutional base of the budget policy that takes into consideration the cyclical nature and dynamism of socio-economic processes. The effectiveness of an institutional environment for the formation and implementation of a budget strategy implies the correlation of budget institutions' activities, which emerged evolutionarily and formed the budget space.

The important tasks are to create conditions for the development of an institutional structure of the budget space, to ensure macroeconomic stability and economic balance, to promote the structural changes in economy and to develop investment and innovation activity. When assessing the effectiveness of the institutional environment of formation and implementation of a budget strategy, it is important to consider effectiveness of the budget institutional environment; adaptivity of the budget policy to social-economic processes; transparency of the budget policy; effectiveness of the activities and responsibilities of the bodies of state administration and local authorities for achieving the stated objectives.

Development of an institutional environment for the formation and implementation of a budget strategy is intrinsically connected to the transformational economic processes and implies the implementation of institutional transformations in budget relations taking into consideration the socio-economic conditions and balance of the budget system. Under conditions of economic transformation, to ensure macroeconomic stability and sustainable economic growth, an important task is to improve the institutional support for the development of a budget strategy, substantiated formation of budget revenues and expenditures, to plan a budget deficit

and the sources to finance it, to manage a state debt, to determine the optimal level of fiscal centralization, inter-budgetary regulation.

When substantiating priority tasks for a budget strategy and the ways to implement them, it is important to take into consideration globalization processes, to assess their impact on the robustness and stability of the system of public finance and its components, it is also expedient to take into consideration world tendencies in the institutional transformations of budgetary relations. Development of a budget strategy will contribute to the formation of effective approaches to solving the tasks on ensuring the country's socio-economic development. Along with this, a budgetary strategy is the basis for carrying out economic transformations aimed at accelerating the pace of economic growth as a precondition for raising the standards of living and welfare of citizens. Under modern circumstances, it is even more important to use effective tools of a budget strategy, which would make it possible to properly respond to changes in the socio-demographic trends in the development of society and the dynamics of economic transformations, while maintaining the appropriate indicators for the robustness and stability of a budget system.

1.3 Formation and implementation of budget policy in countries with the developed and transitional economies

Budget policy is today one of the main tools of economic regulation, the state's impact on economic development. This tool is quite widely used in countries with both the developed and transitional economies. Measures related to the budget-tax regulation of economy in foreign countries are largely aimed at providing the long-term macroeconomic stability and creating the fundamental bases for sustainable economic growth. One of the most effective directions of this regulation, under modern conditions, is the fiscal regulation in the areas of budget revenues and expenditures, deficit, and a public debt. It is expedient to analyze the implementation of relevant measures in countries with the developed and transitional economies in order to systemize them and to identify opportunities for practical implementation in the activities of national institutions. Under modern conditions of economic transformation, most countries with the developed and transitional economies are characterized by the process of improvement of the system of public expenditures and improvement of the efficiency of their use. The basic measures to meet these objectives include the implementation of a program-targeted method of budgeting, the optimization of the number and structure of budgetary institutions, expanding the scope of public procurement and strengthening the state financial control. As a result, the changes occurring in these countries are characterized by a transition of the functioning of budgetary institutions and public institutions to market tools

and management methods, by the active use of market competition mechanisms. The basis of a given approach is a system of contractual relations in the process of public procurements, which makes it possible to enhance the possibilities of regulation and to stimulate economic growth.

One of the main issues related to the financing of budgetary establishments is to ensure the most effective achievement of the objectives assigned to each of them, at the optimal amount of resources used. The importance of the examined issues related to using budget funds to finance budgetary institutions is also in their capability to affect the implementation of priorities envisaged by state policy, with the simultaneous fulfillment of all earlier assigned obligations to population, which is characteristic of a socially-oriented state.

A state, by using the financial methods, can significantly affect the basic economic indicators of the country's development. Specifically, an increase in the volume of state capital investment increases the demand, leads to a growth in the volume of industrial production and a decrease in the level of unemployment, to a growth of real GDP.

State regulation of the economy of developed countries was necessary and justifiable given a certain imperfection of market relations. The state plays a multifaceted role in the economy: stabilization of the cycles of economic activity, procurement of goods and services, control over the process of market monopolization, response to external economic impact, creation of the necessary conditions for the social equitable allocation of income, and providing vital benefits to population, etc. The state affects the production, accumulation, consumption, and other elements in the process of reproducibility. Specifically, by increasing the amount of investment, the state contributes to an increase in demand, a growth in the volume of industrial production, to an increase in the investments to economy; financing the infrastructure predetermines bringing down production costs of enterprises, increases their profits.

Public finances as a means to regulate the economy started to be actively used by governments of developed countries following the world economic crisis of 1929−1933.

The main ideologue and the founder of the theory and practice of economic regulation through the use of public finances in the 20th century was the famous British economist J. Keynes who stated the theory of public finance, which is an important component of the Keynesian economic theory. Scientific contribution to the development of the Keynes theoretical system was made by A. Hansen, P. Samuelson, A. Lerner, R. Musgrave, G. Eckley, W. Heller, J. Pekman, J. Hicks.

The main objective of the economic policy of the state was, according to J. Keynes, to manage aggregate demand; the main instrument for carrying out the specified policy is the budget that is considered to be a significant factor in economic regulation. By exercising influence on the

difference between budget revenues and expenditures, depending on the specific economic conditions, the state has a possibility to deliberately affect the volume of aggregate demand, and through it — the magnitude of proposal.

The Keynesian theory of public finance legalized budget deficits to stimulate economic development. Thus, under conditions of economic downturn, the state must reduce the tax burden on the economy and increase budget expenditures, allowing a budget deficit and thus enhancing the additional demand in the economy. During economic growth, budget regulation must restrain the demand by increasing the tax burden and limiting budget expenditures. Budget deficits could be retained at growing production in order to stimulate the economy and achieve the greatest growth rates. The issues related to the accumulation of government debt, growing inflation under conditions of constant stimulation of reproduction through a budget deficit have not been sufficiently addressed in the Keynesian theory.

The crisis of the state control over market economy based on the Keynesian doctrines, which was fully demonstrated in the 1970s, led to the active search by economists for effective methods to improve the economy. When the government of M. Thatcher and the administration of R. Reagan in the United States came to power, the concept of the system of state regulation of economy began to change.

Transformations that were observed in the financial policy of countries with the developed market economy in 1980s are associated with the «new phenomenon» in economic science — the theory of a «supply economics». The name of the theory itself suggests that their authors contradict the Keynesianism, which focuses on demand regulation.

Authors of the theory of a «supply economics», who tried to prove that the main purpose of their scientific research was the creation of a certain «new economy» include R. Hall, G. Talok, J. Brouzon, M. Rothbot, A. Laffer. Advisor to the President of the United States R. Reagan professor A. Laffer was one of the main strategists to implement the theory of «supply economics» in the process of state regulation of the economy.

One of the fundamental postulates of the indicated theory was the reduction of intervention of the state in economic processes and the stimulation of entrepreneurship. A special role in this case was given to the state finance, in particular, to a decrease in the tax burden on economy, in the volume of state spending.

Using a «tax curve», Professor A. Laffer argued that an increase in the tax burden in a certain economic situation might adversely affect the formation of a revenue part of the budget, while reducing the specified burden, simultaneously or with a delay in time, exert a positive impact on tax revenues.

The area of public finance includes another lever, which was supposed to influence economic processes — reduction of public spending. Measures to reduce the level of inflation by reducing public spending made the

representatives of the financial theory of «supply economics» face the problem to curb economic growth, since measures to reduce government expenditures led to a recession in economic development. However, representatives of the above theory believed that the anticipated growth in production, associated with a decrease in the tax burden on economy, would resolve the problem, and the theory of «supply economics» through the simultaneous tax cuts and state spending had to solve the main task: to reduce state intervention in the economy, to slow down inflation, and to boost economic growth.

The main provisions in the theory of «supply economics» began to be implemented in the early 1980s under conditions of slower growth of production, increased scale of unemployment, crisis in public finance. The main problem that the governments of the United States and Britain failed to resolve was the issue of balance and stability of public finance.

The Reagan budget policy that represented the doctrine of balanced budgets was characterized by the largest budget deficits over the last half a century. Federal budget deficit over the first period of implementation of the financial strategy of «supply economics» reached the following values: in 1981 — USD 79 billion; 1982 — USD 128 billion; 1983 — USD 208 billion; 1984 — USD 185 billion. Then, despite the policy of «tight budgetary economy», the federal budget deficits were also observed, but did not exceed USD 100 billion. However, at the beginning of 1990s they significantly increased, particularly 1991 saw a significant growth in the budget deficit — to USD 269 billion, in 1992 — USD 290 billion. A similar situation with the budget deficit occurred in Great Britain, which, similar to the United States, chose the course for the transition from «demand economy» to «supply economics». Despite the efforts of Government by M. Thatcher to reduce the deficit of the state budget of the country in 1981 to GBP 8.5 billion, it amounted to GBP 14 billion.

Only through the sale of state property, which annually added about GBP 5 billion to the budget revenues, the UK government managed in 1988 − 1989 to achieve a positive balance of public finances. However, due to the economic crisis of the early 90s, a sharp cyclic increase in the budget deficit amounted to GBP 13.9 billion in 1991 and GBP 40 billion in 1992. A change in the economic theories in the 1980s — from «demand economy» to «supply economics» did not produce the main result: stability and balance of public finance. The proclaimed reduction in the intervention of the government in the economy was accompanied by a still increasing government spending, which actually testified about the increasing influence of the state on economic processes.

It should be noted that the theory of «supply economics» made some contribution to the development of economic theory of budget regulation. In this case, at the present stage of economic development, the Keynesian methods of state regulation of the economy, the financial-budgetary

processes, are still applied, but taking into consideration the experience gained on this issue.

Numerous programs and funding objects resulted in a substantial growth in the volumes of expenditure part of budgets in the developed countries. This phenomenon was predicted by the German economist A. Wagner as early as the 19th century, he drew attention to the fact that the rate of growth of public expenditure in the countries of Western Europe outpaced the growth rate of industrial production. The scientist made one of the first attempts to explain the growth of state spending. He formulated the «law of increasing state activity», according to which public spending in countries where industry develops should grow faster than the output of production and national income. A. Wagner revealed a trend of rising state budgets expenditures in the developed countries, and their positive impact on the growth rate of industrial production — «The A. Wagner law». A. Wagner arrived empirically at stating the law by analyzing the facts and events that took place in Western European countries that underwent the rapid growth of industry in the 19th century.

Thus, in foreign countries, over the 1990s, significant components in the system of budgetary control underwent certain changes, in particular, the volume and structure of budget revenues and expenditures. Specific share of budget revenues and expenditures in the GDP decreased. At the same time, a trend was observed towards increasing the share of income tax from persons, a value added tax, contributions to social insurance in the structure of revenue part of the budget; while reducing the revenues from income tax from legal entities, taxes on property, excise duties, respectively; increasing the share of expenditures on social protection and social security, education, health, culture and art, housing and communal services, law enforcement activities, ensuring the safety of the state in the structure of expenditure part of the budget; a reduction — for state administration, national defense, industry, agriculture, transportation, communication. The largest specific share in revenue part of the budget belongs to the tax on persons, contributions to social insurance, a value added tax, in expenditure part of the budget — expenditures on social protection and social security, education, healthcare.

In addition, it should be noted that in the United States, Canada, Germany, Great Britain, Australia one observes a positive effect of the indicator for a change in the specific weight of expenditure part of the consolidated budget in GDP on a year-to-year basis on the indicator of growth rate in real GDP on a year-to-year basis. Specifically, in the United States, an increase in the indicator for a change in the specific weight of expenditure part of the consolidated budget in GDP on a year-to-year basis by one percentage point leads to an increase in the respective indicator for a growth in real GDP by 0.462 percentage points; in Canada — by 0.399 percentage points and with a lag in one year — by 0.454 percentage points, respectively; in Germany — by 0.279 percentage points; in the UK — by 0.794 percentage points;

in Australia — with lags of 4 and 5 years by 0.864 and 1.253 percentage points, respectively.

At present, the institutional environment for the formation and implementation of a budget strategy in countries with the developed and transitional economies is represented by various financial institutions: rules of financial-budgetary stability — control over consolidated state debt at a safe level relative to the gross domestic product, taking into consideration the risk rating of a country and the share of debt in foreign currency, development of a long-term target level of the public debt; rules to balance the structural budget — maintaining a balance of structural budget, its formation with respect to the cyclic nature of economic processes; institute of public-private partnerships — engagement of private companies to address the strategic objectives of social development; institute to solve financial disputes; institute of budgeting, result-oriented, which promotes transparency of financial flows. These financial institutions determine the peculiarities in the formation of modern fiscal policy and are important instruments to provide budget stability and balance under conditions of the deepening process of financial globalization.

An important step for balancing the budget system in European countries was the signing of the Maastricht Treaty on 7 February 1992. According to its regulations, the countries, members of the European Union, introduced significant changes to the mechanism of budget regulation, which had an impact on increasing the level of balance in the budget systems of countries and a significant reduction in the deficit of the state budget, especially over 1994—1997. The Maastricht Treaty stipulates that the member states that agreed to switch to the common currency the level of budget deficit must not exceed 3 %, and the total national debt — 60 percent of gross domestic product. It should be noted that by exercising control over the development of the budgetary system and the observance of fiscal discipline in these countries, the Commission of the European Union paid considerable attention to the criterion of ratio of the deficit of a state budget to state capital expenditures.

The main objective of the economic policy of member states of the European Union in the 1990s was the need to implement measures to stimulate innovation, to facilitate the establishment of the information society, to create a working environment more favorable for initiative and development of small and medium-sized businesses. The main priorities in the financial and fiscal policy include: deterrence of increasing government spending; reducing the tax burden; redirection of public spending on investment in infrastructure, development of human capital; improving the efficiency of public services; support for measures so that a reduction in the overall tax burden does not contribute to a growth in the deficit of a state budget.

In 1996, the member states of the European Union, except for Germany, made progress in reducing the budget deficit from 5.0 % in the gross

domestic product in 1995 to 4.3 %. It should be noted that Finland and the Netherlands managed to reduce the deficit to below 3 % of the gross domestic product. However, 1996 saw another trend towards a rise in the debt: the average indicator rose from 71.2 % in 1995 to 73.5 %. The highest indicators were observed in Germany, Spain, France, Austria and the UK. The share of public spending in the gross domestic product increased in Denmark, France and Italy, and the tax burden increased in Denmark, Spain, France, Italy, Austria, Portugal, Finland, and Sweden.

In order to further strengthen fiscal discipline and to ensure effectiveness of the budget-tax policy, in 1997 the countries signed a Pact of stability and growth, which is based on articles 99 and 104 from the Maastricht Treaty (with amendments adopted in 1993 in Maastricht) and decisions related to it.

According to the Pact of stability and growth, most member states of the European Union initiated significant measures to reduce the budget deficit to 3 % of gross domestic product or less. The specified indicator was reached in 1997 by five member states: Luxembourg, Denmark, Ireland, the Netherlands, and Finland, in other member states the specified indicator closely approached the predefined standard.

The main objectives for fiscal policy in 1998 were the following: reducing government spending; reduction of the total tax burden in order to promote positive economic dynamics; providing the conditions under which tax cuts should not slow down the pace of deficit reduction in cases when the share of a state budget deficit or public debt in the gross domestic product is high; ensure the growth of the volume of investments in fixed capital and the development of human capital.

In terms of countries, the main tasks of fiscal policy in 1998 were: Belgium must ensure achievement, in the medium term, of budget surplus in the amount of 6 % of gross domestic product; Germany, France, Ireland, Italy, Netherlands, Portugal must step up leverages of budget regulation with the aim of reducing a net debt; in Spain, it is necessary to accelerate the achievement of balance between budget revenues and expenditures at a level close to balance or with a surplus; Luxembourg must maintain the budget surplus along with a very low level of debt; Austria should continue efforts to consolidate to achieve a medium-term goal of fiscal policy aimed at achieving a balance between revenues and expenditures and to reduce a net debt; Finland must ensure a budget surplus in the medium term despite a decrease in the revenue from income tax; Denmark must ensure a budget surplus in the coming years and reduce a net debt; Sweden must improve the effectiveness of instruments in the field of budget regulation in the area of budget expenditures in order to support surplus.

The introduction of Euro on 1 January 1999 marked a significant achievement in the process of European integration. At the same time, the European Union faced new tasks in the field of budgetary policy. It was

determined that the political activities that contribute to the growth of employment and stability in the euro zone must include commitments in terms of fiscal policy. The progress achieved in budgetary consolidation must create the necessary opportunities for reducing the vulnerability of the budget and to help countries to prepare for the long-term budgetary challenges associated with aging of the population. Member states in this regard should improve their budgetary positions by limiting government spending rather than increase taxes; ensure the efficiency of public finance, in particular by reducing the overall tax burden and strengthening tax coordination at the level of the European Union.

In 2003, for the first time at the level of the European Union, it was established that the entire budget process would be based on the methodology of development, approval, and execution of the budget, which allows a transition to the mid-term budget planning. This method provided the opportunity to fulfill budget programs that go beyond a calendar year; it also accepted that expenditure planning should be based on the separation of existing obligation accepted. Thus, at the beginning of a three-year planning, expenditure part of budgets was defned by proceeding from the earlier accepted obligations. In the course of moving over a three-year cycle, the emerging amount of additional funds was directed to finance new obligations in accordance with the legal acts of bodies of state power and local self-government.

In order to ensure a clear, meaningful legislative definition of the budget process, it was implied as of 2003 to make perspective financial plans; to ensure the effectiveness of mechanisms for the medium-term socio-economic development of municipalities; to consider and substantiate opportunities for updating, at state level, a regulatory framework for forecasting indicators and development of programs related to the socio-economic development of territories. In October 2008, in connection with the financial and economic recession, the Commission of the European Union decided to mitigate the financial requirements stated in the Pact of stability and growth. At the same time, the main goal of medium-term stabilization programs calls for bringing the basic indicators to the norms established in the Pact of stability and growth.

2008 — 2009 saw in countries of the European Union and the Euro zone a significant increase in the budget deficit and public debt relative to the gross domestic product. In 2008, compared with the previous year, the share of the state budget deficit in the gross domestic product in the Euro zone increased by 1.3 percentage points and was 2 %, and in 2009, respectively, by 4.3 percentage points, 6.3 %. Whereas during 2001 — 2007 the average value for a share of state budget deficit in the gross domestic product was 2.1 %. The share of public debt in the gross domestic product in 2008, compared to the previous year, increased by 3.6 percentage points, and amounted to 69.8 %, and in 2009, respectively, by 9.4 percentage points —

79.2 %. Whereas during 2001−2007 the average value for a public debt was 68.9 %. The dynamics of revenue part in the total volume during 2007−2009 in countries of the Euro zone shows that the greatest average value of this indicator over the specified period accounts for tax revenues — 56.5 %, including indirect taxes — 29.1 %, direct taxes — 26.7 %, and taxes on capital — 0.7 %; deduction for social security — 34.2 %; taxes on sales — 4.8 %; capital gains — 0.3 %; other current revenue — 4.2 %. The dynamics of the share of expenditures in the total volume during 2007−2009 in countries of the Euro zone shows that the greatest average value for this indicator over the specified period accounts for spending on social assistance — 45.8 %, and labor remuneration — 21.5 %.

In the European Union, over 2007−2016, on average, the share of government revenues in the gross domestic product is 44.35 %, including over 2007−2011 — 43.71 %, over 2012−2017 — 44.99 %; the corresponding rate of budget tax revenues over 2007−2016 on average totaled 26.06 %, including over 2007−2011 — 25.60 %, over 2012−2016 — 26.52 %; the corresponding rate of indirect taxes over 2007−2016 was 13.08 %, including over 2007−2011 — 12.78 %, over 2012−2016 — 13.37 %; the corresponding rate of direct taxes over 2007−2016 — 12.70 %, including over 2007−2011 — 12.52 %, over 2012−2016 — 12.88 %; the corresponding rate of taxes on capital over 2007−2016 amounted to 0.28 %, including over 2007−2011 — 0.30 %, over 2012−2016 — 0.26 %; the corresponding rate of deductions for social insurance over 2007−2016 was 13.24 %, including over 2007−2011 — 13.13 %, over 2012−2016 — 13.35 %; the corresponding sales tax rate over 2007−2016 was 3.06 %, including over 2007−2011 — 3.00 %, over 2012−2016 — 3.12 %; the corresponding indicator of capital income over 2007−2016 was 0.21 %, including over 2007−2011 — 0.18 %, over 2012−2016 — 0.23 %; the corresponding indicator for other current revenues over 2007−2016 amounted to 1.78 %, including over 2007−2011 — 1.80 %, over 2012−2016 — 1.77 % (Tables 1.1−1.2).

The share of expenditures in the gross domestic product over 2007−2016 on average is 47.90 %, including over 2007−2011 — 47.89 %, over 2012−2016 — 47.91 %; the corresponding indicator of expenditures for intermediate consumption over 2007−2016 was 6.02 %, including over 2007−2011 — 5.98 %, over 2012−2016 — 6.05 %; the corresponding indicator of expenditures for labor remuneration over 2007−2016 was 10.43 %, including over 2007−2011 — 10.58 %, over 2012−2016 — 10.28; the corresponding indicator of expenditures for repayment over 2007−2016 amounted to 2.60 %, including over 2007−2011 — 2.69 %, over 2012−2016 — 2.51 %; the corresponding indicator of expenditures on subsidies over 2007−2016 amounted to 1.27 %, including over 2007−2011 — 1.23 %, over 2012−2016 — 1.31 %; the corresponding indicator of expenditures on social assistance over 2007−2016 was 20.62 %, including over 2007−2011 — 20.14 %, over 2012−2016 — 21.11 %; the corresponding indicator for other current

expenditures over $2007-2016$ was 2.58 %, including over $2007-2011$ — 2.53 %, over $2012-2016$ — 2.63 %; the corresponding indicator of capital transfers related to debt over $2007-2016$ was 1.24 %, including over $2007-2011$ — 1.34 %, over $2012-2016$ — 1.15 %; the corresponding indicator of capital investment over $2007-2016$ was 3.14 %, including over $2007-2011$ — 3.40 %, over $2012-2016$ — 2.87 %.

Table 1.1 The share of public expenditures, revenues, deficit, and debt in GDP
in the European Union over $2007-2016$

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Expenditures	44.66	46.25	50.08	49.89	48.57	48.96	48.68	48.12	47.23	46.56
Revenues	43.78	43.76	43.47	43.49	44.02	44.71	45.38	45.13	44.86	44.87
Deficit	0.87	2.49	6.62	6.40	4.55	4.25	3.30	2.99	2.37	1.69
State debt	57.56	60.74	72.83	78.38	81.11	83.81	85.69	86.67	84.86	83.55

* Compiled based on data from Statistical organization of the European Commission

Table 1.2 The share of public expenditures and revenues in GDP
in the European Union countries over $2007-2016$, %

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
REVENUES	43.78	43.76	43.47	43.49	44.02	44.71	45.38	45.13	44.86	44.87
Taxes:	26.43	25.92	24.91	25.15	25.59	26.14	26.52	26.58	26.65	26.72
— indirect taxes;	12.99	12.59	12.46	12.82	13.03	13.27	13.34	13.43	13.43	13.40
— direct taxes;	13.20	12.90	12.13	12.09	12.29	12.65	12.90	12.89	12.95	13.02
— taxes on capital	0.24	0.43	0.32	0.23	0.27	0.22	0.28	0.25	0.27	0.30
Deduction for social security	12.66	12.97	13.47	13.25	13.29	13.37	13.45	13.36	13.18	13.37
Taxes on sale	2.80	2.87	3.09	3.13	3.12	3.12	3.18	3.15	3.09	3.07
Capital revenues	0.21	0.16	0.15	0.18	0.20	0.23	0.24	0.25	0.29	0.15
Other revenues	1.68	1.84	1.84	1.78	1.83	1.85	2.00	1.80	1.65	1.55
EXPENDITURES	44.66	46.25	50.08	49.89	48.57	48.96	48.68	48.12	47.23	46.56
Intermediate consumption	5.59	5.79	6.26	6.20	6.06	6.10	6.12	6.06	6.04	5.93
Labor remuneration	10.13	10.30	11.03	10.86	10.59	10.50	10.44	10.31	10.11	10.06
Repayment of interest	2.63	2.69	2.58	2.67	2.89	2.87	2.70	2.54	2.27	2.14
Subsidies	1.10	1.13	1.34	1.32	1.26	1.24	1.25	1.33	1.35	1.37
Social assistance	18.55	19.07	21.20	21.11	20.79	21.09	21.31	21.22	20.93	20.98
Other expenditures	2.39	2.45	2.59	2.63	2.56	2.62	2.79	2.64	2.57	2.52
Capital transfers of debt	1.08	1.42	1.38	1.63	1.18	1.51	1.15	1.12	1.07	0.91
Capital investment	3.18	3.40	3.71	3.47	3.24	3.03	2.91	2.89	2.89	2.66

* Compiled based on data from Statistical organization of the European Commission

The share of a budget deficit in the gross domestic product during 2007−2016 was on average 3.55 %, including over 2007−2011 — 4.19 %, over 2012−2016 — 2.92 %; the corresponding indicator for a public debt over 2007−2016 was 77.52 %, including over 2007−2011 — 70.13 %, over 2012−2016 — 84.91 %. At the same time, there is a marked growth in the share of public debt in the gross domestic product. During 2007−2016 in the European Union countries the corresponding indicator totaled 77.61 %, including over 2007−2011 — 70.42 %; over 2012−2016 — 84.80 %. In terms of countries, the biggest share of public debt in the gross domestic product is observed in Greece (over 2007−2016 — 153.10 %, including over 2007−2011 — 131.50 %; over 2012−2016 — 174.70 %); Italy (over 2007−2016 — 119.43 %, including over 2007−2011 — 109.32 %; over 2012−2016 — 129.54 %); Portugal (over 2007−2016 — 107.58 %, including over 2007−2011 — 86.26 %; over 2012−2016 — 128.90 %), Belgium (over 2007−2016 — 104.01 %, including over 2007−2011 — 96.26 %; over 2012−2016 — 105.76 %); France (over 2007−2016 — 86.05 %, including over 2007−2011 — 77.88 %; over 2012−2016 — 94.22 %).

The smallest share of national debt in the gross domestic product is observed in Estonia (over 2007−2016 — 7.79 %, including over 2007−2011 — 5.58 %; over 2012−2016 — 10.00 %), Luxembourg (over 2007−2016 — 18.80 %, including over 2007−2011 — 15.36 %; over 2012−2016 — 22.24 %); Bulgaria (over 2007−2016 — 18.92 %, including over 2007−2011 — 14.70 %; over 2012−2016 — 23.14 %), Romania (over 2007−2016 — 29.87 %, including over 2007−2011 — 22.02 %; over 2012−2016 — 37.72 %), Lithuania (over 2007−2016 — 33.37 %, including over 2007−2011 — 26.38 %; over 2012−2016 — 40.36 %).

During 2007−2016, in the EU countries, the coefficient of elasticity of state revenue to the gross domestic product was 1.29, including the corresponding indicator for indirect taxes — 0.73, direct taxes — 1.24, taxes on capital — 19.93, deductions to social insurance — 1.59, taxes on sales — 1.47, capital income — 7.60, other current revenues — 2.54. The coefficient of elasticity of expenditures for intermediate consumption to the gross domestic product over 2007−2016 was 1.09; the corresponding indicator for labor remuneration was 0.78; expenses on repayment of interest — 0.14; expenditures for subsidies — 1.34; expenditures on social assistance — 1.43; other current expenses — 1.66; capital transfers of debt — 2.43; capital investments — 0.23 (Tables 1.3−1.4). The coefficient of elasticity of a budget deficit to the gross domestic product during 2007−2016 on average totaled 23.36, including over 2007−2011 — 59.50, over 2012−2016 — (−14.78); the corresponding indicator for public debt over 2007−2016 amounted to 2.15, including over 2007−2011 — 2.85, over 2012−2016 — 1.45).

Despite the measures aimed to conform to the norms of the Pact of stability and growth, the European Union countries demonstrate the differences in the structure of state revenues and expenditures (Table 1.5).

Table 1.3 Coefficient of elasticity of public spending, revenues, and debt
to GDP in the European Union countries over 2007 − 2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
State expenditures	0.77	7.54	−0.35	0.90	0.07	1.41	0.30	0.64	0.62	−1.03
State revenues	1.06	0.92	1.11	1.01	1.43	1.82	2.85	0.83	0.88	1.02
Deficit	−7.21	339.60	−25.96	0.19	−9.14	−2.47	−26.55	−1.95	−3.22	−39.70
State debt	0.24	11.13	−2.23	2.88	2.22	2.74	3.76	1.36	0.57	−1.19

* *Compiled based on data from Statistical organization of the European Commission*

Table 1.4 Coefficient of elasticity of public expenditures and revenues
to GDP in the European Union countries over 2007 − 2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TOTAL REVENUES	1.06	0.92	1.11	1.01	1.43	1.82	2.85	0.83	0.88	1.02
Taxes:	1.16	−2.49	1.63	1.23	1.62	2.13	2.80	1.07	1.06	1.34
− indirect taxes;	0.95	−4.70	1.17	1.73	1.57	1.94	1.70	1.20	1.00	0.74
− direct taxes;	1.37	−3.10	1.97	0.92	1.56	2.54	3.43	0.99	1.10	1.67
− taxes on capital	1.29	151.94	5.18	−6.22	6.93	−7.36	31.35	−1.83	2.32	15.69
Deduction for social security	0.82	5.39	0.37	0.59	1.11	1.32	1.71	0.80	0.72	3.05
Taxes on sale	1.15	5.82	−0.26	1.29	0.91	0.96	3.32	0.71	0.65	0.19
Capital revenues	0.57	−42.38	2.45	7.18	3.62	10.85	1.16	2.44	4.36	−66.26
Other revenues	1.36	18.25	0.99	0.20	1.88	1.52	11.37	−2.06	−0.79	−7.28
TOTAL EXPENDITURES	0.77	7.54	−0.35	0.90	0.07	1.41	0.30	0.64	0.62	−1.03
Intermediate consumption	1.02	7.47	−0.31	0.75	0.24	1.30	1.56	0.70	0.93	−1.55
Labor remuneration	0.64	4.15	−0.14	0.63	0.12	0.57	0.23	0.63	0.59	0.35
Repayment of interest	1.38	5.07	1.67	1.89	3.88	0.73	−6.51	−0.81	−1.16	−7.51
Subsidies	0.94	4.83	−2.01	0.69	−0.69	0.16	2.57	2.88	1.34	2.70
Social assistance	0.68	6.14	−0.82	0.89	0.48	1.74	2.32	0.87	0.72	1.31
Other expenditures	0.64	5.39	0.06	1.41	0.05	2.22	8.97	−0.70	0.46	−1.86
Capital transfers of debt	−0.75	59.83	1.56	5.57	−8.68	15.55	−28.51	0.12	0.17	−20.60
Capital investment	1.41	13.49	−0.51	−0.65	−1.32	−2.42	−3.72	0.84	0.95	−10.36

* *Compiled based on data from Statistical organization of the European Commission*

Table 1.5 Proportion of state revenues in GDP in the European Union countries over 2013 – 2015, %

	Taxes									Deductions for social insurance			Taxes on sale			Other current revenues			Capital revenues		
	Indirect taxes			Direct taxes			Taxes on capital														
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
Austria	14.4	14.4	14.5	13.3	13.7	14.3	0.2	0.1	0.0	15.2	15.4	15.5	4.2	4.2	4.1	2.1	2.0	1.9	0.1	0.1	0.1
Belgium	13.0	13.0	13.0	16.7	16.7	16.7	1.0	1.0	0.9	16.8	16.7	16.6	2.7	2.7	2.7	2.2	1.9	1.7	0.1	0.1	0.1
Bulgaria	15.4	14.8	15.5	5.1	5.4	5.5	0.2	0.2	0.3	7.5	7.9	8.1	2.5	2.9	2.4	4.6	3.0	2.6	2.0	2.4	3.8
Germany	10.8	10.8	10.8	10.3	11.9	12.0	0.1	0.2	0.2	16.5	16.5	16.6	3.5	3.5	3.6	1.4	1.5	1.4	0.2	0.2	0.2
Greece	14.1	15.6	16.1	10.5	9.8	9.4	0.1	0.1	0.1	13.6	13.6	13.9	2.7	2.7	2.8	4.0	2.8	2.9	4.1	2.5	3.0
Denmark	16.6	16.5	16.5	30.5	33.4	29.9	0.2	0.2	0.3	1.1	1.1	1.0	3.9	3.8	3.9	3.6	2.9	2.3	-0.3	-0.4	-0.3
Ireland	10.7	11.2	10.5	12.8	13.2	13.0	0.2	0.2	0.2	5.7	5.8	5.3	2.5	2.5	2.4	1.9	1.7	1.3	0.2	0.2	0.1
Czech Republic	12.8	12.0	12.5	7.2	7.4	7.4	0.0	0.0	0.0	14.9	14.8	14.8	3.7	3.6	3.4	1.9	1.8	1.9	1.0	1.2	2.2
Spain	11.2	11.5	11.7	10.2	10.1	10.1	0.5	0.5	0.6	12.4	12.5	12.2	2.3	2.3	2.2	1.8	1.7	1.4	-0.1	0.0	0.0
Croatia	19.0	18.7	19.5	6.3	6.1	6.5	0.0	0.0	0.0	11.3	11.8	11.9	3.7	3.7	4.0	2.0	2.0	1.6	0.3	0.3	0.7
Italy	14.9	15.4	15.2	15.0	14.8	14.8	0.3	0.1	0.1	13.4	13.3	13.4	2.3	2.3	2.3	1.9	2.0	1.9	0.3	0.3	0.3
Cyprus	13.7	14.9	14.8	10.3	10.2	9.9	0.0	0.0	0.0	7.5	8.3	8.5	2.5	2.8	2.7	2.5	3.5	3.2	0.0	0.0	0.0
Luxembourg	12.8	13.3	11.9	14.2	13.9	14.3	0.2	0.2	0.1	12.3	12.3	12.0	2.9	2.8	2.7	1.6	1.5	1.7	0.1	0.1	0.1
Latvia	12.3	12.7	12.7	7.7	7.8	7.8	0.0	0.0	0.0	8.8	8.7	8.7	3.3	3.3	3.3	2.3	1.9	1.8	1.7	1.6	1.6
Lithuania	11.1	11.3	11.8	5.0	5.1	5.5	0.0	0.0	0.0	11.1	11.5	12.0	1.9	1.9	1.9	1.7	1.7	1.8	2.1	2.7	1.9
Hungary	18.5	18.5	19.0	6.6	6.8	6.9	0.0	0.0	0.0	13.0	13.1	13.3	3.7	3.7	3.4	2.7	2.5	2.1	2.6	3.0	4.0
Malta	12.8	13.6	13.5	13.6	14.3	14.1	0.2	0.0	0.2	6.9	6.9	6.8	2.3	2.2	2.6	1.7	1.6	1.4	1.8	2.4	3.2
The Netherlands	11.0	11.3	11.2	10.1	10.7	11.5	0.3	0.2	0.2	15.5	15.4	14.7	3.5	3.4	3.3	3.6	2.8	1.9	0.1	0.1	0.1
Poland	12.8	12.8	12.9	6.8	6.9	6.9	0.0	0.0	0.0	13.3	13.2	13.6	2.4	2.6	2.3	2.2	2.1	2.1	0.9	1.2	1.1
Portugal	13.7	14.2	14.5	11.4	10.9	10.8	0.0	0.0	0.0	12.0	11.7	11.5	3.8	3.8	3.7	3.0	3.1	2.5	1.1	0.8	0.7
Romania	12.8	12.8	13.2	6.0	6.3	6.7	0.0	0.0	0.0	8.7	8.6	8.1	2.5	2.0	2.2	1.7	1.8	1.9	1.5	2.1	2.6
Slovakia	10.3	10.6	10.9	6.4	6.9	7.2	0.0	0.0	0.0	13.5	13.6	14.0	4.2	4.1	4.2	2.9	2.9	5.1	1.2	1.2	1.3
Slovenia	15.1	15.0	14.8	7.1	7.2	7.3	0.0	0.0	0.0	14.9	14.6	14.6	4.0	4.0	4.1	2.5	2.4	2.2	1.2	1.7	1.8
Finland	14.4	14.4	14.4	16.2	16.5	16.8	0.3	0.0	0.3	12.7	12.8	13.0	7.5	7.5	7.5	3.6	3.5	3.3	0.1	0.1	0.1
France	15.5	15.7	15.9	12.7	12.7	12.5	0.5	0.5	0.6	18.9	19.1	18.8	3.9	3.9	3.9	1.7	1.7	1.7	-0.3	-0.2	-0.1
Estonia	13.3	13.8	14.3	7.1	7.4	7.9	—	—	—	11.1	11.1	11.4	3.0	3.1	3.1	2.1	2.3	2.2	1.5	1.0	1.1
Sweden	22.2	21.9	22.0	17.8	17.9	18.3	0.0	0.0	0.0	3.8	3.7	3.7	4.2	4.1	4.0	2.7	2.3	2.0	0.3	0.1	0.2
United Kingdom	12.7	12.8	12.8	12.7	13.7	14.0	0.2	0.2	0.2	7.8	7.6	7.8	2.5	2.5	2.5	2.0	1.4	1.4	0.1	0.1	0.1
Iceland	14.1	15.7	15.1	17.8	13.7	18.0	0.1	0.1	0.1	3.7	3.7	3.6	3.0	3.0	2.9	3.3	3.6	2.4	0.0	0.0	0.0
Norway	11.3	11.4	11.9	19.0	17.3	15.6	0.1	0.1	0.0	9.5	9.9	10.4	3.3	3.4	3.6	11.5	12.2	12.7	0.0	0.0	0.0
Switzerland	6.2	6.2	6.1	14.0	14.2	14.1	0.1	0.2	0.2	6.8	6.8	6.8	4.8	4.9	4.9	1.5	1.5	1.4	0.0	0.0	0.0

Compiled based on data from Statistical organization of the European Commission

At the same time, during 2005−2015 the share of redistribution of the gross domestic product via a budget is more than 43 % and varies among countries in a rather wide range. The largest specified indicator among the European Union countries was observed in 2015 in Finland — 55.4 %, the smallest — in Ireland, 32.8 %. On average, over 2013−2015, the share of tax revenues in Austria, Belgium, Greece, Denmark, Ireland, Croatia, Italy, Luxembourg, Hungary, Malta, Portugal, Finland, France, Sweden, Great Britain, Iceland, Norway is more than 25 %. In countries such as Belgium, Spain, Italy, Luxembourg, Finland, prevailing among tax sources are the direct taxes. More than 15 % in the structure of government revenues account for the deduction for social security in countries such as Austria, Belgium, Germany, Slovenia, France.

As regards the structure of public spending, countries such as Austria, Belgium, Germany, Greece, Italy, Luxembourg, the Netherlands, Finland, France spend more than 20 % on social assistance, while Bulgaria, Cyprus, Latvia, Lithuania, Romania, Malta, Estonia, Great Britain, Iceland, Switzerland spend less than 15 % (Table 1.6).

Despite the differences in the structure of public revenues and expenditures between the European Union countries, there is a marked decrease in the average deviation for all indicators, which makes it possible to conclude that the process of convergence exerts a significant impact on budget policy.

The level of public debt still exceeds the indicator set in the Pact of stability and growth. Specifically, among the European Union countries, on average, over 2013−2015, only in Estonia, Luxembourg, Romania, Latvia, Bulgaria, Lithuania, the Czech Republic, Denmark, Slovakia, Sweden, Finland and Poland, the public debt did not exceed 60 % of the gross domestic product. It should be noted that the use of fiscal policy as an effective instrument for ensuring the socio−economic development is complicated by its cyclic asymmetry, which increases due to changes in economic conditions. In this regard, an important task in the field of fiscal policy is the harmonization of budget systems, in particular in terms of the structure of revenues and expenditures.

In general, at this stage, the specificity of the European model of fiscal policy is defined by a considerable role of deep integration processes to ensure its effectiveness. In this case, it should be noted that based on the strategic forecasts, the GDP in terms of parity purchasing power in the EU countries would on average increase by 2050 by 1.5 times. Specifically, the corresponding indicator will grow from 2016 to 2050 in Germany by 1.54 times; in the UK — by 1.93 times; in France — by 1.72 times; in Italy — by 1.40 times; in Poland — by 1.99 times. Along with this, a growth in the share of pension expenditures in GDP is predicted. According to the forecast of the European Commission, the share of public expenditure in the GDP of the EU countries related to the rising level of aging population will increase by 1.5 percentage points over a period from 2016 to 2070, and will amount to 26.9 %.

Table 1.6 Share of public expenditures in GDP in the Eurozone countries over 2013 – 2015, %

	Intermediate consumption			Labor remuneration			Repayment of interest			Subsidies			Social assistance			Other current expenditures			Capital transfers payable			Capital investments		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
Austria	6.4	6.3	6.3	10.6	10.6	10.7	2.6	2.5	2.4	1.4	1.4	1.4	23.0	23.3	23.5	3.2	3.1	3.2	1.3	2.4	1.3	2.4	2.9	2.9
Belgium	4.2	4.3	4.2	12.7	12.7	12.5	3.4	3.2	2.9	3.5	3.4	3.4	25.3	25.3	25.4	2.2	2.1	2.0	1.9	1.7	1.3	2.4	2.4	2.0
Bulgaria	5.7	5.5	5.8	9.5	9.5	9.3	0.7	0.9	1.0	1.3	1.3	1.2	13.9	14.5	14.3	2.2	1.5	2.1	0.5	3.9	0.7	3.9	5.0	5.9
Czech Republic	6.6	6.4	6.4	9.0	8.9	8.9	1.3	1.3	1.1	2.3	2.3	2.3	16.6	16.3	15.9	2.2	2.2	2.2	1.0	1.4	0.7	3.7	3.9	5.1
Denmark	9.4	9.3	9.2	16.7	16.6	16.5	1.7	1.5	1.6	2.2	2.1	2.0	19.2	19.1	19.0	3.6	3.2	3.3	0.3	0.4	0.4	3.6	3.8	3.6
Germany	4.8	4.8	4.7	7.8	7.7	7.6	2.0	1.8	1.6	0.9	0.9	0.9	23.6	23.7	23.8	2.2	2.1	2.1	1.1	1.2	1.0	2.2	2.1	2.1
Greece	4.7	4.8	4.7	12.2	12.3	12.2	4.0	4.0	3.8	1.1	1.0	0.9	21.5	21.6	22.2	1.8	2.0	1.6	12.2	0.9	5.3	4.8	4.0	4.7
Ireland	4.6	4.6	4.3	10.4	9.9	9.1	4.3	4.0	3.1	1.0	1.0	0.9	15.9	14.9	13.0	1.6	1.4	1.2	0.5	0.6	1.6	1.5	2.1	1.8
Spain	5.3	5.3	5.2	11.1	11.0	11.0	3.4	3.4	3.1	1.1	1.1	1.2	19.3	19.1	18.4	1.7	1.7	1.5	1.0	0.8	0.6	2.3	2.2	2.3
Croatia	7.8	8.0	8.1	12.1	11.8	11.4	3.5	3.5	3.6	2.1	2.0	1.7	15.9	16.6	16.4	1.6	1.3	1.9	1.1	1.4	1.0	3.7	3.7	2.9
Italy	5.6	5.5	5.4	10.3	10.2	9.9	4.8	4.6	4.2	1.7	1.9	1.7	22.6	23.0	23.0	2.4	2.3	2.2	1.2	1.4	1.8	2.4	2.3	2.3
Cyprus	4.1	3.8	3.7	14.2	13.2	12.8	3.1	2.9	2.8	0.5	0.5	0.4	14.2	14.2	14.2	2.9	3.4	2.4	2.4	10.1	1.9	1.8	1.8	1.9
Latvia	6.3	6.2	6.4	9.4	9.6	9.9	1.5	1.4	1.3	0.6	0.7	0.4	11.5	11.3	11.5	2.9	3.4	3.0	0.4	0.5	0.1	4.4	4.4	4.4
Lithuania	4.7	4.8	5.2	9.5	9.5	9.7	1.8	1.6	1.5	0.3	0.3	0.4	12.9	12.5	12.6	1.6	1.4	1.5	1.3	1.4	0.7	3.4	3.4	3.6
Luxembourg	3.7	3.5	3.6	9.0	8.9	8.7	0.4	0.4	0.4	1.3	1.4	1.4	20.9	20.7	19.8	3.2	3.0	3.1	1.1	0.8	0.8	3.7	3.6	3.8
Hungary	7.5	8.0	7.1	10.1	10.4	10.7	4.5	4.0	3.6	1.3	1.4	1.2	17.0	16.0	15.4	3.3	3.2	3.3	1.6	1.8	2.7	4.3	5.1	6.7
Malta	6.2	6.5	6.8	12.8	13.0	12.7	2.9	2.9	2.6	1.0	1.3	1.3	12.6	12.4	11.7	2.4	2.4	2.3	1.2	1.1	1.5	2.9	3.6	4.5
The Netherlands	6.4	6.3	6.0	9.3	9.2	8.8	1.5	1.4	1.2	1.3	1.2	1.2	22.4	22.1	22.0	1.9	2.1	2.0	0.8	0.6	0.5	2.9	3.3	3.2
Poland	5.9	6.1	5.8	10.4	10.4	10.2	2.5	1.9	1.8	0.7	0.6	0.7	16.3	16.2	16.3	2.3	2.3	2.3	0.5	0.6	0.5	3.8	4.1	4.2
Portugal	5.6	5.8	5.9	12.5	11.8	11.3	4.9	4.9	4.6	0.6	0.6	0.7	20.4	19.7	19.2	2.7	2.8	2.5	0.9	3.9	1.9	2.1	2.1	2.2
Romania	5.7	5.7	5.6	8.1	7.7	7.6	1.7	1.7	1.6	0.5	0.5	0.5	11.7	11.5	11.5	1.9	2.3	2.4	1.0	1.2	1.1	4.6	3.9	5.1
Slovakia	5.5	5.5	5.9	8.6	8.8	9.0	1.9	1.9	1.8	0.8	0.7	0.6	18.9	19.0	19.0	1.9	1.9	2.1	0.5	0.5	1.0	3.3	3.6	6.3
Slovenia	6.9	6.7	6.5	12.1	11.4	11.1	2.6	3.2	3.0	1.1	0.9	0.8	19.3	18.5	18.0	2.4	2.1	2.0	11.4	2.3	1.4	4.6	4.9	5.2
Finland	11.5	11.5	11.5	14.3	14.2	14.0	1.3	1.2	1.2	1.3	1.3	1.4	21.6	22.4	22.9	3.0	3.0	2.9	0.3	0.3	0.4	4.1	4.1	4.0
France	5.2	5.1	5.1	12.9	13.0	12.9	2.3	2.2	2.0	1.7	2.2	2.5	25.8	26.0	25.9	4.0	3.9	3.8	1.0	1.0	1.0	4.1	3.8	3.6
Estonia	6.6	6.6	6.8	10.6	10.8	11.3	0.1	0.1	0.1	0.7	0.5	0.4	12.3	12.4	12.3	1.9	1.7	2.0	0.9	0.8	0.4	5.2	5.1	5.2
Sweden	8.5	8.4	8.3	12.6	12.6	12.4	0.8	0.7	0.5	1.7	1.7	1.7	17.8	17.5	17.1	6.3	6.2	6.0	0.3	0.2	0.2	4.4	4.4	4.3
United Kingdom	11.4	11.3	11.1	9.6	9.4	9.2	2.7	2.7	2.3	0.5	1.5	0.6	14.5	14.1	14.1	2.8	2.5	2.5	0.8	0.8	0.9	2.5	2.6	2.5
Iceland	11.8	11.5	10.8	13.6	13.8	13.8	4.6	4.7	4.4	1.6	1.5	1.3	7.1	7.0	6.4	1.6	1.5	1.4	0.9	2.3	1.6	2.9	3.1	2.9
Norway	6.0	6.2	6.5	13.6	14.0	14.8	0.7	0.6	0.6	1.9	1.9	1.9	15.2	15.8	16.9	2.3	2.5	2.7	0.1	0.2	0.2	4.2	4.5	4.9
Switzerland	4.4	4.4	4.4	7.5	7.5	7.6	0.7	0.6	0.6	3.5	3.3	3.4	11.1	11.2	11.3	2.2	2.4	2.3	0.8	1.5	1.2	3.1	3.0	2.9

*Compiled based on data from Statistical organization of the European Commission

In order to ensure the financial-budget stability, the EU countries as of present have adopted: the new budgetary provisions to the Pact of stability and growth; Pact «Euro-Plus»; Fiscal agreement. The new budgetary provisions were introduced to the Pact of stability and growth; they imply that along with a limit indicator for a budget deficit (3 % of GDP) there is the need for a structurally-balanced budget; as well as annual reduction, by one twentieth, in the amount of public debt, which exceeds the limit indicator (60 % of GDP).

Pact «Euro-Plus» aims to increase competitiveness, improve employment, ensure the long-term stability of public finances and financial stability in general. It was established that to ensure the long-term stability of public finances, significant attention will be paid to: health protection, social privileges, and stability of the pension system. The above will be carried out taking into consideration demographic factors. The fiscal agreement is intended for the introduction of uniform and mandatory budgetary rules: an annual structural budget deficit should not exceed 0.5 % of the gross domestic product — except when a quota of the state debt is much less that 60 % of the gross domestic product.

At the same time, the EU countries, with the aim of securing financial and fiscal stability, created a procedure to avoid and adjust macroeconomic inequalities, according to which they defined a scale for the evaluation of threshold values for indicators with the aim of timely detection of negative trends. Specifically, the balance of payments (a sliding average indicator over three years) — (−4 %/6 % to GDP); net international assets — 35 %; a reduction in the share of export market over 5 years — 6 %; an increase in the expenditure on labor force in terms of unit of production over three years — 9 %; fluctuations in real effective exchange rate over 3 years — 5 %; a non—government debt — more than 160 % of GDP; national debt — 60 % of GDP; credit flows in the non-state sector — more than 15 % of GDP; an annual increase in property prices — 6 %; an average unemployment rate — 10 %; an annual increase in all general obligations of financial sector — 16.5 %.

Thus, creation of the European Union made it possible for countries to coordinate the implementation of a budget policy aimed at ensuring the socio-economic development of member states. The mechanism for coordination of a budget policy within the EU implies the application of certain norms, specifically a share of the budget deficit and the public debt to the gross domestic product; the application of control systems and sanctions for violating the established norms; mandatory development of programs of stability and convergence programs indicating the predictive values for budgetary indicators. These measures make it possible for countries to ensure compliance with jointly agreed rules to prevent financial-budgetary crises, the adjustment of a budget policy and the search for effective tools to manage the economy.

The main features in the regulation of budget sphere in the EU countries at present include the application of medium-term planning of budgetary indicators. However, due to significant fluctuations in economic conditions, there are great difficulties regarding the implementation of the effective budget policy.

Countries with the transitional economies also face the need to review the tools of budget regulation in order to reduce the impact of crisis processes. Specifically, according to the program of socio-economic development of the Republic of Belarus for 2016—2020, the budget-tax policy is aimed at improving the efficiency of the use of budgetary resources, their concentration on priority areas of socio-economic development, further optimization of the tax system.

As regards the budget policy, it is implied to ensure: a deficit-free budget; a transition to the medium-term budget planning; optimization of the mechanisms for budget revenue allocation; a widespread introduction of the result-oriented budgeting; support for state assistance based on equal access, competition, and correspondence to market requirements; a gradual reduction of the national debt [27].

It is important to note that the main part of budget revenues of the Republic of Belarus forms of tax revenues — 85.67 % on average over 2013—2015, including a share of revenues from the value added tax that makes 34.55 %, income tax — 16.65 %, tax on income from foreign economic activity — 13.83 %, income tax — 11.14 %, excise duties — 10.19 %, tax on property — 5.08 % (Table 1.7).

In terms of expenditures, the largest share accounts for state expenditures — 23.97 % on average over 2013—2015. The corresponding indicator for education expenditures amounts to 17.11 %, national economy — 16.00 %, health protection — 13.83 %, social policy — 8.29 %, housing and communal services and housing construction — 7.70 %, judiciary, law enforcement activities and ensuring security — 6.39 %, national defense — 3.51 %, physical culture, sports, culture and the media — 3.18 %, environmental protection — 0.36 %.

According to the priorities in fiscal policy, they justified the need to maintain a social focus of budget expenditures and to increase the share of expenditures on innovation. It was established that in order to increase the autonomy of local governments regarding the development and implementation of regional development policy, to enhance their interest in providing support to businesses and to create new jobs, to ensure sustainable regional development, the norms for deductions from the state taxes and fees, which are budget-forming for the budgets of districts and cities of regional subordination will not be changed for a period of not less than three years; measures in the field of tax policy will be directed to support the optimal level of tax burden on the economy, to stimulate economic growth.

Table 1.7 Structure of the consolidated budget and a share of deficit in the GDP of the Republic of Belarus, %

	2007	2008	2009	2010	2011	2012	2013	2014	2015
REVENUES	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
TAX REVENUES, including:	71.25	71.29	88.37	92.04	85.79	87.37	87.15	86.20	83.65
– income tax;	9.00	8.94	10.42	11.99	12.68	14.00	16.37	16.98	16.61
– tax on profit;	11.21	12.80	11.16	12.44	11.83	14.15	13.05	10.58	9.79
– property tax	4.44	4.28	3.94	4.12	3.47	3.76	4.60	5.09	5.54
VAT	25.32	24.35	29.25	36.16	36.08	32.94	34.09	36.94	32.62
Excises	8.90	8.33	8.81	9.69	7.62	8.11	10.62	11.23	8.73
Tax income from foreign economic activity	18.35	22.67	19.29	12.87	20.62	18.46	14.14	9.74	17.59
Non-tax revenues	23.43	22.08	11.39	7.75	14.02	12.41	12.69	13.26	15.97
Gratuitous receipts	5.32	6.64	0.24	0.23	0.19	0.22	0.15	0.54	0.39
EXPENDITURES (functional classification)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Public expenditures	13.59	16.78	16.37	19.74	19.95	22.30	24.27	22.50	25.15
National defense	2.53	2.15	2.69	2.91	3.42	3.25	3.34	3.49	3.70
Judiciary, law enforcement and security	4.33	3.64	4.95	5.55	5.41	5.26	6.12	6.67	6.39
National economy	23.49	25.85	33.25	22.94	19.54	19.27	16.60	15.90	15.50
Environmental protection	1.13	0.84	0.81	0.94	0.70	0.56	0.39	0.38	0.31
Housing and communal services and housing construction	4.52	4.87	6.18	7.35	7.82	7.79	8.47	8.20	6.44
Health protection	9.08	7.87	10.88	12.20	13.07	13.13	13.45	14.05	13.97
Physical education, sports, culture and media	2.35	2.24	2.87	3.27	3.27	3.33	3.22	3.24	3.09
Education	11.65	10.40	13.75	15.75	17.26	16.74	17.17	17.44	16.72
Social security	27.33	25.35	8.24	9.38	9.57	8.39	8.01	8.14	8.73
EXPENDITURES (economic classification)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
CURRENT EXPENDITURES, including:	78.56	75.53	67.19	74.42	80.38	77.86	77.86	80.55	82.72
– labor remuneration	20.05	17.95	28.00	29.25	29.16	28.73	30.05	30.70	29.59
Accruals for wages	5.48	4.89	7.47	7.81	7.82	7.94	8.17	8.43	8.17
Public debt service	1.03	1.54	3.23	2.82	5.16	6.23	4.52	4.90	7.27
Current budget transfers	54.38	57.29	35.04	34.77	33.82	33.50	32.66	32.15	31.72
CAPITAL EXPENDITURES	20.15	20.38	22.69	25.73	19.08	22.02	23.58	20.39	14.47
Providing loans, loans minus repayments	1.29	4.09	10.12	-0.15	0.53	0.11	-0.42	-0.95	2.81
DEFICIT (SURPLUS) in % of GDP:	0.43	1.43	-1.79	-2.57	-2.08	-0.53	-0.23	1.04	1.83
Financing in % of GDP:	-0.43	-1.43	1.79	2.57	2.08	0.53	0.23	-1.04	-1.83
– internal financing in % of GDP	-3.62	-3.75	-6.57	-0.25	-5.15	0.18	0.69	-0.30	0.30
– external financing in % of GDP	3.18	2.32	8.35	2.82	3.07	-0.70	-0.92	-0.74	-2.14

* Compiled based on data from the Ministry of Finance of the Republic of Belarus

It was established that the level of tax burden would not exceed 26 % of the gross domestic product. In order to achieve this objective, the following is implied: to improve the efficiency of the tax system to stimulate investment and innovation activity; to improve approaches to levy real estate tax and environmental taxes; to exempt from a value added tax the intra-holding turnover of goods; to ensure a transition to electronic services for taxpayers; to introduce an institute of «tax deposits» that would encourage bringing the revenues and capital out of the shadows.

The financial-budgetary strategy of the Republic of Kazakhstan at present is aimed at achieving the stabilization of macroeconomic situation, which implies reducing the deficit of the state budget and the implementation of strict monetary and credit policy. The budgetary system undergoes reforms, which imply a transition from control over expenditures to managing the results through the increased decentralization in the management of public finances: reforming the system of inter-budgetary relations and the budget process, a transition to the new system of state planning and budget planning for medium term.

At the same time, the execution of the republican budget of Kazakhstan occurs under conditions of slower growth and economic development, against the background of declining world oil prices, rising inflation, a significant weakening of exchange rate of the national currency to US Dollars. In 2015, a revenue share in the total revenues of the republican budget was 79.4 %, paid budget credits — 1.5 %, loans — 19.1 %. In the total amount of revenues, tax revenues amounted to 54.3 %, revenue from transfers — 42.9 %, non-tax revenues — 2.7 %, revenues from the sale of main capital — 0.1 %. Over the past five years, the structure of revenues in the republican budget shows a trend of substituting tax revenues with transfers from the National Fund and lower budgets. Thus, in 2011, the transfers accounted for 29.8 % of the revenues, while in 2015 their share increased by 13.1 percentage points to 42.9 %. Over 2015, the proportion of budget credits increased from 1.6 % to 2.6 %, the percentage of repayment of loans dropped from 5.2 % to 4.1 %. The share of expenditures in the gross domestic product in 2015 was 18.3 %, with an increase to 0.1 % to 2014, and by 1.3 % to 2013.

According to the development strategy of Kazakhstan up to 2050, the need for the following was identified: to spend budget funds only within the limits of own capabilities and to reduce the deficit to the maximum possible minimum; to build up reserves and ensure that they are retained in the long term; budgeting in terms of the long-term prospects of national projects, specifically the diversification of the economy and infrastructure development; reasonable selection of objects for investments in terms of their feasibility and payoff.

An increase in the part of revenues in the republican budget of Kazakhstan in the gross domestic product by one percentage point over 2007 — 2016 led to a decrease in the real gross domestic product by 0.007 percentage

points ($y = 104.65 - 0.007x$). An increase in the share of expenditures in the republican budget of Kazakhstan in the gross domestic product by one percentage point during $2007 - 2016$ led to a decrease in the real gross domestic product by 1.52 percentage points ($y = 130.05 - 1.52x$).

At the same time, an increase in the share of expenditures for social assistance and social security in the republican budget in the gross domestic product by one percentage point during $2007 - 2016$ led to a decrease in the real gross domestic product by 8.80 percentage points ($y = 137.45 - 8.80x$). While an increase in the share of spending on industry, architectural, urban planning and construction activities in the republican budget in the gross domestic product by one percentage point during $2007 - 2016$ led to an increase in the real gross domestic product by 7.43 percentage points ($y = 104.22 + 7.43x$).

The coefficient of elasticity of expenditures in the republican budget of Kazakhstan to the gross domestic product over $2007 - 2016$ is on average 1.22, the corresponding indicator of revenues — 0.75, the corresponding indicator of deficit — (-0.52) (Table 1.8).

Thus, recent years have seen the proportional reduction in growth rates in comparison with the growth of the gross domestic product in the following: budget expenditures on fuel and energy complex and mining, industry, architecture, urban planning and construction activities, transfers; a budget deficit. Faster growth rates, compared with the gross domestic product, are observed in the following: budget revenues, including revenues from the corporate income tax, excise duties, non-tax revenues and transfers; budget expenditures, including transportation and communication, other expenses and debt service.

Depending on the economic, social, cultural and historical conditions, each country individually resolves issues related to building relationships between different levels of public authorities, in particular, in the field of the formation of income sources and exercising spending authority. In this case, there is the list of public services, which in most countries are provided exclusively by local governments. The above refers to the areas of housing, infrastructure, fire safety, protection of civil order, etc.

As regards other functional groups of expenditures, there are no unambiguous criteria to their allocation among the levels of a budgetary system. Social expenditures play an important role in the implementation of the redistributing function of public finance, which is a determining factor in assigning the respective expenditure power to the competence of the central government. Acquiring the information on the level of well-being of people in the territories, the number and categories of socially vulnerable people who need help, would ensure the effective rendering of social services. Given the above, spending authority in the field of social protection is advisable to differentiate between the levels of state authorities.

Table 1.8 The coefficient of elasticity of revenues, expenditures, deficit, in the republican budget of Kazakhstan to GDP over 2007 – 2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
REVENUES	0.79	1.98	-2.73	1.08	0.77	0.71	0.54	1.38	1.27	1.67
Tax revenues:	-0.10	1.10	-5.04	1.54	1.49	-0.09	1.12	0.43	-2.98	1.90
– corporate income tax;	-0.09	0.86	-5.06	1.06	0.86	-0.09	-0.05	1.30	1.54	1.17
– value added tax;	1.11	0.07	-3.28	1.11	0.94	0.58	2.81	-0.95	-6.95	3.92
– excises;	1.55	-0.18	-2.03	-0.95	1.26	3.97	1.84	3.51	10.88	1.88
– non-tax revenues	9.56	-2.30	9.57	-1.33	1.78	13.18	-3.71	3.01	7.74	5.59
Proceeds from sale of fixed capital	-0.03	0.17	-7.92	14.97	-1.09	0.75	-2.99	-1.41	4.66	-0.76
Proceeds from transfers	9.34	7.22	0.64	0.70	-0.29	1.50	0.16	3.42	8.26	1.14
EXPENDITURES	0.88	1.23	2.58	0.84	0.65	1.45	0.52	1.32	1.62	1.10
State services of general character	1.02	0.85	-2.92	1.11	1.31	1.17	1.03	3.63	21.10	-1.05
Defense	0.38	0.37	0.71	0.61	0.61	2.89	1.21	0.63	2.21	-0.26
Civil order, security, legal, judiciary, law enforcement	3.64	0.47	3.06	0.68	0.64	2.60	0.63	-0.60	-3.03	0.32
Education	3.32	1.07	3.85	0.08	1.07	4.20	0.20	0.24	-1.47	1.32
Health protection	-2.87	0.59	8.91	3.81	0.09	2.06	0.64	2.79	0.81	1.37
Social assistance and social security	30.05	0.90	3.85	0.71	0.85	0.97	0.64	1.40	3.66	0.99
Housing and communal services	2.95	0.67	17.12	-0.06	0.18	2.41	0.76	1.56	-15.08	2.91
Culture, sport, tourism, information space	3.92	1.56	3.25	1.05	-0.49	-1.97	0.02	1.29	-0.39	0.65
Fuel and energy complex and subsoil use	-1.15	0.67	0.62	1.48	0.79	0.43	-0.50	-0.76	-5.18	-1.44
Rural, water, forest, fish farming, especially protected natural areas, environmental protection and animal life, land relations	258.36	2.85	0.20	0.85	0.49	-0.22	-1.12	-1.22	2.25	0.84
Industry, architectural, urban planning and construction activities	-3.70	-1.84	63.34	-1.48	3.30	-2.46	1.46	4.56	-12.53	-2.10
Transport and communications	6.36	0.60	0.66	0.76	0.47	0.27	0.25	2.30	1.35	1.17
Other expenditures	16.66	-0.20	-6.90	0.06	1.27	3.08	3.45	2.12	6.95	8.19
Public debt service	-3.50	2.85	3.35	1.30	0.94	0.75	2.28	3.02	9.13	5.13
Transfers	0.77	5.33	2.92	0.80	0.76	1.17	-0.10	1.27	-2.48	-0.50
NET BUDGET LOANS	-4.61	-60.45	-6.82	1.55	4.59	-4.29	-1.37	0.31	32.09	12.35
Budget loans	0.25	1.64	-2.99	7.21	1.12	-0.52	-1.87	-0.29	20.03	4.38
Repayment of budget loans	3.89	-2.75	9.20	14.11	-0.10	2.70	-2.06	-0.57	14.01	-1.14
Balance on transactions with financial assets	11.94	5.77	-14.08	3.32	0.64	0.71	-3.49	19.83	-20.42	3.74
Acquisition of financial assets	9.94	5.77	-14.06	3.31	0.64	0.71	-3.34	18.26	-20.34	3.80
Proceeds from the sale of financial assets of the state	-3.78	-3.10	123.15	0.65	-1.65	-0.26	154.90	-9.18	47.97	11.37
BUDGET DEFICIT (SURPLUS)	-18.93	2.17	9.42	34.85	-3.75	-26.22	-1.29	4.95	-5.14	-1.26

Compiled based on data from the Ministry of Finance of the Republic of Kazakhstan

In many foreign countries, spending authority for education is given both to the central and local governments. In this case, higher education establishments are financed from the state budget, which corresponds to the principle of economy of scale, while expenditures on elementary and secondary education are the responsibility of local budgets. The authority for spending on health care in most foreign countries is divided not only between the levels of a budgetary system, but also between the sectors of economy — public and private. The central budget, as a rule, is responsible for expenditures of national importance, related, for example, to the prevention of spread of dangerous infectious diseases. Power to maintain the institutions of primary and specialized medical care is assigned to the sphere of administration of local self-government bodies.

World experience testifies to the efficiency of combination of public and private mechanisms to render social services, because the presence of variations in a given issue makes it possible to choose the best variant. Higher motivation in achieving the best results of activities is the main advantage of private structures, using which could improve the efficiency of spending of local budgets. Assigning the spending authority to local self-government bodies in order to render services in the areas of education, health, social protection can lead to the differentiation in quality of such services depending on the level of funding from local budgets. Resolving the specified task in foreign countries was promoted by the introduction of unified standards to render public services, whose application when planning an expenditure part of local budgets is mandatory.

A centralized approach to the management of budgetary funds and the high level of their redistribution are characteristic of countries with a high degree of inequality of budget funding among administrative — territorial units.

Specifically, in Germany, federal authorities are responsible only for the action of laws in areas, which mainly relate to foreign relations, federal finance management, armed forces, federal-border protection. A significant number of control functions is assigned to the bodies of local self-government. Only a small part of functions is performed through the requests of federation, for example, management of networks of federal automobile roads and expressways, water ways, construction of airports. Most federal laws are performed directly by local authorities under federal control. However, the possibilities for the federation to execute control are limited. Control applies to the legitimacy, rather than expediency of management decisions. The implementation of authority related to the development of schools, police activities, landscaping is provided exclusively by local governments.

In Japan, the mechanism of distribution of spending responsibilities between the levels of a budget system is predetermined by the vertical scheme of relations between central and local public authorities. A totalitarian political system in the country was quickly changed to the democratic. In this case, local self-government authorities were created by the central

authorities in line with a unified scheme. The state had the right to control and directly interfere in the issues of regional significance. Such a situation was the basis and a political prerequisite for establishing a highly-centralized model of relations between central and local governments.

Local authorities in Japan are endowed with powers concerning the tasks and measures in the areas related to creation of adequate conditions for the life of people, ensuring their well-being, support to local businesses. These authorities determine the order of land management, ensure the implementation of national programs that contribute to the revitalization of productive activity in a region and re-allocation of production volumes from one territory to another. On the one hand, bodies of local self-government are given a wide range of economic functions and rights, on the other hand, they are not fully independent financially. Therefore, optimization of the budget-tax system is an important tool to ensure actual autonomy of local authorities.

An organization that is responsible for ensuring and coordinating the realization of measures related to regional development in Poland is Polish Regional Development Agency (PRDA). The main functions of PRDA are: development and implementation of initiatives on the socio-economic development of regions; ensuring publicity of information on the set and achieved goals for regional development; introduction of budget programs, which would be implemented through foreign investment and would promote prospective development.

It is important to note that since the end of 1990s the member states of the European Union adopted the mandatory three-year forecast for the indicators of local budget expenditures, which should improve the efficiency and effectiveness of using budget funds. The OECD countries, in the context of the introduction of a medium-term planning of local budgets, often apply the term «multi-year budgets», which are a tool for the implementation of measures within administrative and territorial reforms, increasing the efficiency of budgetary management and transparency of the financial-economic policy.

In 2008, France, by amending the Constitution, introduced a new category of laws on programming that define the main directions in the development of public finances in a medium term. The pivot of the French system of medium-term programming is the approval of budget expenditures for three years in the context of functions that match the allocation of expenditures based on major activities — foreign affairs, security, defense, education, social protection, etc.

A law on the budget for next year is developed separately, but always based on the medium-term budget. The law on budget provides detailed expenditures, specified in the law on programming, to the level of budget programs, while the total volume of expenditures for each function remains the same. Medium-term budget planning proceeds from the fact that general expenditures cannot exceed the specified norm for their growth, for example, at the level of the expected medium-term forecast for the

consumer price index. Only the reconsideration of inflation indicators can lead to a change in the volume of overall spending.

Medium-term budget programming refers only to the approval of expenditure limits in terms of functions of the state budget and is not applicable to local budgets and extra-budgetary social funds, because they are independent from the central government. At the same time, a law on the medium-term budget programming includes objectives regarding the levels of deficit and debt not only in the state budget, but also in the sector of state administration, including a state budget, local budgets, extra-budgetary social funds, which is the requirement of the European Union.

An important component of the medium-term budgetary programming is forecasting the macroeconomic indicators. Macro forecasting implies the development of realistic macroeconomic scenario based on which the main financial documents of the country are compiled — laws on a budget, on programming public finances, on financing social security. The development of macroeconomic forecasts for a short- (up to a year) and medium-term (over a year) employs different approaches. Short-term programming is based on the assumptions about a change in the individual components of aggregate demand — consumption, investment, export and import, while the medium-term one is based on an approximation of the actual rate of economic growth to the potential ones, which requires individual calculation of growth rates in a gross domestic product over the medium- and long-term based on the dynamics of production factors.

The French model of medium-term programming is characterized by certain features that distinguish it from the models of other European countries. Some of these differences indicate a need for the further adaptation of the system of multi-year budget planning to acting institutional and legislative mechanisms.

In the Netherlands, medium-term planning was initiated in 1994. A time horizon in this case spans the planned year and the four subsequent budget periods. Directions and content of clarification and adjustment of budget indicators are determined by changes in the trends of socio-economic and political development of the country.

The main motivation for the Dutch planning system was that the set goal of achieving a certain level of deficit/surplus proved to be insufficient, because it could not enable control over the use of budget funds and, as a rule, led to the need to implement special measures. The initial phase of a budget process begins when a new government comes to power and forms the overall budget strategy for the entire four-year term, which is part of the coalition agreement. This strategy includes specific objectives of fiscal policy, which are subsequently achieved through the implementation of various government measures on an annual basis.

A coalition agreement consists of three main parts: a review of strategies intended to be implement by the new government, including the basic

macroeconomic indicators, which must be reached by the end of the term of its time in power; a detailed list of budgetary rules defining the way the coalition would act in the case of a possible shortage of budgetary funds; actual values for the limiting indicators of budget expenditures for a long-term prospect for the three major budget areas — health, social security, and labor, as well as basic administrative expenditures of the government.

The limiting budgetary indicators for specific sectors in the total amount of expenditures, which are typically based on the more pessimistic of the two economic forecasts, proposed by the central planning department, reflect the strategic priorities of the budget policy. The discipline role of budget constraints is emphasized by the fact that under condition for the occurrence of unforeseen expenditures or consideration of political proposals, which were not part of the initial coalition agreement, approval of the additional expenditures requires the consent of all ministers and support from political parties in the parliament. This means that the actual values for the planned and actual expenditures for the three largest sectors usually differ to a minor extent.

The basis for developing a fiscal policy in the field of planning the local budgets expenditures is their level. Fixed indicators for budget limits in real terms are determined for each field, make it possible for the automatic stabilizers to act through the revenue part. The degree of financial adjustment over the planned period is coordinated by the government, it is not governed by the system of planning automatically. The idea is that the limiting indicators for budget expenditures should be established based on the substantiated projections of macroeconomic indicators.

Reform of the system of budget planning in Finland began in 1991, following the financial difficulties caused by the economic recession in the early 1990s. The current system of planning is based on the multi-year program of spending, adopted in 1995, which contributed to the financial and economic stability and optimization of expenditures. Medium-term budget planning was introduced in 2003.

A medium-term program for a four-year period is formed by a new government starting from when it comes to power and covers the entire term of its power. Indicators for limiting budget indicators are expressed in permanent prices and are split into fourteen management areas, which are essentially the areas of activities of various ministries. Each year the program is adjusted to reflect changes in actual prices and is extended for the purpose of adopting a new four-year forecast. It focuses on the years within the tenure of the government in power. Part of the plan, which goes beyond the term of current government, cannot be regarded as mandatory. The possibilities of achieving the objectives, initially established for a period of the term of the government, are discussed and made public. Some expenditures are not included in the planning program. Specifically, expenditures intended to smooth the effect of economic cyclical fluctuations, as well as

interests on the public debt. Planning does not include any targets relative to a fiscal balance or a government debt. At the same time, a stability program, submitted to the European Commission, establishes such objectives for the current budget period. Expenditures of the local authorities must be balanced in accordance with the medium-term program of the government.

In Austria, Denmark, Finland, Australia, budget indicators for perspective development are calculated for the three years following the current budget period. In Sweden, in parallel to compiling a three-year budget, they form forecasting volumes for the basic budget-forming indicators over four scheduled periods. Such an approach makes it possible to predict the results and consequences of the fiscal policy and to avoid potential pitfalls in the future. The specificity of budget planning in Greece implies the application of a moratorium on reducing or limiting the volume of investment expenditures, calculated by the Economics Ministry, when adding them to the state budget.

Interesting is the French practice related to developing a medium-term finance forecast for the sector of general state management, which includes a state budget, local budgets, state social funds, while only one part of this forecast, namely a state budget, is approved by law.

A review of best practices in the field of strategic programming makes it possible to summarize the following. A medium-term planning of local budgets expenditures through their formation for a multi-year period ensures: the reorientation of budget from an instrument of current planning to the mechanism for future forecasting; the use of an effective model of a budget process, underlying which is the relationship between the current and future objectives of financial and economic policy; the formation of a financial plan of development of both separate territories, industries, and the economy in general; conducting a thorough analysis of the macro indicators and directions of future socio-economic development of a country and administrative-territorial units; monitoring of the implementation of budgets of local self-government by means of monitoring and analysis of budget indicators, not limited to the information about the current budget period only; the relationship between directing budget funds for the implementation of expenditure authority, programs, projects, and the results of their use; transparent accountability of public authorities; information base for result-oriented budgeting.

A program-target method (PTM) for planning the expenditures of local budgets is a tool that ensures effective management of the budget process in a medium term. This method focuses on solving the existing problems and achieving the defined objectives. Many countries apply it in order to efficiently use the limited funds of local budgets. The program-target method in a budget process was introduced in the 1960s in the United States of America. At present, the United States, Canada, New Zealand, the United Kingdom, and the member states of the European Union are actively using PTM during preparation and execution of local budgets.

In the United States of America, the program-target method was initially implemented at the level of federal government in the process of making a state budget. The US Federal Treasury system supported the initiative to implement this methodology, which plays an important role in the implementation of practice of servicing budget expenditures based on the approved indicators for the effectiveness of budget programs. At present, the practice of program-target budgeting is applied by most states and territories. In accordance with the legislation in the USA, every state has the right to select a system to control budget, that is appropriate for it, and is guided by its own approaches to the formation and implementation of a budget based on PPM, it uses different procedures for the development of effective indicators for executing budget programs, reporting on their implementation, and allocation of resources among programs. At the level of governments of states and administrations of municipalities, monitoring of the effectiveness of budget expenditures is regulated by its own legal regulations.

The process of program-target budgeting in the USA is constantly upgraded owing to the implementation of new initiatives related to the reforms in a budget sphere. In the first place, this concerns the improvement of approaches to the assessment of effectiveness of budget program implementation, the establishment of interconnection between the goals and objectives of programs and priority areas in the socio-economic development of the country and its territories, which contributes to increasing the efficiency of using budget funds.

An important step in this direction was the adoption of the Federal law «On the evaluation of results of activity of state institutions», which identified goals and ways to achieve effective indicators in the field of management of budget expenditures. Provisions of the law stipulate that the priority during decision making and reporting is such results of activities of central and regional authorities as increasing the level of employment, complete satisfaction of social needs, ensuring national security.

Taking into consideration the experience of the United States may prove useful when developing domestic methodological framework for the compilation and execution of local budgets based on PTM, especially in the implementation of the system of monitoring and evaluation of budget programs based on the effective indicators of their fulfillment.

In Australia, the introduction of PTM in the early 1970s was a component in a comprehensive reform of public administration and economic policy. The preparation of a budget based on PTM implies the following steps: government defines ultimate results in the form of strategic goals that reflect a social effect that needs to be achieved in each particular sector; the ministries and departments, in their turn, establish the goals that they must achieve in order to maximally effectively implement the state policy that contributes to the achievement of the government's strategic goals; in order to assess the social and economic efficiency of its activities, improve transparency of the budgetary process and the level of own responsibility for the ultimate results, the

ministries and departments develop a system of effective indicators for budget programs; The finance ministry carries out a comprehensive review of expenditures and prepares budget plans for programs in terms of expenditures and revenues over a current and the three subsequent years; a medium-term plan is the basis for the development of the yearly budget.

Foreign experts believe that the experience of PTM introduction in Australia can be assessed positively because: the budget reforms were mostly supported by government; PTM was introduced as a component of the comprehensive reform in a budgetary process; the executors of reforms were clearly defined, one of which was the Ministry of Finance.

One should note among the main deficiencies: improper definition of purposes for individual budget programs, which complicates the process of their monitoring and evaluation and, therefore, prevents making a rational management decision; lack of information on the implementation of budget programs, making it impossible to timely introduce appropriate changes to programs or eliminate negative aspects in the process of their implementation.

The UK budget process is characterized by the following approaches, which are used for the purpose of proper program-target management: budget objectives focus on the main priorities in the state and regional policy and are aimed at their implementation, budget control is executed based on the ultimate socially important results; a budget policy strategy and the amount of expenditures in terms of functions and departmental classification are determined for a long-term period. The specified indicators, control amounts, is the basis for a government to review existing obligations for the next two budget periods and to prepare a forecast for the third year.

The agreement on the provision of budgetary services and the agreement on service quality that apply in the UK from 1998 onwards define the goals and objectives of each ministry, body of municipal management, the values for effective indicators of budget programs and the volume of public services, the size of the expected effect from rendering them, as well as other targets for the activities of ministries, departments and authorities.

The positive achievement of the British approach to PTM implementation is the enhancement of budgetary discipline and the improved efficiency of expenditures due to their long-term planning. The United Kingdom government forms a fiscal policy based on the view that the application of PTM ensures a more rational allocation of funds in the priority areas of financial and economic development.

Procedure shortcomings of the British system of program-target budgeting include its periodic, fairly complicated, analysis of all the programs included in the budgets. That requires considerable human resources, technical and financial expenses and, until the time the analysis is completed, it could be the cause of uncertainty regarding the future funding of programs.

PTM implementation in the budgetary process is of special relevance under conditions of the Ukraine's integration into the European Union,

since the preparation of a budget in the program-target format is one of the main requirements for member states of the European Union and the candidates for entry.

Experts from the International Monetary Fund, by conducting an analysis of the international experience of program-target budgeting, identified four basic requirements to develop it, the expediency to comply with which is confirmed by the world practice: a set of programs must take into consideration the comprehensive system of directions and priorities in strategic development. A set of programs represents the plan of budget expenditures, agreed with the strategic objectives, with tactical tasks, ultimate results, developed in the course of budgeting process, focused on achieving results. In order to realistically reflect the goals, a set of programs should be properly structured, that is, match the strategy in general. The above will make it possible to evaluate the way in which the government's measures ensure the achievement of strategic goals in socio—economic policy; programs must be compiled in such a way as to ensure the adoption of effective economic decisions and the determination of priorities. Proceeding from the need to incorporate a set of programs into the wider context of state decisions and priorities, there should be a clear correlation between budgetary funds used for program implementation and the expected and ultimate results; programs should be compiled so that their implementation would ensure the principles of accountability, logic, consistency, systemic character. Programs and subprograms should be divided into separate activities and projects. In this case, the achievement of targets must be mandatory for the budget funds allocators; the application of PTM must ensure the formation of a comprehensive model of budget control, aimed at ensuring the effectiveness of budget expenditures. To obtain maximum benefit from program implementation, structured in accordance with the goals and objectives, the additional measures are required in terms of efficiency and accountability. The mechanism of the use of funds should provide more freedom to allocators and responsible executors of budget programs that seek to achieve their effective implementation.

By summarizing the experience of foreign countries in the field of implementation of the program-target method, the following conclusions can be drawn: a program-target method is only one of the elements of a whole series of reforms in the budgetary sphere, aimed to improve the activities of budgetary establishments. It is impossible to improve the effectiveness of local budgets' expenditures by improving only the management technology without modifying a budget process; it is inappropriate to simultaneously introduce or improve the program-target budgeting at all levels of the budgetary system and organizational hierarchy of state institutions. It is recommended that a program-target method should be introduced in the pilot ministries, regions, budgets, with the subsequent dissemination of acquired experience to other levels of the budget hierarchy; effective implementation of the program-target method implies the presence of a system of financial

control, reporting and auditing. Compulsory elements are monitoring and evaluation of results of budget programs implementation.

The experience of many countries suggests that the introduction of the program-target method is a gradual process in which individual budgeting elements are first introduced, tested, and modified. It took many years for the countries that first implemented the program-target method to develop ideas and successfully implement it in practice. They changing and improve this system step by step. Therefore, the application of both positive and negative experience by other countries may prove useful for Ukraine, which is starting to introduce this system of governance at the level of local budgets.

In addition to the above, difficulties in moving to the program-target method for planning local budget expenditures may be associated with an underestimation of the set tasks, improper skills of representatives of local executive bodies and local governments, the lack of the required software.

Thus, in order to ensure the long-term stability of a budgetary system, currently applied are the instruments that limit the growth of budget expenditures at unconditional implementation of existing commitments. The priority tasks of the financial-budget strategy include: ensuring transparency and predictability of budget parameters, including basic principles and conditions for the implementation of tax, fiscal, and debt policy, the identification of main budget risks and their prevention; taking measures to improve tax, fiscal, debt policy, including improvement of efficiency of budgetary expenditures that contribute to the achievement of balanced budgets and solving the key tasks in the country's socio-economic development both in the short- and long term; determine the volume of long-term financial obligations, including indicators for financial support of government programs for the period of their validity.

At present, countries with the developed and transitional economies when forming budgetary relations employ the diversification of financial-budgetary instruments with the aim of stimulating open competition both at the national and international levels, that affects support for the stability of socio-economic development. Countries that apply general world standards at the national level demonstrate a low level of information search costs and other transaction costs, they appear more attractive. The globalization, adjusted in this way, is the result of the efforts of developers of national policy related to meeting such expectations by stimulating the harmonization of national policy, including the globalization of public benefits supported by market.

Under the influence of globalization, the social function of the budget aimed at social security of citizens undergoes a transformation. Specifically, the EU countries created in the second half of XX century a model of the «social welfare state», related to budgetary support for the sectors of health, education, pension insurance, etc.

The new tasks of budget policy imply adherence to fiscal discipline, improving the efficiency of managing transboundary externalities,

improvement in the management of budgetary risks taking into consideration the global financial risks, enhancing the qualitative level of a budgetary policy related to forming a revenue part of the budget, specifically changes in the structure of revenues.

By following the policy of openness and involvement in world economy processes, the EU countries retain internal budgetary stability, which substantiates the requirements for new financial-budgetary institutes: strict budget control for the purpose of long-term assessment of budget stability; budgeting and its correlation with regard to the creation of reserves in case it is necessary to increase expenditures; taking into consideration political aspects of the budgetary process in case of change in the program funding.

The main objectives of budget policy in countries with the developed and transitional economies at present include the avoidance of above-the-norm size of deficit and debt with the simultaneous stimulation of innovation processes, which requires raising the quality level of budget management. In recent years, in proportion to the rise in the gross domestic product, there is a reduction of income from capital transactions. Slower rate of growth, compared with a gross domestic product, is observed for the following: budget expenditures for economic activity, health, education, spiritual and physical development. Faster growth rate, compared with a gross domestic product, is observed for the following: budget revenues, including tax revenues; budget expenditures on social protection and social security; direct government and guaranteed debt.

Under conditions of limited financial resources, the effectiveness of the state regulation of economy is determined by the functional structure of expenditures, which plays a significant role in the allocation and redistribution of centralized funds among sectors of economy, impacts the aggregate demand and supply. The rational use and an increase in the importance of development expenditures in budget planning and forecasting is the determinant to ensure stability of the financial system and the transparency of budgeting process. It is expedient to form expenditures directed to satisfy the maximum number of needs by consumers of public services through the selection of an optimum variant for investing monetary funds. The enhanced impact of technical progress on ensuring an economic growth implies increased investment in the development of basic infrastructure for material production, the modernization of fixed assets and the accelerated development of innovative industries, qualitative changes in factors that predetermine increased labor productivity.

Employing the experience of foreign countries in the implementation of budget policy, in the development of a budgetary strategy taking into consideration external economic conditions, are important for Ukraine. The experience gained will make it possible to further stabilize the system of public finance, to ensure economic growth and the development of a competitive domestic economy.

Chapter 2
Tax policy as a component of the system that forms budget revenues

2.1 Architectonics of the tax regulation of economy

A characteristic feature of the development of domestic tax system is the instability of tax legislation, which manifests itself in a frequent change in the number of taxes, their rates, the tax base, the amount of tax benefits, the mechanism of administration of respective taxes. A vivid example is the fact that only in the first year of functioning of the Tax code, 151 changes were introduced to the taxation of a value added tax, despite the principle of stability, registered in the code, according to which changes to any of the elements in taxes and fees may not be made later than six months before the start of a new budget period, during which the new rules and rates would be effective. Given the above, it is important to stabilize of tax legislation, to ensuring predictability and transparency of its adjustment. State financial institutions must ensure the formation of a tax strategy for a short- and medium-term, which would enhance the manageability of the budget process, would enable legal entities to plan their adaptation to economic transformations. In addition, an effective communication policy should be implemented, which must not only cover all stages in the development and implementation of a strategy to reform the domestic tax system, but also imply explanations for wide social groups.

Even though the main objective of tax regulation is the formation of a sufficient volume of the revenue part of the budget for the state to implement the assigned functions and obligations, of significant importance is the use of the regulatory potential of tax mechanism for eliminating or mitigating the impact of negative factors on the processes of economic development. The implementation of appropriate measures of tax regulation has both a short- and a medium- and long-term effect of action. Short-term effects from the action of tax policy tools are reflected in the stimulation of internal demand in the period of financial recession, medium- and long-term — relate to the issues in investment climate, institutional principles of ensuring

economic development. The dynamics of economic transformations over the past fifteen years predetermined the need for a wide application of tools in the budget-tax regulation in order to ensure macroeconomic stability and to provide for stimulating pulses to activate the processes of economic growth.

Employing budget revenues as an instrument to regulate the country's socio-economic development has certain features in a period of transformational change in the economy, which imply ensuring a macroeconomic equilibrium, creating a favorable financial and economic environment for the development of strategic sectors. An important direction for the regulating role of budget revenues is the impact on the economic growth of the country. Tax administration is a complex structure of tax payments with the multiple number of hierarchical processes. In order to reduce the degree of influence of financial-economic risks and the risks of tax offences, it is important to improve the toolset of tax administration. The state must adapt the tax mechanism to the new methods and depth of integration processes related to the implementation of economic activity, the number and stratification of taxpayers, technological progress. Implementing the above directly affects the efficiency in the administration of taxes and fees, which could be improved by a comprehensive application of risk-management tools.

The conditions of economic and social transformations render more relevance to the issues on searching for methods and institutional mechanisms to improve the efficiency of tax regulation. The mechanisms of tax regulation are one of the main financial instruments of the state regulation of social and economic processes in a country at a certain stage of its development. The degree of optimal ratio between the components of tax regulation defines the level and pace of the country's socio-economic development, including sectors of the economy, communities, social relations, stability and balance in public finance.

Development of the architectonics of tax regulation creates a basis for the effective implementation of tax and customs policy. The need for modernization of the national system of tax regulation is predetermined by a public demand to form a long-term concept to regulate the financial-economic system. The institutional architectonics of tax regulation must be adaptive and coherent with respect to the main directions of economic policy, including budgetary, monetary-credit, investment, sectoral, currency, price, anticyclic, competitive, foreign economic.

In strategic terms, the vectors to implement the mechanism of tax regulation for the socio-economic development of a modern country must be the following non-fiscal objectives:
— sustainable development of the state;
— macroeconomic stability;
— carrying out structural reforms;
— the well-being of local communities;
— raising standards of living;

— favorable conditions for conducting economic activity;
— security of the state, businesses, and citizens;
— effective medicine;
— high-quality education;
— safe environment and goods;
— protection of socially vulnerable layers of population.

Modern taxation, provided its effective use, can act as a tool to consolidate the society, by ensuring its socio-economic development. Otherwise, it could lead to social upheavals, such as protests against the passage of the Tax code of Ukraine adopted by Verkhovna Rada in November 2010, which significantly limited the rights of small businesses that worked using a simplified taxation system.

A change in public consciousness, economic and political transformations, led to reviewing the concept on the purpose of taxation. It began to be regarded as a multi-purpose tool whose effective application would contribute to the country's socio-economic development.

Modern basic functions of taxes include:
— financial — administration of tax revenues to finance public expenditures;
— economic regulation — economic impact of taxes on the priority industries, exporting, importing, scientific research;
— social — redistribution of revenues through a progressive income tax in favor of the poorest strata of the population; categorization of society based on a tax regime: taxation of a family, individual social groups, products, socially-prioritized or discriminated sectors;
— territorial — determining a legal territory at which tax laws have legal force, territorial tax inequities; solving the tasks on territorial development: tax-exempt individual undeveloped rural areas, urban areas, stimulating their competitiveness; environmental protection: environmental taxes;
— political — tax as a contribution of citizens for the sake of general public interest; the political legitimacy of taxes; tax law compliance; direct democratic consent to pay taxes.

Tax regulation is one of the main financial instruments for the state to regulate social and economic processes in a country at a certain stage of its development. The degree of optimal ratios between its elements affects the level and dynamics of the country's socio-economic development in general, of individual sectors, social spheres, local communities and taxpayers.

In order to improve and enhance the effects from the application of tax regulation, one should apply architectonics as a science and a research method into relations among all of its elements, which reveals general principles of the design of holistic systems. Development of the institutional architectonics of tax regulation, which is part of the institutional architectonics of the country's socio-economic system, makes it possible to ensure the structuring

and equilibrium, to find a «golden middle» in its construction, to turn it into a powerful impulse for the country's social and economic progress.

The term «architectonics» is composed of two words of Greek origin: «archi» is main, and «tektos» is to build, construct, which is translated as «main order» or «primary structure».

The dynamics of socio-economic processes is determined by the institutional environment of the state. According to D. North: «...rules of the game are the environment — an infrastructure element in the metastructure of an economic system, while organizations (legal entities) represent the producers of institutional changes, that is, their role definitely lies in the initiation of «anti-quietness». An institutional environment is the complex of institutes and institutions that operate within a country. According to the scientific approaches, reflected in works by A. Grytsenko, the institutional architectonics is a structure of institutions that make up the rules, norms, stereotypes, traditions, institutions, and other social formations in their relations with the essence and common aesthetic plan for building an integrated social system.

Developing the institutional approach to studying the development of budget regulation, I. Chugunov considers the institutional architectonics of a budget policy to be a system of rules, regulations, laws, legislative and executive authorities, institutions, and their optimal combination and ratio, which contribute to forming and implementing strategic and tactical goals aimed at ensuring the effective functioning of the system of budgetary regulation and the country's socio-economic development. This scientist, along with L. Lysyak, note: «A budget policy should be considered as a component in the system of the institutions of society, and development of the budget regulation system will positively affect the implementation of appropriate institutional changes in modern economic environment».

The above applies to the conditions for functioning of the modern institutional architectonics of tax regulation, which develops as a component of, and influenced by, the development of the institutional environment and the institutional architectonics of the country's socio-economic system (Fig. 2.1).

An important characteristic feature of the institutional architectonics of tax regulation is harmony, which is provided by the coherence and alignment between the functioning and development of its component elements and the rules, standards, laws, regulations, procedures, powers, requirements, principles, functions, relationships, specialized institutions and other organizations.

Adaptability (from the Latin «adaptio» — to adapt) to the institutional development of the state defines the system of tax regulation as an adaptive mechanism that automatically adapts and changes its functioning in the system of state regulation in accordance with public interests and aspirations, strategic priorities and tasks, the existing and emerging challenges and contradictions, changes in financial-economic situation, phases of the economic cycle, the geopolitical position and the direction of the country's geopolitical development. The adaptive approach to the development of the institutional

architectonics of tax regulation makes it possible to adjust to and to take into consideration the dynamics of socio-economic processes in a country.

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│          Country's institutional environment         │
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Institutional architectonics of social-economic system

Institutional architectonics of tax regulation of the country's socio-economic development

Harmony

Rules, regulations, laws, norms, procedures, authority, requirements, standards, principles, provisions, functions, relations, elements, specialized institutions, other organizations

Adaptability to the country's institutional development

Automated adaptability and change in functioning according to interests, strategic objectives, aspirations, priorities, existing and emerging challenges and contradictions of development, financial-economic situation, phases of the economic cycle and vector of geopolitical development

Coherence between the institutional architectonics and the country's economic and social system

Permanent and natural connection, consistency, absence of contradictions, alignment and harmonious combination with the country's socio-economic development

Integrity of the institutional mechanism of tax regulation

Planning, forecasting, execution, analysis, accounting, control, management, coordination, exchange, consistency, regulation, administration, support, financing, stimulation, regulation, information, interaction

Hierarchy

Institutional subordination, orientation of activities, coordination, accountability, supervision, component of the architectonics of economic system

Institutional ratios

The optimal ratio of the amount of tax revenues in the gross domestic product, the sources to ensure tax revenues, rates of taxes and charges, tax benefits, tax functions, tax burden on labor, capital and consumption, direct and indirect, state and local taxation, taxpayers, sources and methods of payment

Mission

Creation of institutional conditions for effective functioning of the tax mechanism, achieve harmonious effect of tax levers on the country's development through the tactics and strategy of tax regulation of the economic growth and social development; optimum correlation among taxation elements, their unification

Fig. 2.1 Modern institutional architectonics of tax regulation of the country's socio-economic development

Development of the institutional architectonics of tax regulation would eradicate such violations through: a change, transformation, restructuring, development, optimization, improvement, modernization, reforming the constituent elements of the tax space, to balance the country's socio-economic development. Thus, modern domestic tax regulation acts as an important element of supra-national and international regulation (Fig. 2.2).
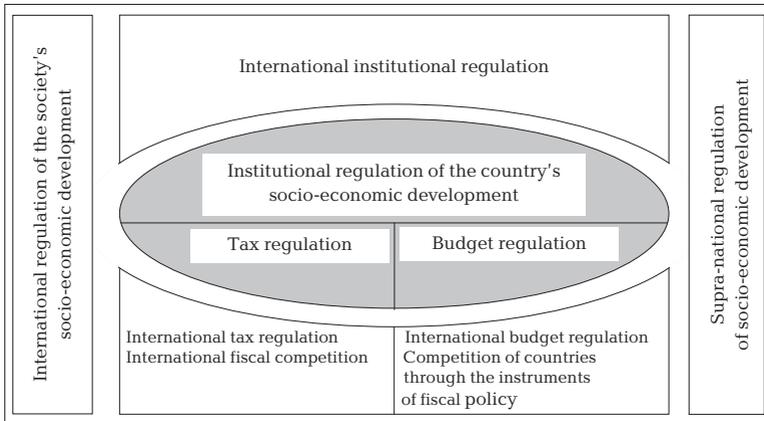
Fig. 2.2 Tax regulation as a component of the national, supra-national and international institutional regulation of socio-economic development

It is an integral tool of the policy of institutional regulation of the country's socio-economic development as a component of the international institutional regulation.

The principle of coherence (from the Latin word «cohaerens» — connected) implies coordinated interaction between the elements of a complex system. Development of the institutional architectonics of tax regulation should be based on the adaptivity and coherence with all components of the institutional system of the country's socio-economic development: formal rules (laws, government regulations, formal contractual terms), informal rules (objective laws of social development, public standards of conduct, business arrangements), traditional-mental rules (customs, traditions, values).

The integrity of the system of tax regulation is provided by internal unity and interconnectivity of such its constituent elements as planning, forecasting, analysis, accounting, control, management, coordination, exchange of information, regulation, administration, financing, informing, interaction, etc. Such integrity provides for a stable operation of the tax regulation system, as well as a possibility to use, in the case of temporary loss of effectiveness of a specific element, the one that is similar. Removing a particular element from the system would as a consequence disrupt its institutional

equilibrium. The entire set of elements should be subject to general tactics and strategy of regulation, to the general rules of development.

For quite a long time the institutional architectonics of tax regulation had significant flaws and was imbalanced and non-integrated — due to a long-term adoption of the systemic institution-forming statute: the Tax code of Ukraine, a certain lack of systemic and a balanced approach in its making (missing paragraph 1 from chapter XIV «On special tax modes»), non-preparedness by other regulatory institutions to apply its regulatory provisions.

Hierarchy in the system of tax regulation is manifested by its institutional subordination, guiding the activities, internal and external coordination, accountability, liability for control, supervision, and coordination by the Cabinet of Ministers of Ukraine through the minister of finance.

The institutional architectonics of tax regulation of the country's socio-economic development defines the most optimal ratios: fiscal, economic, and social functions of taxes; the share of all and each of the taxes in the structure of a gross domestic product, a gross regional product, revenue part of budgets at all levels; the total tax arrears and overpayments in the structure of general revenues and in terms of each tax; the structure of tax revenues by payers, objects of taxation; proceeds from voluntary payments, control work, repayment of tax debt, penalties for criminal proceedings, etc.; regulatory powers between state institutions; the level of tax burden on macro- (the state economic system), meso- (sectors of economy), micro- (legal entities) and nano- (households and individuals-entrepreneurs) levels; tax burden between large, medium and small taxpayers, legal entities and individual persons.

The goal of the sustainable development strategy «Ukraine-2020» is to create the conditions for full membership of this country in the European Union, and therefore it is important to ensure the coherence of the system of institutional-legal regulation of tax relations and congruence (form Latin «congruens, -ntis» — proportionate, appropriate) in the development of the institutional architectonics of tax regulation with the requirements by the European Union. An example of the failure of this approach was the inclusion by Ukraine on December 27, 2017 of Latvia, Estonia, and other countries, in the list of offshore zones because of the conflicting domestic and foreign tax laws. On January 31, 2018, this country excluded Latvia, Estonia, Georgia, Hungary, and Malta from the list of offshore zones.

An important indicator for the development of the institutional architectonics of tax regulation is the structure of tax revenues based on the tax and customs payments. In 2017, the bodies of the State fiscal service of Ukraine received the actual amount of taxes and charges (statutory payments) to the Consolidated budget of Ukraine of UAH 519.2 billion, customs payments — UAH 321.9 billion, respectively. The share of tax payments in the administered revenues to the Consolidated budget of Ukraine was 61.7 %, customs — 38.3 %, to the State budget of Ukraine — 51.5 % and 48.5 %, respectively (Table 2.1).

Table 2.1 The structure of revenues to the Consolidated budget of Ukraine and the State budget of Ukraine based on tax and customs payments, whose control is executed by the bodies of the State fiscal service of Ukraine

Payments	Amount of revenues to the consolidated budget, UAH billion	Share in the administered revenues to the consolidated budget, %	Amount of revenues to the state budget, UAH billion	Share in the administered revenues to the state budget, %
2017				
Tax	519.2	61.7	335.3	51.5
Customs	321.9	38.3	316.2	48.5
2016				
Tax	428.8	64.6	283.0	54.6
Customs	235.3	35.4	235.3	45.4
2015				
Tax	384.8	65.5	285.4	58.5
Customs	202.3	34.5	202.3	41.5
Difference between 2017 and 2016				
Tax	+ 90.4	− 2.9	+ 52.3	− 3.1
Customs	+ 86.6	+ 2.9	+ 80.9	+ 3.1
Difference between 2016 and 2015				
Tax	+ 44.0	− 0.9	− 2.4	− 3.9
Customs	+ 33.0	+ 0.9	+ 33.0	+ 3.9

Source: compiled and calculated based on data from [the official website of the State fiscal service of Ukraine: http://sfs.gov.ua/]

As of 2017, the summary tax payments have a significantly greater regulatory potential for forming the revenues in the Ukraine's Consolidated budget, while an almost equal share of the tax and customs payments in the administered revenues to the State budget of Ukraine testifies to the equality in their regulatory capacity.

When determining the directions for development of the institutional architectonics of tax regulation, important is the constant assessment of the main trends in development (institutional trends) of the institutional ratios between the indicators of tax regulation.

The formation and development of the architectonics of tax regulation should be based on its mission — to create institutional conditions for effective functioning of the entire tax mechanism and for achieve harmonious effect of tax levers on the country's development through the tactics and strategy: adjustment of economic growth and social development; ensuring optimum ratios of taxation elements, their unification; achieving and maintaining optimal values for institutional indicators; determining and achieving indicators of institutional changes in the tax system of Ukraine.

The formation and functioning of effective institute of tax regulation should create necessary conditions for the balanced dynamic development of financial-economic activity of taxpayers based on investment and innovation. Government, by means of tax policy, should create favorable institutional conditions for sustainable economic growth, which in turn would contribute to the country's social development. Favorable conditions of taxation for people and businesses will make it possible to form a rational type of tax behavior for citizens in the country, which is extremely relevant under current conditions, somewhat complex and volatile tax rules for business activities that, vice versa, promote the irrational type of tax behavior.

Ukraine has until recently faced a low effectiveness of institutional reforms, particularly in the taxation field. Domestic institutional reforms, including on taxes, are characterized by a high discreteness (from Latin word «discretus» — divided, intermittent). Ukraine ranks third among 195 countries by the number of conducted reforms in taxation, but it takes place 84 only in terms of taxes paid as estimated by «Doing Business 2017». Despite the substantial number of reforms in this country, their result is not always up to expectations.

Development of the modern institutional architectonics of tax regulation should be provided based on the comprehensiveness and optimality in the distribution of power authorities among all its institutional bodies: the President of Ukraine, Verkhovna Rada Of Ukraine, the Cabinet of Ministers of Ukraine, Ministry of Finance of Ukraine.

Institutional acts, rules and norms of tax regulation must adhere to the strategy of the country's development, should not contradict international norms. Otherwise, the subjects that are to be controlled and the subjects of tax authorities would clash in permanent contradictions, which could inhibit the country's socio-economic development. Taking taxes from people and legal entities must be done under condition of mutual benefit: taxpayers, by paying them, accept responsibility for the country's welfare, while the state, personalized by government, responsible for the efficiency of budget spending, cares about the taxpayers. Such an approach, a combination of their interests, may be the key to the country's sustainable development.

The modern institutional architectonics of tax regulation is formed and developed as part of and under the influence of development of the institutional environment and the institutional architectonics of the country's socio-economic system. The institutional architectonics of tax regulation of the country's socio-economic development defines the most optimal ratios between: functions of taxes; shares of taxes in the structure of GDP, GRP, revenue part of budgets at all levels; tax receivables and overpayments; division of regulatory responsibilities among public institutions; tax load at all levels of the economic system; distribution of the tax burden among taxpayers, etc.

Development of the institutional architectonics of tax regulation has to be carried out based on adaptivity to the country's institutional development — this will make it possible to build a system of tax regulation as the adaptive mechanism that would automatically adapt and modify its functioning in the system of state regulation, in accordance with public interests and aspirations, strategic priorities and tasks, the existing and emerging challenges and contradictions, change in the financial-economic situation, phases of the economic cycle, the geopolitical position and vector of the geopolitical development of Ukraine.

The system of tax regulation should be adequate and be in constant touch with the main economic policy determined by the state: the policy of institutional transformation, anticyclic, structural-sector, budgetary, investment, amortization, antimonopoly-competitive, monetary-credit, pricing, currency, international and regulatory.

Further development of the institutional architectonics of tax regulation should take place based on the principles of coherence (from Latin word «cohaerens» — interconnected) with the institutional architectonics of the country's economic and social system.

Science treats an institutional environment as a set of:

— institutions in the broad sense, which include the mentality of individuals, of certain social groups, and a market culture;

— procedures and rules of conduct that are stipulated by the law or custom;

— institutional bodies and structures designed to ensure meeting the economic and social needs of society;

— laws and other regulations that stand to protect private interests of economic entities and the state.

Regulation is one of the oldest functions of the state and today it is deeply integrated into economic and social processes in the country. Adaptability of tax regulation is the property, capability, and characteristic of the system to use the new information, to quickly adapt to changes in the country's institutional environment to bring its policies and structures to optimum parameters. Improper adaptability is the inability to properly analyze available information that would impact the effectiveness of measures related to tax regulation and would promote achieving the country's balanced and sustainable socio-economic development.

Significant impact on the institutional architectonics of tax regulation is exerted by: public institutions, the country's structure of economy, political, social and cultural factors. The structure of the country's economy determines the sectoral ratios among tax revenues to the budgets at all levels. Weak public institutions can form the basis for significant evasion from taxation, for abuse in the application of legal rules in the process of implementation of tax regulation. Social factors in the medium- and long term also affect the institutional ratios in the field of taxation, while the

cultural element may positively or negatively influence the development of tax relations. The negative attitude of society to the institute of taxation will define the ratio between voluntary and forced payment of taxes, declared tax obligations and those hidden from taxation. This in turn affects the architectonics of institutional structure of fiscal authorities (for example, the expansion of staff in the auditing units, debt repayment, targeting and management of customs risk, financial investigations, combating money laundering, revealing proceeds from crimes) as well as the development of mechanisms for the forced recovery of taxes, carrying out control and check activities, stricter responsibility for tax evasion.

Coherent approach to the formation and development of the institutional architectonics of tax regulation should be based on maintaining a close connection (cohesion — from Latin word «cohaesus» — linked coupled), interaction and the integrity of its constituent elements, which will make it possible to ensure their harmonious complementing one another, to eliminate contradictions in the process of implementation and achievement of strategic goals not only in the tax but also the budget regulation. Analysis, forecasting, planning, accounting, tax control, other tax procedures form the effective comprehensive mechanism of tax payments regulation.

An important part of the formation and development of the institutional architectonics of tax regulation is its institutional support, in which a prominent role belongs to the institutional-legal support that creates a legal basis for the effective implementation of the tax and customs policy. Such importance is illustrated by an example of the imbalance in the development of institutional regulatory rules: the Law of Ukraine as of December 7, 2017, N 2245—VIII «On amendments to the Tax code of Ukraine and to certain legislative acts of Ukraine on ensuring the balance of budget revenues in 2018» introduced the following changes to the Tax code of Ukraine regarding the mechanism of regulation of duty-free transportation of goods across the border: «In the case of import into the customs territory of Ukraine, in hand luggage and/or accompanied baggage, of the goods (other than excisable goods and personal belongings), whose total invoice value does not exceed the equivalent of EUR 500 and whose total weight does not exceed 50 kg, through the border checkpoints of Ukraine other than open for air connections, by an individual that was absent in Ukraine for less than 24 hours or who enters Ukraine more than once within 72 hours, the taxation base is part of the total invoiced value of such goods that exceeds the equivalent of EUR 50, taking into consideration the fee thyat is payable» [On amendments to the Tax code and certain legislative acts of Ukraine on ensuring balance of budgetary revenues in 2018 year: law of Ukraine of December 7, 2017 year N 2245—VIII: https://ips.ligazakon.net/document/view/t172245? ed=2017_12_07& an=261.].

Thus, ignoring a coherent approach to the formation and development of tax regulation, the lack of cohesion between the components of

institutional-legal support, leads to the emergence of contradictions and discrepancies in the application of Article 374 «Conditions for bringing (sending) the goods by citizens into the customs territory of Ukraine» from the Customs code of Ukraine, and Article 191 «Features in determining the taxation base for goods imported into the customs territory of Ukraine in the international mail and express shipments, in unescorted baggage, and the goods imported into the customs territory of Ukraine by individuals in hand baggage and/or in accompanied baggage» from the Tax code of Ukraine. Therefore, it is important to ensure the steady development of the institutional architectonics of tax regulation based on the internal coherence of the system of institutional-legal support for the tax and customs policy.

The institutional architectonics of tax regulation must be adaptive and coherent to the main directions of economic policy determined by the state:

— policy of institutional transformations, providing the tax basis for the formation of a rational multi-layered economic system;

— anticyclic, adjusting the pace of economic growth, preventing economic downturn and the emergence of crises;

— structural-sectoral, promoting progressive changes in the structure of national economy and the improvement of sectoral and sector-to-sector proportions; stimulating the development of industries based on scientific and technical progress; maintaining the competitiveness of domestic products in foreign markets and raising the quality of life of citizens;

— budgetary, providing the optimal formation of tax revenues, which are the basis of public financial resources, national and local interests, regulation of the public debt;

— investment-oriented, creating the necessary conditions for legal entities to attract financial resources for the expanded reproduction of fixed assets of production;

— amortization-type, providing legal entities with favorable financial conditions to reproduce fixed production and non-production funds at innovative technical and technological base;

— antimonopolistic-competitive, creating a favorable competitive environment for business activities; providing equal approach and preventing discrimination; taking part in the control over product quality;

— monetary-credit, regulating the amount of money supply;

— pricing, adjusting the size of taxes and duties, which are included in the cost of goods production (works and services) and are transferred to the buyers of goods by inclusion in the price;

— currency-responsible, maintaining the rate of the national currency against foreign currencies; stimulating the growth of state foreign currency reserves;

— foreign economic, regulating the relations among legal entities and foreign entities in carrying out export-import transactions; protecting national market and domestic producers;

— regulatory, improving the tax legal regulation of economic relations; creating conditions for effective relations between the regulatory authorities or other public authorities and taxpayers, providing for a minimum intervention in their financial and economic activities.

It is advisable to use a synergistic approach («synergetikos» is translated from Greek as cooperation, joint action) to the development of the institutional architectonics of tax regulation, which is based on multilateral collaborative interaction between norms, rules, laws, government authorities, regulatory agencies in the country's institutional space. The term «synergetic» was suggested by the German scientist G. Hacken; it defines the consistency of interaction between certain parts when creating a structure as a whole.

The synergistic approach to the implementation of the fiscal, economic and social function of taxes, their coordinated interaction within a single mechanism of tax regulation, as part of the implementation of the above-mentioned key areas of economic policy, is an important prerequisite for the improvement of social welfare.

Development of the institutional architectonics of tax regulation is not only enhancing the institutional capacity of the government to receive from taxpayers the proper amount of tax revenues. The fiscal service of Ukraine should be involved in informing the taxpayers about the directions of spending tax revenues while the budget policy, by forming the structure of expenditures, which meets public needs and the model of budget expenditures in highly-developed countries, would contribute to improving tax culture in the country. Thus, development of the institutional architectonics of tax regulation should provide both adequate tax revenues to budgets of all levels and a positive impact of all the institutional actors that are directly or indirectly associated with the policy of tax regulation on the socio-economic development of society.

Adaptability and coherence in the formation and development of the institutional architectonics of tax regulation should provide its adaptation, adequacy and connection between measures and the impact of regulatory policy related to the Sustainable development strategy «Ukraine-2020».

Imbalance in the mechanisms of adaptivity and coherence of the institutional architectonics of modern tax regulation, the ineffectiveness of even one element, reducing its regulatory potential, could cause a disruption of not only the institutional fiscal balance, but also cause the imbalance in the entire socio-economic development of the country.

Improper planning and forecasting tax revenues (inexact determination of future budget revenues), poor quality of their administration (inefficient control over tax reporting, poor-quality tax advice, incorrect determining of the amount of tax and/or monetary obligations to taxpayers, violation of the order for determining tax obligations and procedures of appeal and judicial review, improper tax control and incomplete accounting of

taxpayers, insufficient information and analytical support to activity, failure to repay tax debt by tax payers), violation of the institutional ratios between direct and indirect, progressive, proportionate and regressive, local and national taxes and fees, the tax load on income, property, and consumption, trigger negative chain reactions throughout the institutional architectonics of the country's space, which even extend beyond it (Fig. 2.3).
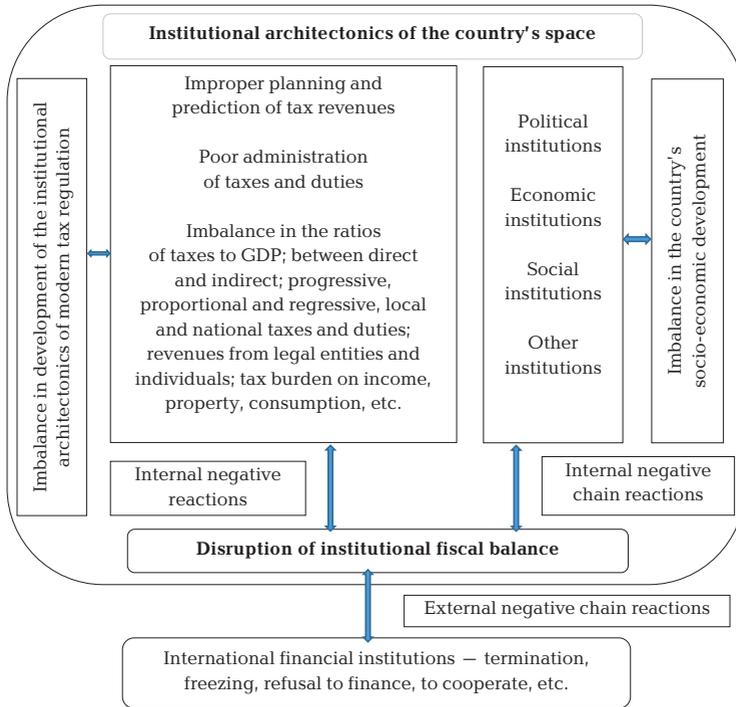
Fig. 2.3 Imbalance of development of the institutional architectonics of tax regulation

An important prerequisite for high and sustainable rate of socio-economic development is its stable financial support, which has to be achieved through a clear coordination of the tax and budget policy, which would promote the transformation and confirmation of the role of the State fiscal service of Ukraine in the public consciousness as an important institution of the country's development.

Ensuring institutional coordination of the tax and fiscal policy makes it possible to prevent unpredictable fiscal gaps, to ensure optimal ration between revenue and expenditure budget elements in the short-, medium-

and long term, integrity of the policy of economic regulation. The specified may be achieved under condition for the development of tax and budget planning and forecasting, fulfillment of the revenue and expenditure part of the budget as a holistic mechanism whose parts are in mutual coherence. It is important to ensure the coordination between tax revenue institutional indicators and budget expenditures in a time space.

A known law of unity and struggle of opposites is one of the basic laws of dialectics. It describes the inner source of motion and development of the phenomena of nature, systems. According to this law, all systems and processes are characterized by internal contradictions, opposite aspects and trends in development while cooperation and the «struggle» between them is a source of change and development. «The continuous and permanent interaction between opposites leads to the mutual transition of one side of the contradiction to another, and thus to the constant struggle between them and the formation of a relative unity.

Development of the institutional architectonics of tax regulation may determine whether it could be the attractor or repeller (from Latin word «repello» — push) for the dominant factors (labor and natural resources, means of production) and resources (intellectual, economic, social, cultural, and human capital), of the country's economic and social development.

Attractor is a certain set that attracts the surrounding units. Internationally, according to Professor A. Filipenko: «It could be possible that such an attractor in the global economy is the European Union, which, since 1957, has been constantly attracting new and new participants into its environment.

Attractors of the institutional architectonics of tax regulation ensure equilibrium in the space of tax regulation, thereby contributing to the development of economic conditions, in a combination they create conditions that ensure: development of economic and social processes based on the principles of sustainable development; favorable tax and business climate in the country, separate regions, sectors of the economy and social areas, in separate markets of goods over a certain period. Collectively, the attractors of tax regulation can create the most favorable institutional conditions for doing business in the country, institutional tax and customs space that attracts foreign direct investment (equity) into the economy of Ukraine and other global resources of development (advanced technologies, financial assistance, qualified labor force, etc.).

Repellers of the institutional architectonics of tax regulation, on the contrary, push the system of tax regulation off the balance, introducing imbalances in the country's development of socio-economic system, creating obstacles and limitations in reaching certain social goals.

Development of the institutional architectonics of tax regulation of the country's socio-economic development should be conducted based on increasing its adaptivity and coherence to the modern challenges of

development. When developing a strategy for the country's socio-economic development, the following should be considered:

— the weaknesses and strengths in the modern policy of tax regulation, determined on the basis of analysis of its most important institutional indicators taking into consideration the geopolitical position of Ukraine in the context of international tax competition for mobile limited economic resources (capital, labor);

— the institutional dynamics and place of Ukraine in the development of cross-border tax regulation.

Achieving the above requires the development of systemic, scientifically-based measures that would contribute to the improvement of the institutional indicators for tax regulation with respect to the vector of the country's development in the long term and the geopolitical aspirations of Ukrainian society (Table 2.2).

Based on an analysis of key institutional indicators for the domestic system of tax regulation and the countries which Ukraine borders on land, it is possible to define the institutional indicators for attractors and repellers of modern policy of tax regulation (Table 2.3).

Table 2.2 Initial institutional indicators of modern policy of tax regulation according to the World Bank report «Doing Business 2018» taking into consideration the geopolitical position of Ukraine in the context of international tax competition

Country	Payments (quantity)	Time (hours)	General tax rate (% of income)	General tax rate of income tax (% of income)	Tax on labor and social fees (% of income)	Other taxes (% of income)	Time required to fulfill duties on VAT reimbursement (hours)	Time required for VAT reimbursement (weeks)	Time required to verify the income tax of enterprises (hours)	Time required to complete the checking of income tax for enterprises (weeks)	Index of procedures after reporting and tax payment (0 – 100)
Belarus	7	184	52.9	10.8	39	3.1	—	—	1	0	50
Hungary	11	277	46.5	9.9	34.3	2.3	15	15.2	12	23	63.94
Moldova	10	181	40.5	8.9	31.3	0.3	7.8	13.3	2.5	0	90.79
Poland	7	260	40.5	14.5	25	1	8	8.2	6	18.1	77.36
Romania	14	163	38.4	11.6	25.8	1	22.5	27.5	2	0	76.82
Russia	7	168	47.5	8.8	36.3	2.5	7.2	19.8	7.5	16	73.14
Slovakia	8	192	51.6	10.5	39.7	1.4	5	24.1	2	0	87.17
Ukraine	**5**	**327.5**	**37.8**	**11.9**	**24.8**	**1.1**	**16**	**14.3**	**3**	**0**	**85.95**
Mean value	**8,6**	**219.1**	**44.5**	**10.9**	**32**	**1.6**	**11.6**	**17.5**	**4.5**	**7.1**	**75.65**

Source: compiled and calculated based on data from «Doing Business 2018»

Table 2.3 Institutional indicators, attractors and repellers, of current policy of tax regulation taking into consideration the geopolitical position of Ukraine in the context of international tax competition

Country	Payments	Time	General tax rate	General tax rate for income tax	Tax on labor and social contributions	Other taxes	Time required to fulfill duties on VAT reimbursement	Time required for VAT reimbursement	Time required to verify the income tax of enterprises	Time required to complete the verification of income tax for enterprises	Index of procedures after reporting and tax payment	Overall rating for all examined institutional indicators	Place occupied by country
Belarus	2	4	7	5	7	7	—	—	1	1	1	23	3
Hungary	5	7	4	3	5	5	5	4	7	4	2	34	6
Moldova	4	3	3	2	4	1	3	2	3	1	8	26	4
Poland	2	6	3	8	2	2	4	1	5	3	5	26	4
Romania	6	1	2	6	3	2	7	7	2	1	4	19	1
Russia	2	2	5	1	6	6	2	5	6	2	3	26	4
Slovakia	3	5	6	4	8	4	1	6	2	1	7	32	5
Ukraine	**1**	**8**	**1**	**7**	**1**	**3**	**6**	**3**	**4**	**1**	**6**	**22**	**2**

Rating based on individual institutional indicators (Max — 1, min — 8 points)

An analysis of tax regulation policy taking into consideration the geopolitical position of Ukraine in the context of international tax competition allows us to establish the following:

— the institutional indicators-attractors that attract economic resources are a number of tax payments, the general tax rate (% of income), tax on labor and social contributions (% of income), the time for VAT reimbursement (weeks), the time to verify income tax for enterprises (hours), the time to complete the verification of income tax for enterprises (weeks);

— the institutional indicators-repellers, which, on the contrary, push away economic resources are the time required to calculate and pay taxes (hours), the general tax rate on income (% of income), the time required for VAT reimbursement (hours), the index of procedures after reporting and payment of taxes (0 — 100).

Modern attractors and repellers in the architectonics of tax regulation exert a significant impact on the economic situation, provide its stability or, vice versa, instability. The presence of significant number of repellers in the architectonics of tax regulation creates a negative attitude of society to the institute of taxation, creates high risks in the institutional environment

for businesses, hinders the processes of country's social and economic development.

A significant obstacle to the stable socio-economic development of the country is the «institutional gaps» in the system of tax regulation, which are characterized by gaps in the institutional-human resources, institutional-legal, institutional-organizational and institutional-structural support. According to I. Chugunov: «The budget system includes institutions that both increase and decrease the level of efficiency of functioning of this system as a tool for the country's socio-economic development, which is why it is important to assess budgetary institutions that relate to it, to determine the «institutional excess», which has a significant effect on the extent of capacity of the financial-budgetary regulation».

Gaps in the work of a fiscal institution pose a threat to the sustainable development of the national tax system, exerting a negative pressure and introducing imbalances to other regulatory systems in the country, undermining the functional capacity and the regulatory potential of the entire institute of taxation (Table 2.4).

Table 2.4 Examples of institutional gaps in the process of development of the institutional architectonics of tax regulation

Title of institutional gap	Essence of institutional gap
Institutional-HR	Fulfillment of duties of the Chairman of Ukraine SFS by M. V. Prodan from March 2017 to September 2018 (1 year and 6 months)
Institutional-structural	Legal status of tax militia from January 1, 2017
Institutional-legal	Violation of basic principles of tax regulation: — stability — changes to any elements of taxes and duties are introduced later than six months before the start of the new budget period, over which the new rules and rates are effective; — equality of all payers before the law, avoiding any manifestations of tax discrimination — civil servants are granted a possibility not to apply for the tax and social benefit
Institutional-organizational	As a result of failure in the operation of AIC «Document management» (from 6 to 11 December 2015) SDS lost about 3 Terabytes of information (about 531 thousand electronic documents, 26 thousand units of data in registration cards, 4.1 thousand registration cards, 3.1 mil. control cards)

For example, the adoption of paragraph 25 of the Law of Ukraine on December 7, 2017 N 2245-VIII «On amendments to the Tax code of Ukraine and certain legislative acts of Ukraine on ensuring the balance of budgetary revenues in 2018» created the institutional-legal gap between Article 374 of the Customs code of Ukraine and Article 191 of the Tax code of Ukraine, disrupting the equilibrium between the two important components of the

institutional-legal support to the development of the institutional architectonics of tax regulation. Another example was the fulfillment of duties of the Chairman of Ukraine's SFS by M. V. Prodan from March 2017 to September 2018. Thus, the main official of the fiscal service in this country was in the status of the acting chairman for 1 year and 6 months.

It is important to ensure the steady development of the institutional architectonics of tax regulation based on the internal coherence of the system of institutional-legal support of tax policy, to eliminate current gaps and to avoid in the future new institutional gaps.

The adaptive and coherent institutional architectonics of tax regulation makes it possible to ensure adequacy and connection between regulatory measures and the country's economic and social development by achieving and maintaining the most optimal ratios between the elements of such a system.

The adaptive structure of the system of tax regulation makes it possible for the system of taxation to be flexible and efficient in responding to changes, to adapt to them, thereby neutralizing emerging new negative, and enhancing positive, factors that affect social development. Under today's economic conditions, adaptability of the domestic institutional architectonics of tax regulation to the country's institutional environment is determined by the capability to systematically change its functioning, in order to retain its institutional properties and capacities or achieve the optimum state of development and to improve effectiveness of functioning at a change in the conditions for the development of society.

The use of coherent approach will make it possible for the system of tax regulation to realize its purpose as an integral system, to stay, despite its dynamism, within the organic interrelation with the country's socio-economic system. A coherent approach to the formation and development of the institutional architectonics of tax regulation should be based on maintaining a close relationship, interaction and the integrity of its constituent elements, which would make it possible to ensure their harmonious complementing one another, to eliminate contradictions in the process of implementation and achievement of the strategic goals of fiscal regulation.

2.2 Fiscal efficiency of tax policy

The country's tax policy is primarily aimed at ensuring sufficient revenues to the budget so that the state fulfills its functions and assigned tasks. Application of fiscal mechanism must be implemented in a way that does not reduce or undermine confidence of economic agents towards the tax system, the authorized governmental bodies, and the state as a social institution. For example, the practice of «voluntary» payment of taxes in advance, untimely budget refund, or a high level of tax burden that hinders

business and investment activity of businesses, can provide the fulfillment of the set indicative plan for budgetary revenues (that is the fiscal result), but it contradicts the principle of effectiveness. The issues on improving the efficiency of state tax policy are relevant for representatives of different scientific schools, practitioners, and ordinary people. Given the above, we consider it advisable to carry out a comprehensive assessment of fiscal efficiency taking into consideration the dialectic unity of approaches to defining the essence of this category.

O. Rymar considers that fiscal efficiency can be defined as the ratio of the absolute volume of tax revenues to the cost of their administration. The economic essence of the received result shows the amount of money the state spends to ensure the revenue per unit of monetary resources to the budget in the form of taxes[33]. K. Grigorieva notes that the effectiveness of the fiscal function of tax system is to maximize the tax revenues and to minimize the cost to obtain them. Based on the above, a given approach does not account for the cyclic component of economic development, at the stage of the rise fiscal efficiency would constantly improve even without significant institutional changes in the administration of taxes and the high level of shadowy economy. The specified fact becomes a pretext for government institutions to emphasize a significant improvement of situation in the public sector and in the improvement of a fiscal mechanism without any real grounds. There is also an opinion on that one of the criteria for fiscal efficiency is the level of actual fulfillment of the plan of tax revenues to the budget. At the same time, it is expedient to assess the impact of an inflationary factor on the formation of budget revenues. With an actual inflation rate exceeding the planned one, revenues from taxes on consumption will be higher than predicted, and, formally, the result in terms of efficiency would be positive. In addition, there are risks of a certain understatement of planned indicators for the revenue part of the budget in order to exceed them. At the same time, comparing the actual amount of tax revenue paid to the budget with the potentially possible, with respect to a set of scientific methods, is a more credible evaluation criterion of fiscal efficiency. A deviation between the abovementioned indicators would reflect the influence of institutional factors, such as the amount of shadowy economy, tax evasion, tax compliance, the effectiveness of the system of tax administration.

$$\begin{cases} TP_j = \dfrac{FT_j}{PT_j}; \\ PT_j = tr_j \cdot b_j, \end{cases} \tag{2.1}$$

where TP_j is the index of the tax potential of the j-th tax; FT_j is the actual receipt of the j-th tax by the budget; PT_j is the potential receipt of the j-th tax by the budget; tr_j is the average rate of the j-th tax; b_j is the taxation base of the j-th tax.

E. Balatsky distinguishes two basic aspects in the analysis of fiscal efficiency — from the point of view of the impact of tax policy tools on production activity of the economic system and filling a revenue part of the state budget[34]. The researcher stresses that the results of these assessments are often in a certain contradiction, when at high fiscal efficiency, under the first criterion, one can obtain the diametrically different values for the specified indicator from when applying the second, which complicates the process of deriving the overall conclusion about assessment.

The effectiveness of fiscal function of the tax system is a multi-faceted category that combines the criteria of the volume of mobilized tax revenues to the budget (in absolute and relative terms) and the share of the hidden taxation base, which is part of the shadowy economy — the consequence being the overestimated ratio of the paid taxes to GDP. The issue of the excessive level of tax burden in the context of a factor of tax evasion and its implications for the economy was addressed by many scientists, specifically D. Bradford, A. Laffer, M. Feldstein, J. Stiglitz, V. Tanzi. The shadowy economy reduces the effectiveness of the country's fiscal and monetary policy, redistributes tax burden that slows economic growth and hinders the growth of employment. The level of taxation in many respects depends on the taxation base defined by the state institutions. The efficiency of the tax system depends on the created taxation structure in the context of taxation of production factors (labor and capital) and consumption taking into consideration the destructive effects of taxation and the time lag of its effect. For countries with the differential model of economy and depending on the degree of development of the institutions, fiscal efficiency of the identical taxation structure is significantly different. International financial institutions give recommendations for countries with transitional economies to use taxes based on a wide taxation base and the moderate rates, since this has the most neutral effect of impact on economic growth, as well as reduces possibilities for tax evasion. The cyclic nature, especially for an open model of the economy, similar to that in this country, is also a factor that introduces adjustments to the structure of taxation at the stages of recession and economic recovery, which exerts an influence on the overall level of fiscal efficiency.

The overall fiscal efficiency of the tax system, considering its essence, defined by a legislative body, can be determined as the sum of fiscal efficiency of each tax and fee. Important indicators to measure fiscal efficiency in international practice are the effective tax rates, which are calculated via the ratio of tax revenues to the taxation base, estimated based on the system of national accounts. In world practice, it is adopted to calculate the implicit tax rates based on the classification of taxation of production factors, which makes it possible to evaluate the net effect of tax functioning on labor, capital, and consumption taking into consideration acting tax benefits, credits. A given rate for the category of taxes on consumption was calculated by us according to the methodology of the European Commission

as the ratio of taxes on consumption to the resulting consumption of households, in order to adequately compare the assessment of the specified indicator to the member states of the EU. The taxes on consumption include VAT, excise tax, import duties, other taxes and fees according to acting methodology (energy charges, for environmental pollution, additional fees to pay pensions, etc.). A similar view on the group of taxes on consumption is shared by Y. Ivanov and O. Chumakova[35].

An analysis of data reveals a gradual growth of the tax burden in the context of taxes on consumption, over 2001—2005 the value for the implicit rate for a given group of taxes was 17.7 %, over 2016—2018 — 24.0 %. We can state that in the first five-year period the tax burden in Ukraine was slightly lower in comparison with the European Union countries, during 2006—2015 it was almost identical, and over 2016—2018 — higher. The main reasons for the increase in the average effective rate were a significant reduction in tax relief from VAT payment and the improvement of quality level of its administration, a growth in the rates for an excise tax in terms of groups of excisable goods (including within the framework of tax harmonization).

To confirm the above facts concerning the value added tax, we suggest performing an analysis into the values for effective rate, which is calculated as the ratio of the actually paid tax to the budget (including budget reimbursement) to the end consumption, which includes consumer spending by households, nonprofit organizations that serve households, and the public management sector. The average value for the effective tax rate over 2001—2018 is 9.9 %, including during 2001—2005 — 7.5 %, over 2006—2010 — 10.9 %, 2011—2015 — 10.3 %, 2016—2018 — 12.0 %. A gradual expansion of the VAT taxation base, including the framework of a policy to move away from the special taxation regimes, had a positive impact on budget revenues under condition of effective unchanged tax rate of 20 % in the specified period.

It should be noted that the activities to supply and import into the customs territory of Ukraine of certain categories of medical equipment and medical products are subject to the lowered tax rate of 7 %, but the volume of such transactions is insignificant in the overall taxable operations. In 2001, the ratio of the amount of tax revenues to GDP was 5.2 %, and in 2017 — 10.2 %, in terms of periods: 2001—2005 — 5.67 %, 2006—2010 — 8.89 %, 2011—2015 — 9.31 %, 2016—2018 — 10.20 %. In the course of analysis of values for this indicator we revealed sharp deviations (over 1 %) within the same fiscal year, 8 times, indicating substantial changes in the mechanism of charging VAT. Specifically, in 2003, the value for the share of tax in GDP decreased by 1.25 percentage points, in 2007 by 1.02 percentage points, in 2010 by 1.29 percentage points, in 2013 by 1.02 percentage points. However, in 2005 there was an increase in the fiscal significance of the tax by 2.81 % of GDP, in 2006 by 1.60 % of GDP, in 2008 by 1.47 % of GDP, in 2011 by 2.02 % of GDP.

Table 2.5 Implicit tax rate on consumption in Ukraine and EU countries, %

	Ukraine	EU countries-27	Baltic countries	Poland
2001 — 2005	17.7	19.1	18.5	19.0
2006	22.4	19.3	19.4	20.8
2007	20.5	19.5	20.2	21.6
2008	21.4	19.1	18.9	21.1
2009	20.2	18.6	19.8	18.8
2010	19.9	19.4	20.1	20.4
2006 — 2010	20.9	19.2	19.7	20.5
2011	21.5	19.8	20.5	20.4
2012	20.4	19.8	20.6	19.1
2013	18.4	20.0	20.4	18.9
2014	19.4	20.2	21.2	19.2
2015	22.7	20.4	21.9	19.6
2011 — 2015	20.5	20.0	20.9	19.4
2016	23.8	20.6	22.4	20.0
2017	24.5	20.8	21.9	20.3

Source: calculated by author based on data from the State treasury service of Ukraine and the State fiscal service of Ukraine and from the European Commission

In 2003, the reduced weight of the analyzed indicator was due to a sharp rise in tax benefits, which led to the loss of budget revenues. In addition, the share of budget refund in the total tax paid to the budget increased to the maximum value of 81.2 %, or by 37.4 percentage points, due to an increase in the volume of applications for its implementation. In that year, the value added tax in the budget revenues moved to place 3. Over 2005 — 2006, the total proportion of tax in GDP almost doubled, namely, it increased by 4.41 percentage points, including that the budget received additional financial resource through the taxation of import operations — 2.91 percentage points. Over the above-mentioned period, the state began taxing operations related to the import of oil and gas into the customs territory of this country, it canceled benefits to pay VAT in free economic zones and territories of priority development, and improved the procedure for tax reimbursement. The latter step significantly improved fiscal discipline of payers and initiated a preventive mechanism to counter tax evasion. In 2008, despite a decrease in the share of VAT on goods and services manufactured in this country by 1.33 percentage points, there was an increase in the weight coefficient of the tax on imported goods by 2.81 percentage points. An important factor that contributed to it was the implementation of the rule that banned payments for imported goods by a tax bill, but exclusively in monetary form, which had a significant positive impact on the dynamics of its payment to the state budget.

Table 2.6 Fiscal significance of taxes on consumption in Ukraine

	2001 — 2005		2006 — 2010		2011 — 2015		2016 — 2018	
	% to GDP	% to reve-nues	% to GDP	% to reve-nues	% to GDP	% to reve-nues	% to GDP	% to reve-nues
Taxes on consumption, including:								
VAT:	5.67	20.17	8.89	29.14	9.31	30.13	10.20	30.48
— on goods (operations, services) manufactured in the country	1.95	3.99	1.78	5.80	2.28	7.39	2.20	6.57
— on goods (operations, services) imported in the country	3.72	16.18	7.11	23.34	7.02	22.74	8.00	23.91
Excise duty:	1.77	6.65	1.88	6.21	2.86	9.23	4.17	12.47
— on goods subject to ex-cise, manufactured in the country	1.57	5.96	1.58	5.21	1.84	6.13	2.51	7.55
— on goods subject to ex-cise, imported in the country	0.19	0.69	0.30	0.99	0.81	2.69	1.65	4.92
Import duty	1.09	3.96	1.07	3.49	1.09	3.47	0.82	2.45

Source: *compiled by author based on data from the Ministry of finance of Ukraine and the State treasury service of Ukraine for respective years*

In addition, in the process of evaluating the tax fiscal efficiency, a coefficient of efficiency is applied, which, according to international practice, is calculated as the ratio of the effective and nominal rates. Over the period 2001 — 2018, the value for the specified indicator increased from 0.34 to 0.62, the mean value is 0.49. The next indicator of fiscal effectiveness is the VAT productivity, calculated as the ratio of the share of tax in a gross domestic product to the nominal rate. The average value for this indicator in 200 — 2005 was 0.28, in 2006 — 2010 — 0.44, in 2011 — 2015 — 0.47, in 2016 — 2018 — 0.50.

The weight coefficient of VAT in the structure of a budget revenue part increased over the analyzed periods by 10.31 percentage points to 30.48 %. Fiscal significance of the excise tax increased from 1.77 % of GDP in 2001 — 2005 to 4.17 % in 2016 — 2018, there was a similar increase in the weight proportion of tax in budget revenues, from 6.65 % to 12.47 %. The most stable weight indicators are demonstrated by revenues from import duty, but in 2016 — 2018 we still recorded a downward trend in the analyzed indicators — the share of duty in GDP decreased by 0.27 percentage points, and specific weight share in the consolidated budget revenues decreased by 1.02 percentage points.

Of importance when analyzing the fiscal significance of the basic group of taxes on consumption is the issue on evaluating the structure of their

receipt based on the origin of goods, operations, and services (domestic and imported). The result obtained could serve as an indicator of the resistance of the tax system against cyclic nature, devaluation risks, it would characterize the technological capacity of domestic economy to satisfy consumer demand by economic agents. Our analysis revealed that over the period of 2001 — 2018 the taxation of import operations accounted for 69.6 % of the VAT revenue, excise and import duties. In 2016 — 2018, the average ratio of the amount of receipt of the specified taxes to GDP was 10.4 %, exceeding the mean value for this indicator over the analyzed period of 2001 — 2018 by 2.3 percentage points.

A gradual increase in the fiscal significance of taxes on consumption related to import and their weight participation in the formation of budget revenues, on the one hand, is positive in terms of attracting an additional resource for the state to execute its functions and as a testament to the growth in effectiveness of the tax and customs regulation. At the same time, the identified trend characterizes the state of the national economy, which is emergent and thus requires significant investments for modernization in order to generate competitive technologies, products and services. Taxes are a kind of indicator for the country's economic development and are at the same time an instrument of its regulation. Transformation of the approach to the structure and level of taxation, together with institutional reforms, could gradually raise the technological level of economy and increase the role of endogenous factors related to supporting the processes of economic growth. The strengthening dependence of budget revenues on a currency exchange rate affects the accuracy of fiscal forecasting and planning, is one of the risks of failure to fulfill the budget in terms of expenditures (primarily capital). For Ukraine, it is important to strengthen the effectiveness of interaction between fiscal and monetary institutions in the mentioned field. Despite the transition to a floating exchange rate and the reduced impact of administrative factors on its size, it is solely the coordinated position of authorities that are empowered to develop the budgetary-tax and monetary policy could ensure high accuracy in forecasting the exchange rate taking into consideration the large array of input data, based on a set of existing methods.

Excise tax ranks second in terms of its fiscal significance in the category of taxes on consumption. Over the past fifteen years the state excise policy underwent several stages in its development, which was manifested by the expanding base of taxation, by regulation of tax rates, introduction of the excise tax on retail for specific goods subject to excise. It is worth noting that the indicator for the ratio of excise revenue to GDP in the period of 2001 — 2018 was in the range from 1.35 % in 2001, to 4.27 % in 2016; the average value for this indicator is of 2.40 %. One can argue about the existence of polar trends in the fiscal importance of the tax at different time intervals. For example, 2001 — 2004 saw a steady growth of the analyzed weight indicator by 0.59 percentage points, in 2005 — 2008 — a decline

by 0.59 percentage points, achieve the level of 2001, over 2009—2010 as a result of conducting a compensating tax policy there occurred a substantial increase in the real tax revenues to the budget, 2011—2013 are characterized by the stability of the weight indicator, from 2014 onwards (when activating the compensatory mechanisms in a fiscal policy) there has been a growth in the fiscal significance of the excise tax. In view of the above, it is expedient to analyze the structure of tax revenues in terms of the basic groups of excisable goods (alcohol, tobacco, fuel, vehicles). Thus, from 2003 to 2008, the largest share of revenues to the budget belonged to the excisable group of alcohol and alcoholic beverages (37.1 % in the total tax revenue structure, and 0.62 % of GDP), the second — fuel (34.0 % and 0.58 %, respectively), the third — tobacco products (22.6 % and 0.37 %), the fourth — cars and other vehicles (4.71 % and 0.08 %) The fiscal significance of each excisable group over 2003—2018 is shown in Fig. 2.4.
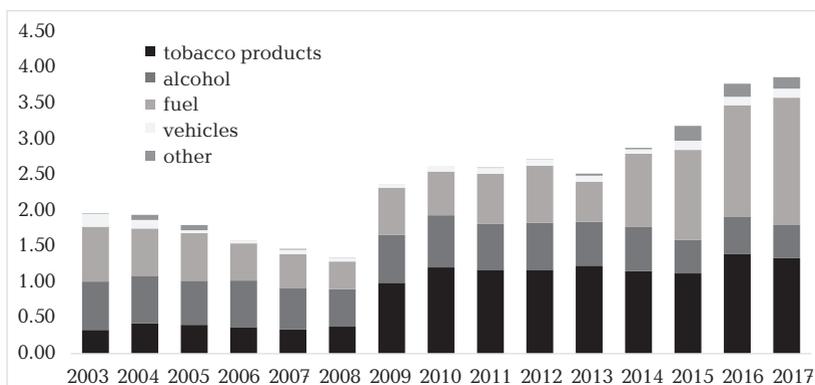
Fig. 2.4 The share of excise tax* in GDP over 2003—2017 in terms of groups of excisable goods (* excluding the excise tax on the retail sales of excisable goods)

The economic recession initiated the activities of state financial institutions concerning the filling of the revenue part of the budget under conditions of a significant drop in the business activity by economic agents. Given the situation, the state substantially raised excise on tobacco products, which ensured an increase in the revenue from taxation of the specified group of products in 2010, compared to 2008, by 3.65 times or 0.83 % of GDP.

Increasing the rates of tax on the group of alcoholic products resulted in an increase in revenues in 2010, compared to 2008, by 1.59 times, equivalent to 0.21 % of GDP. Similarly, revenues from taxation of fuels grew by 1.80 times and by 0.22 percentage points relative to GDP. Thus, over the period of 2009—2013, the highest average value for weight indicators (in the general structure of excise tax revenue and in GDP) belongs to the excisable

group of tobacco products (45.0 % and 1.16 %), respective indicators from the taxation of fuel make up (26.0 % and 0.67 %), alcohol and alcoholic beverages (25.9 % and 0.66 %). From 2014 onwards, given the deterioration of economic situation and the start of a military-political conflict, the state considered the expansion of taxation base and raising the tax rates to support the balance and sustainability of the budgetary system. The specified areas of tax regulation covered the excise tax as well, which is characterized by the most neutral influence on activities by legal entities, which is especially important under conditions of economic downturn. The state gradually increased tax rates in terms of the categories of taxable goods; because of the devaluation of the national currency, specific rates for petroleum products and vehicles dramatically increased; starting in 2015 onwards, the taxing of wholesale supply of electricity has been in effect. Starting in 2015 onwards, the state unified the size of specific tax rates and a minimum tax liability for all types of cigarettes (with or without filter). From 2017, the excise tax on the retail sale of fuel was transferred to the basic tax rate, which is paid to the budget by manufacturers or importers, which influenced a change in the structure of excise tax revenues. The largest fiscal significance belongs to the fuel group, over 2014 — 2018 its share in the total tax revenues amounted to 40.6 % of GDP — 1.41 %; excise taxation of tobacco products provided for the following indicators — 36.7 % and 1.25 %, alcohol — 15.5 % and 0.52 %, vehicles — 3.1 % and 0.11 %.

The effective tax rate on income could be defined as the ratio of tax revenues to the consolidated budget and legal entities' profits before tax. It should be noted that the effective rate values could be both lower and higher than the nominal tax rate, registered in the legislation. The specified situation is, to some extent, predetermined by the differentiation in fiscal accounting and tax accounting of legal entities' income, which is especially true for this country prior to the moment of their harmonization, the existence of tax benefits and, partially, tax evasion. Thus, during the period of 2001 — 2018, the effective rate exceeded nominal in 2003, 2005, 2006, 2013 and 2017, while it was lower over the rest of years. The highest amplitude in the deviation of values for these rates was registered over 2014 — 2015 under the conditions of economic recession. On average, a deviation of effective rate from the nominal rate over the period of 2001 — 2018 is 1.23 percentage points annually. It is advisable to estimate the dynamics of weight indicators of tax revenue, it, first of all, concerns the share of tax in GDP. The value of this indicator over the period of 2001 — 2018 is in the range of 1.97 — 5.32 %, the average magnitude is 3.92 %, in 2001 — 2005 — 4.62 %, in 2006 — 2010 — 4.40 %, in 2011 — 2015 — 3.30 %, in 2016 — 2018 — 2.49 %. It is obvious that the fiscal role of the tax gradually decreases, which is associated with a phased reduction of the tax rate from 30 % to 18 %, with changing approaches to determining the base of taxation and economic development. A more detailed analysis of the indicator for a proportion of income tax

in GDP over the last decade based on quarters reveals the high sensitivity of tax revenues, depending on economic conditions and a respective change in the taxation base. We recorded a substantial decrease in the quarterly indicators for the crisis year of 2009 relative to 2008, which are lower by more than 1 percentage point. Similarly, from quarter II, 2013, to quarter IV, 2015, there is a downward trend in the revenue from income tax, the depth of drop in the indicator of specific weight of the tax in GDP exceeded 2 percentage points, and, as compared to the 2008, by more than 3 percentage points (Fig. 2.5).
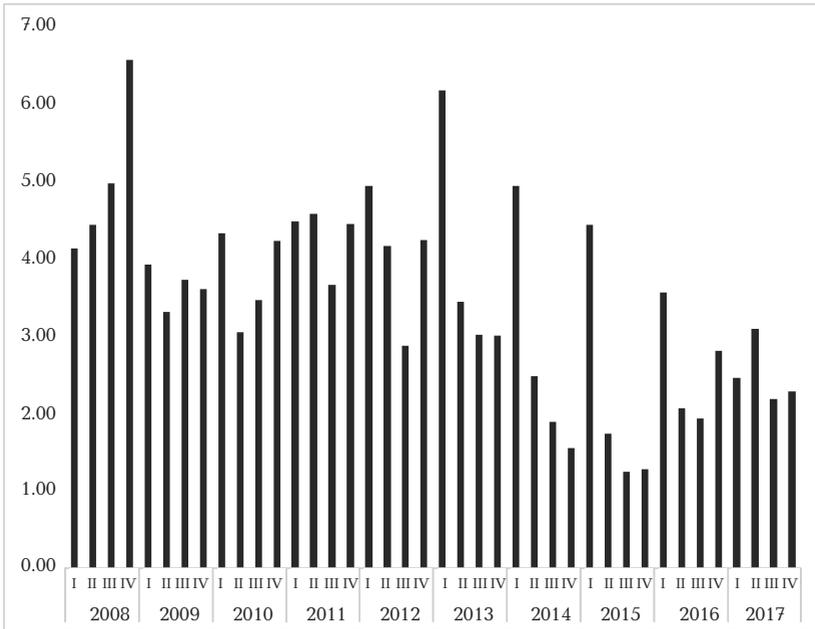
Fig. 2.5 The share of income tax revenues from legal entities in GDP over the period of 2008 — 2017 (bases on quarters), %

In addition, in the dynamics of income tax one could identify the existing seasonal irregularity of payment to the budget, characterized by an increase in revenue in quarter I, most clearly evident over 2013 — 2016. In general, we could state the presence of a strong interconnection between the specified indicators, except for a few periods, especially largest differences were registered in 2014 — 2016. Having investigated the tax revenues based on the types of economic activity, one could confirm that the first three sectors that provide for the greatest amount of tax to the budget include industry, trade, transport and communication (a total of about 75.0 %).

However, over the above period, the specific share of income from these sectors in its general structure was 42.5 %, and the respective weighted index for agriculture amounted to 20.8 %, while enterprises in this sector paid to the budget only about 1.0 % of the total revenues from legal entities' income tax.

In the course of analysis of revenues from legal entities' income tax, we determined that a rather important role belongs to such indicator as the profitability of enterprises' activities in general in the economy, and separately, based on the type of economic activity (Table 2.7).

Table 2.7 Operating profitability of enterprises based on the type of economic activity for the period of 2006 — 2017, %

	2006–2010	2011	2012	2013	2014	2015	2016	2017
Total in economy	4.9	5.9	5.0	3.9	−4.1	1.0	7.4	10.1
Industry	7.1	4.7	3.4	3.0	1.6	0.9	4.2	8.3
Wholesale and retail	7.9	12.3	12.2	10.2	−12.8	−0.9	15.8	25.9
Transport and communication	8.4	7.5	5.9	5.1	−1.7	1.0	6.1	7.9
Construction	0.2	0.8	−0.1	0.0	5.8	−7.6	−0.4	4.0
Agriculture	13.5	23.6	21.7	11.3	20.6	41.7	32.4	3.8
Finance and insurance	5.1	6.3	6.1	5.9	−15.2	−8.9	−4.8	3.2

Source: compiled by author based on data from the State statistics service of Ukraine for respective years

The data above demonstrate that the operating profitability of enterprises over 2011 — 2014 gradually decreased, reaching a negative value in 2014, for the first time since the recession of the late 2000s. A downward trend was characteristic of industry, wholesale and retail trade, transport and communication, financial services, construction. In 2015, the situation improved to a certain extent, although operating profitability in a series of sectors of the economy remained negative. The highest profitability over the specified period was registered in agriculture, the maximum value for this indicator climbed the mark of 41.7 % in 2015, which was ten times greater than the total operating profitability in economy. It should be stated that the main types of economic activity should be investigated deeper to analyze specific activities of enterprises and the dynamics of change in the taxation base. For example, in mining industry, it is important to keep track of changes in the operations of enterprises in its core segments — extraction of coal, gas, oil, metal ore, etc.

The state should analyze the dynamic trends in the key sectors of economy, which provide for the significant share of tax revenue to the budget, carry out predictive assessment of factors that would affect the profitability of enterprises and the size of financial result before tax. There are several factors that complicate the analysis and impact the accuracy of forecast

of tax revenues in the medium term. First, it is a multiple number of enterprises, especially in the field of trade, which apply the simplified system of taxation, accounting, and reporting (although formally they should not) and are not the taxpayers. Second, a characteristic feature of collecting income tax in Ukraine is the non-uniformity in paying it across the regions, which is associated with the structure of the national economy and location of the production factors (about 70 % of the tax revenues are provided by 20 large cities). Third, the large taxpayers (as 01.01.2018, there are 1,328 of them) account for 60 % of tax revenues to the budget. A high proportion of export in the gross domestic product (47.9 % in 2017), this applies to both commodities and finished products, testifies to the significant dependence of the state of domestic economy on demand in world markets. Favorable situation could ensure an increase in the growth of sectors related to processing industry, agriculture, etc., while declining world markets would lead to the opposite. Thus, predicting the development of individual sectors in the economy, whose enterprises provide for a significant portion of revenues from income tax, is supersensitive to exogenous factors.

Under current conditions, a group of taxes on labor in Ukraine is represented by the tax on personal income in the taxation of income from wages, a military fee, and social contributions. Evaluation of tax load on labor is carried out using the determination of an implicit rate, which is calculated based on the proposed formula:

$$T_{lab} = \frac{Tr_i + SC + To_i}{W + SC_{emp}} \cdot 100 \text{ %,} \tag{2.2}$$

Tr_i — tax on personal income (wage remuneration); SC — contributions to social insurance; To_i — other taxes on income from labor remuneration (such as a military fee); W — wages; SC_{emp} — contributions to social insurance, paid by employers.

Using formula 2.2, we calculated the implicit rate of taxes on consumption in Ukraine for the period of 2001−2018, as well as compared values for this indicator with other countries, given in Table. An analysis of values from the Table allows one to conclude that in Ukraine the tax burden on labor over the period of 2001−2015 was higher than that in the Baltic states and Poland, and, in general, corresponded to the level of taxation in the EU countries with the developed economies. The high level of taxation of income from wages is one of the determining factors to put them in shadow and narrow the taxation base of personal income tax and a unified social contribution. A decrease in the social contributions rate in 2016 led to a decrease in the level of tax burden and to a significant decrease in revenues to social insurance funds, which testifies to the low degree of relationship between the response of economic agents and the events in the tax policy in the country. However, the modification of the state's regulatory policy

in the area of establishing the minimum wage in 2017 made it possible to reach the nominal values of social contribution revenues of 2015, with a simultaneous legalization odcf payroll fund and an increase in the revenues from personal income tax.

Table 2.8 Implicit tax rate on labor in Ukraine and EU countries, %

	Ukraine	EU-27 countries	Baltic countries	Poland
2001 — 2005	32.7	34.8	33.9	32.8
2006	32.6	35.2	33.3	33.1
2007	34.4	35.3	32.4	31.3
2008	34.3	35.4	31.6	29.7
2009	35.1	35.0	32.6	29.4
2010	34.7	35.0	33.8	29.0
2006 — 2010	34.2	35.2	32.7	30.5
2011	33.7	35.5	33.9	30.2
2012	32.9	35.7	33.5	31.4
2013	34.8	35.9	33.1	31.3
2014	34.7	35.9	32.7	31.6
2015	35.7	35.7	32.1	32.7
2011 — 2015	34.4	35.7	33.1	31.4
2016	28.0	35.9	32.0	32.6
2017	30.6	35.3	32.4	32.3

Source: calculated by author based on data from the State treasury service of Ukraine and the State statistical service of Ukraine and from the European Commission

Determining and evaluation of the effective tax rate on income of individuals have certain methodological features, associated with the inclusion in the taxation base of the two different factors of production — labor (income from labor) and capital (passive income from it use). In the taxation of labor remuneration (main and additional salary, payments for civil-legal agreements, the salaries of servicemen), this rate is calculated as the ratio of the share of tax revenue from this category of income to the general expenditures on labor remuneration. An analysis of dynamics in the values for this indicator over the period of 2001 — 2018 reveals that the largest deviations from the nominal tax rates were registered over 2009 — 2010 (–1.89 percentage points) and 2014 — 2015 (–2.37 percentage points). A decrease in the tax fiscal efficiency is due to the phenomenon of recession in the economy, which was accompanied by a significant reduction in employment, increasing the size of its shadow market. According to official data from the Ministry of economic development and trade of Ukraine, the maximum values for the level of shadow economy were registered exactly over the above-specified years (2009 — 41 percentage points, 2010 — 38 percentage points, 2014 — 43 percentage points, 2015 — 40 percentage points)[36].

One could verify that during 2001—2005 the growth rate of wages was somewhat higher in comparison with the rate of growth in the revenues from income tax on individuals due to a decrease in the tax rate, over 2006—2010 and 2011—2015 the values for the specified indicators were almost identical (Fig. 2.6). During 2016—2018, the rate of growth in the tax revenue outperformed an increase in the general expenditures for labor remuneration, which is due to two main aspects:

a) an increase in the tax rate by 3 percentage points to 18 %;

b) a simultaneous increase in the level of minimum wage by 2 times, which neutralized the application of tax benefits (because the limit level of income that gives the right to apply it without specific categories is set at a rate of 1.4 subsistence minimum for able-bodied persons, and the indicated sum is now lower than the amount of the minimum wage).
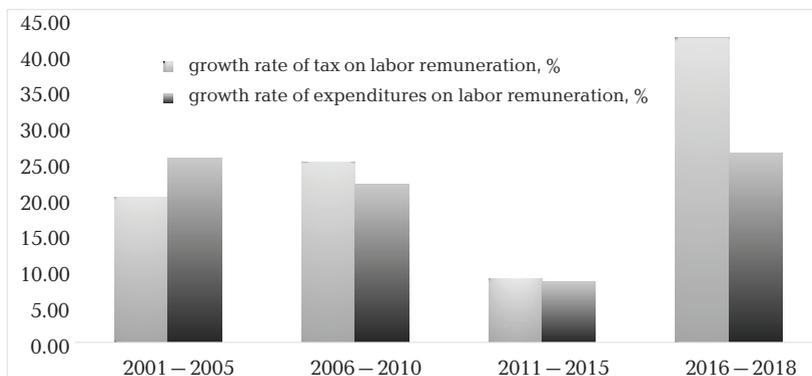
Fig. 2.6 The growth rate of personal income tax revenues from income in the form of wages and expenditures on labor remuneration based on periods, %

The values of specific weight of the tax on personal income in the gross domestic product over 2001—2018 gradually grew. The average value for this indicator in 2001—2005 is 4.38 %, in 2006—2010 — 4.69 %, in 2011—2015 — 4.85 %, in 2016—2018 — 6.02 %. The mechanism for collecting taxes underwent significant changes; up to 2003 inclusive, a progressive taxation scale was in effect (a scale of rates of 10 %, 20 %, 30 %, 40 %). Starting from 2004, the state introduced a unified tax rate, for a three-year transition period, of 13 %. One can track a substantial increase in the fiscal significance of the tax on personal income in 2004, compared to 2003. Relative to GDP, tax revenues decreased by 1.23 percentage points, in the structure of the consolidated budget revenues, the share of the tax dropped by 3.52 percentage points. In 2007, as a result of raising the rate from 13 % to 15 %, the corresponding weight indicators, in comparison

to 2006, rose by 0.64 and 2.55 percentage points. Introduction of the Tax code of Ukraine in 2011 initiated a moderate progression in taxation — 17 % of income that exceeds the 10-time size of the state minimum social standards in the field of personal income. In 2012, a decision was taken concerning the application of a tax rate of 10 % for the taxation of income in the form of wages of miners, thereby recognizing this category of workers as socially significant, which requires financial incentives to build its prestige in society.

The taxation base expanded gradually in the direction of taxation of passive income and levelling the tax burden between different sources of revenue received by individuals. In 2016 the state introduced a tax rate at the level of 18 % to most components of taxable income. Starting from 2017, given the differentiation in the size of the state minimum social standards and guarantees in the field of personal income, the existence of tax social benefits was almost neutralized. As a result of the military-political conflict, the state introduced a military fee, temporarily, until the end of the reform of the armed forces, at the rate of 1.5 % of taxable income. In 2014, the state started taxing part of pensions and lifetime allowance that exceeded the 10-time subsistence to disabled citizens (this provision of legislation was effective before 1 July 2017), interest income from bank deposits and deposits in credit unions. Given the above, it is expedient to analyze the weighted indicators of tax revenues on the income of individuals in terms of the taxation of labor remuneration (excluding the military fee for the identical comparison base). Completely similar are the trends in a change in the specified indicator with the general tax trend except for crisis years of 2014 and 2015. In 2014, the share of general tax revenue in GDP decreased by 0.16 percentage points, while the specified indicator for part of the tax paid to the budget at the expense of taxing wages dropped by 0.43 percentage points. In 2015, with a growth in the specific weight of the tax in GDP by 0.25 percentage points, a reduction in the weight indicator for tax on taxation of labor remuneration decreased by 0.40 percentage points.

Study into the structure of tax revenues on the income of individuals based on the type of economic activity over 2008 — 2017 shows that the largest share belongs to taxes paid by budget-funded sphere — 24.7 %, industry — 17.7 % (extracting — 4.2 %, processing — 13.5 %), transport and communication sector — 7.4 %, trade — 7.1 %, financial and insurance activity — 6.2 %, agriculture (including forestry) — 5.5 %, generation, transmission and distribution of electricity, water and gas — 4.6 %, construction — 2.5 % other types — 24.3 %. It is worth noting the trends towards growth in 2017, in comparison to 2008, in the specific weight of agriculture (+ 3.9 percentage points), financial and insurance activities (+ 3.6 percentage points), trade (+ 1.0 percentage points), and a substantial decrease in the weight indicator for industry (–5.9 percentage points), transport and communications (–2.8 percentage points), and construction (–1.9 percentage points).

2.3 Tax revenues in the system of budget revenues

Tax policy is an important tool in the formation of revenue part of the budget of Ukraine. Improving the system that forms revenues in the budget of Ukraine under conditions of economic transformation implies the investigation of their dynamics, components, structure, while the evaluation of progress in implementation would make it possible to identify the main budget-forming sources, shortcomings in their formation and application.

The formation of budget revenues is affected by a number of components of the budget-tax policy, in particular: the level of tax rates, taxation base, tax benefits, tax administration, the structure and amount of expenditures, as well as certain macroeconomic factors, specifically the economic condition, which is measured by the size of GDP, the structure of the economy, which is reflected in such components of GDP as consumption, investment, exports and imports, labor remuneration funds and financial results of activities of enterprises and organizations.

Specific share of Ukraine's consolidated budget revenues in the gross domestic product over 2008—2017 is 31.1 % on average (Table 2.9).

Table 2.9 Specific share of Ukraine's consolidated budget revenues in the gross domestic product over 2008—2017, %

	Tax revenues	Non-tax revenues	Revenues from capital transactions	Official transfers from governments of foreign countries and international organizations	Target funds	Total revenues (excluding inter-budgetary transfers)
2008	23.96	6.39	0.71	0.01	0.35	31.42
2009	22.78	6.40	0.40	0.07	0.24	29.89
2010	21.66	6.82	0.29	0.03	0.26	29.05
2011	25.70	4.61	0.18	0.04	0.08	30.61
2012	25.55	5.73	0.21	0.02	0.06	31.57
2008—2012	**23.93**	**5.99**	**0.36**	**0.03**	**0.20**	**30.51**
2013	24.33	5.84	0.11	0.10	0.05	30.43
2014	23.16	5.08	0.13	0.34	0.03	28.74
2015	25.53	7.05	0.09	0.09	0.03	32.79
2016	27.28	5.26	0.07	0.18	0.03	32.82
2017	27.76	5.18	0.07	0.06	1.02	34.09
2013—2017	**25.61**	**5.68**	**0.09**	**0.15**	**0.23**	**31.77**
2008—2016	**24.44**	**5.91**	**0.24**	**0.10**	**0.13**	**30.81**
2008—2017	**24.77**	**5.84**	**0.23**	**0.09**	**0.22**	**31.14**

Source: compiled and calculated based on data [official site state Treasury service of Ukraine: http://www.treasury.gov.ua, the official website of the Ministry of Finance of Ukraine: https://www.minfin.gov.ua/]

The increase in the share of GDP redistribution through the consolidated budget of Ukraine in 2017 (34.09 %) against 2016 (32.82 %) was influenced by:

— economic factors (profit growth of profitable enterprises — revenues from enterprises' income tax; the growth of imports of goods — value added tax on goods imported into Ukraine and the excise tax on excisable goods (products) imported into the customs territory of Ukraine; growth in the average monthly wage — tax on income of individuals);

— changes to the tax arrangements in terms of indexing the tax rates;

— transfer of profits by the National Bank of Ukraine and dividends by the National joint-stock company «Naftogaz Ukraine»;

— confiscation of funds based on the court decision for committing corruption offences.

An important part in the formation of budget revenues is the tax revenues, which make up most of the GDP, which is redistributed through the budget. In the process of mobilizing a part of the newly created value and the formation of the Fund of financial resources using various forms of tax revenues (taxes, fees, mandatory payments), the state regulates financial and economic activity of separate legal entities and expands the reproduction of the country in general. Tax revenues to the budget over 2008 — 2017 are, on average, 24.77 %. In terms of five-year periods of 2008 — 2012 — 23.93 %, 2013 — 2017 — 25.61 %.

Data in Fig. 2.7 show that the largest share of GDP was allocated via the tax system in 2017 — 27.76 %.
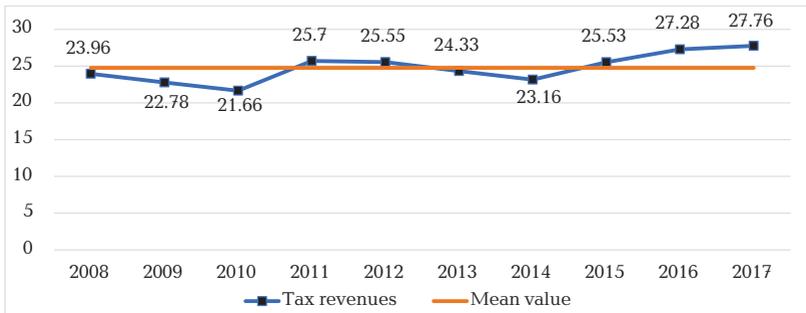
Fig. 2.7 The share of Ukraine's consolidated budget tax revenues
in the gross domestic product over 2008 — 2017, %.
Source: *compiled and calculated based on data [official site state Treasury service*
of Ukraine: http://www.treasury.gov.ua, the official website of the Ministry
of Finance of Ukraine: https://www.minfin.gov.ua/]

In 2011, 2012, 2015, 2016 and 2017, the share of tax revenues to the Consolidated budget of Ukraine in the gross domestic product exceeded

the average indicator for 2008—2017 — 24.77 %. The formation of the maximum indicator in 2017 was influenced by a significant increase in primary sources, which generate tax revenues. The total amount of tax revenues in 2017 increased in comparison with 2016 by 27.3 %, and in terms of the main sources of revenues: the value added tax (balance) — by 33.3 %, excise tax — by 19.3 %, legal entities' income tax — by 21.9 %, tax on income of individuals — by 33.8 %.

Non-tax revenues also represent a significant share of redistribution of the gross domestic product and are, in 2008—2012, 5.99 %, in 2013—2017 — 5.68 %, in 2008—2017 — 5.84 %.

The dynamics of tax revenues are in complete agreement with the general trend of growth, because they are the basic sources to form budget revenues. The role of non-tax revenues decreases, that indicates the reorientation of the national economic system and the increased tax burden on it. A slight tendency to increase over the past five has been demonstrated by the state target funds. Thus, their proportion increased from 0.2 % in 2008—2012 to 0.23 % in 2013—2017. The specified dynamics was due to the received (in half I of 2017) confiscated funds, according to the decision of the court, for committing a corruption offence — UAH 29.7 billion.

The average indicator for the share of Ukraine's consolidated budget tax revenues in the gross domestic product over 2008—2016 was 24.44 %, while the share of the total tax revenues (excluding social contributions) in 28 member-states of the European Union in the gross domestic product over 2008—2016 was 26.13 % (Table 2.10).

The indicator for the proportion of taxes in a gross domestic product over 2008—2016 in Ukraine (24.44 %) almost matches the level of the following member states of the European Union — Greece (23.78 %), Croatia (24.79), Cyprus (24.74), Hungary (25.40), and Portugal (23.80). It was significantly lower than the level of such member states of the European Union as Denmark (46.31 %), Finland (30.21) , Sweden (40.44), Iceland (33.33), Norway (30.82), as well as significantly higher than that in such countries as the Czech Republic (19.10), Lithuania (17.27), Romania (18.49), Slovakia (16.96).

Important in the financial policy of countries with the developed and transitional economies is an increase in revenues from taxation of production and import operations, while taxes on consumption tend to decrease (Fig. 2.8).

The information shown in Fig. 2.8 reflects the situation regarding the increasing role of tax regulation in the process of forming the budget revenues in countries with the developed and transitional economies. During a period of financial recession, of special relevance are the issues related to applying a system of measures for the fiscal stimulation of economic growth.

Table 2.10 The share of total tax revenues (excluding social contributions) of 28 member states of the European Union in the gross domestic product over 2008 — 2016, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	Mean value
EU-28	26.1	25.0	25.3	25.7	26.3	26.6	26.7	26.7	26.8	26.13
Belgium	29.8	28.5	29.2	29.6	30.5	31.2	31.2	30.8	30.6	30.16
Bulgaria	23.3	19.9	19.3	18.6	19.9	20.8	20.5	21.2	21.1	20.51
Czech Republic	18.3	18.0	18.1	19.1	19.5	20.0	19.3	19.6	20.0	19.10
Denmark	44.8	45.1	45.1	45.1	45.9	47.0	49.7	47.3	46.8	46.31
Germany	23.1	22.7	21.7	22.3	22.8	23.2	23.1	23.4	23.7	22.89
Estonia	20.0	22.1	20.5	19.9	20.5	20.7	21.5	22.5	23.0	21.19
Ireland	24.6	22.9	22.7	22.7	23.5	23.7	24.0	19.5	19.4	22.56
Greece	21.1	20.6	21.1	22.9	24.6	24.7	25.3	25.9	27.8	23.78
Spain	20.7	18.5	20.1	20.0	21.2	22.1	22.4	22.7	22.3	21.11
France	26.9	25.9	26.2	27.3	28.2	28.9	28.9	29.0	29.1	27.82
Croatia	25.1	24.3	24.2	23.6	24.4	25.2	24.9	25.3	26.1	24.79
Italy	28.4	28.5	28.4	28.5	30.4	30.3	30.2	30.0	29.7	29.38
Cyprus	27.7	24.0	23.9	23.9	23.9	24.1	25.2	24.9	25.1	24.74
Latvia	20.1	18.4	19.8	19.7	20.4	21.0	21.5	21.8	22.9	20.62
Lithuania	21.1	17.7	16.7	16.1	16.2	16.2	16.4	17.3	17.7	17.27
Luxembourg	26.4	26.9	26.7	26.4	27.3	27.3	26.8	26.4	27.4	26.84
Hungary	26.0	26.1	25.4	23.7	25.4	25.1	25.3	25.8	25.8	25.40
Malta	26.4	26.7	26.3	26.3	26.7	26.9	27.1	26.6	27.2	26.69
The Netherlands	22.9	22.6	23.0	22.1	21.3	21.6	22.7	23.3	24.0	22.61
Austria	27.9	27.0	27.1	27.3	27.8	28.3	28.3	28.7	27.6	27.78
Poland	22.9	20.1	20.6	20.7	20.1	19.7	19.8	19.9	20.7	20.50
Portugal	23.4	21.4	21.8	23.4	23.1	25.2	25.3	25.4	25.2	23.80
Romania	18.3	16.9	17.6	19.1	19.0	18.6	19.0	20.0	17.9	18.49
Slovenia	22.9	21.9	22.3	22.0	22.2	22.1	22.2	22.1	22.2	22.21
Slovakia	17.3	16.4	15.9	16.4	15.8	16.8	17.6	18.3	18.1	16.96
Finland	29.7	28.8	28.7	30.0	30.0	31.0	31.2	31.2	31.3	30.21
Sweden	41.3	41.3	40.5	39.7	39.7	40.1	39.8	40.3	41.3	40.44
United Kingdom	28.3	26.1	27.2	27.9	27.0	27.0	26.6	26.9	27.4	27.16
Iceland	32.4	28.9	29.4	30.4	31.4	31.9	34.7	32.8	48.1	33.33
Norway	32.8	31.6	32.5	32.8	32.1	30.4	28.9	28.0	28.3	30.82
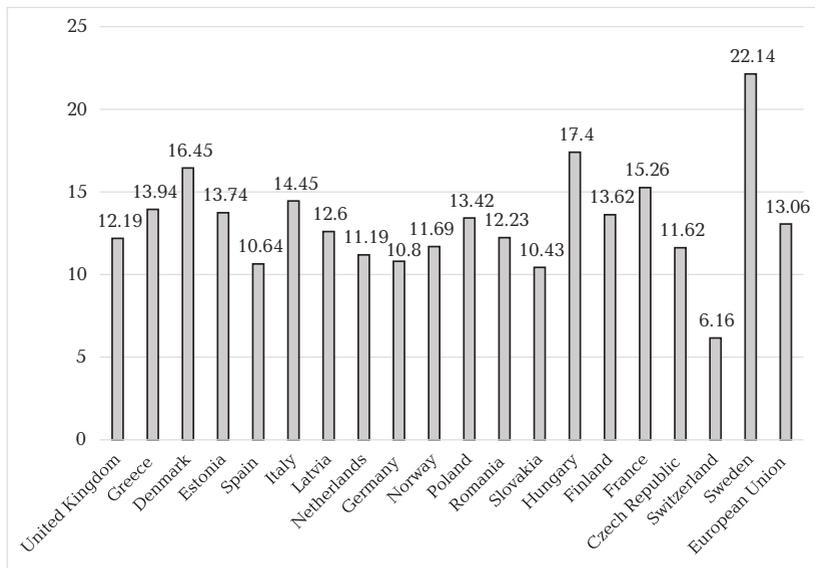
Fig. 2.8 The average value for the share of taxes on production and imports in GDP in countries with the developed and transitional economies in 2008 — 2017, %.
Source: compiled and calculated based on data [Eurostat: http://ec.europa.eu/ eurostat/data/database]

Policy in a budget sphere in the EU countries now is in the state of transformation — the search for new, more effective tools to enhance the competitiveness of economy under conditions of reduction in respective expenditures, the need to reform taxation systems, labor and pension legislation, social security, medical protection. Budget policy has a two-stage structure: the overall European budget policy, which affects the planning of both the overall EU budget and the national countries' budgets. The formation of a fiscal policy in each European Union country is under a sufficient influence from the overall budget, it applies to donor countries and countries-recipients, and the socio-economic̈ model that is implemented in the state. Several countries has similar goals in the formation and implementation of a socio-economic development model.

Quite high social standards and respective obligations directly affect the share of GDP, redistributed via the country's budget, and influence the level of tax burden on the economy (Fig. 2.9).

Data in Fig. 2.9 show that most OECD countries demonstrate indicators of tax burden close to average across the organization. Quite high during 2008 — 2017 was the tax burden in Germany — 49.8 %, France — 49.1 %, Finland — 43.1 %, and Norway — 43.0 %. Such dynamics characterizes

the situation when the specified countries, accepting additional financial obligations (usually of social nature), are forced to increase the share of revenues that is redistributed via budget through taxes. Such countries as Australia, 27.5 %, the United States, 30.9 %, Japan, 31.2 %, give more free-dom to market mechanisms of self-regulation and, accordingly, promote the development of the country's economy through liberalization of tax laws and tax rates.
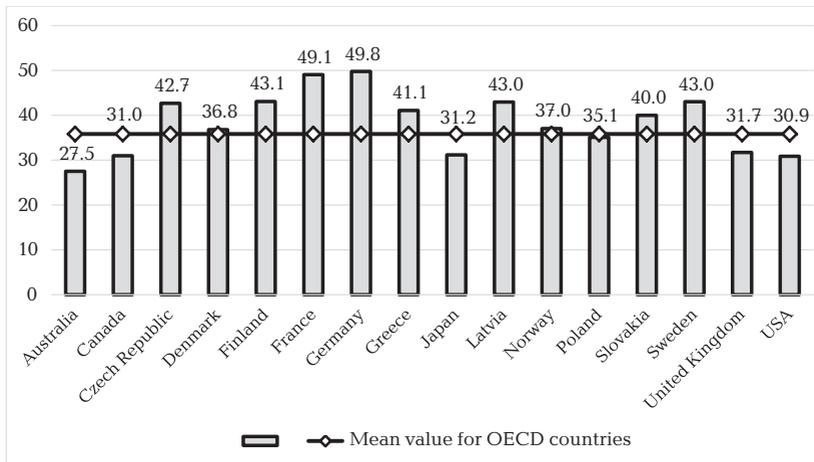
Fig. 2.9 Mean value for tax burden in OECD countries in 2008 — 2017, %.
Source: compiled and calculated based on data
[OECD: https://data.oecd.org]

In recent years, there has been a need for additional stimulation of social development. In this case, it is obvious that it is necessary to find ad-ditional instruments to influence the economic growth, to devise measures to prevent and combat the manifestations of recession. Critical factor is to select an object for conducting the financial policy of stimulation. Under conditions of volatile market and a floating currency exchange rate, un-stable macroeconomic background, credit organizations seek to use avail-able resources at acceptable level of risk, to work in the financial markets, rather than in the real sector of the economy. It is necessary to form the tax mechanisms to reproduce economic growth that would improve the effi-ciency of financial injections to the real sector of the economy.

An indicator for the proportion of tax revenues in revenue part of the Consolidated budget of Ukraine over 2008 — 2017 is, on average, 79.49 %, non-tax revenues — 18.80 %, income from capital transactions — 0.73 %, official transfers — 0.31 %, target funds — 0.67 % (Table 2.11).

Table 2.11 Structure of revenues in the Consolidated budget
of Ukraine over 2008−2017, %

	Tax reve-nues	Non-tax reve-nue	Revenues from capi-tal transac-tions	Official transfers from governments of foreign countries and international organizations	Target funds
2008	76.26	20.32	2.25	0.05	1.12
2009	76.22	21.41	1.34	0.24	0.79
2010	74.54	23.48	1.00	0.10	0.88
2011	83.98	15.05	0.59	0.12	0.26
2012	80.93	18.16	0.67	0.05	0.19
2008−2012	**78.39**	**19.68**	**1.17**	**0.11**	**0.65**
2013	79.94	19.19	0.37	0.35	0.15
2014	80.58	17.67	0.44	1.18	0.12
2015	77.86	21.49	0.28	0.29	0.09
2016	83.13	16.03	0.20	0.54	0.10
2017	81.43	15.20	0.21	0.16	3.00
2013−2017	**80.59**	**17.92**	**0.30**	**0.5**	**0.69**
2008−2017	**79.49**	**18.80**	**0.73**	**0.31**	**0.67**

Source: compiled and calculated based on data [official site state Treasury service of Ukraine: http://www.treasury.gov.ua, the official website of the Ministry of Finance of Ukraine: https://www.minfin.gov.ua/]

Tax revenues make up the largest share of revenues in the Consolidated budget of Ukraine based on five-year periods: 2008−2012 − 78.39 %, 2013−2017 − 80.59 %. Significant proportion belongs to the non-tax revenues, which in 2008−2017 were, on average, 18.80 %. Based on five-year periods: 2008−2012 − 19.68 %, 2013−2017 − 17.92 %.

Income from capital transactions, official transfers and target funds cumulatively accounted, in the structure of revenues in the Consolidated budget of Ukraine over 2008−2017, for only 1.71 %.

The implementation of the fiscal function of the entire totality of state and local taxes and fees ensures the importance of tax revenues in the system of budget revenues at all levels of the budgetary system. National are the taxes and fees established by the Tax code of Ukraine. They are mandatory over the entire territory of Ukraine, except for certain cases defined by the legislation of Ukraine. Local taxes and fees are set according to the list and limit in the size of rates, which are clearly defined by the Tax code of Ukraine, decisions by village, township, city councils and boards of united communities, created in accordance with the law and the perspective plan for the formation of territories by communities, within their authority, and are required to pay at the territory of the respective local communities.

The state national taxes include: legal entities' income tax, tax on income of individuals, value added tax, excise tax, environmental tax, rent

fee and duty. Local taxes are: a tax on property and a unified tax. Local fees include charges for parking of vehicles and a tourist tax.

The dynamics of share of the budget-forming taxes in the revenues of Ukraine's Consolidated budget and the gross domestic product over 2008−2017 are given in Table 2.12.

Table 2.12 The share of budget-forming taxes in the revenues of Ukraine's Consolidated budget and the gross domestic product over 2008−2017, %

	Value added tax		Corporate income tax		Excise tax		Income tax on individuals		The total share of budget-forming taxes	
	Share in GDP	Share in revenues	Share in GDP	Share in revenues	Share in GDP	Share in revenues	Share in GDP	Share in revenues	Share in GDP	Share in revenues
2008	9.71	30.91	5.05	16.07	1.35	4.29	4.84	15.41	20.95	66.68
2009	9.26	30.99	3.62	12.11	2.37	7.92	4.87	16.30	20.12	67.32
2010	7.97	27.45	3.73	12.83	2.62	9.00	4.71	16.23	19.03	65.51
2011	9.99	32.64	4.23	13.83	2.61	8.51	4.62	15.11	21.45	70.09
2012	9.84	31.16	3.95	12.52	2.72	8.63	4.82	15.28	21.34	67.59
2008−2012	**9.36**	**30.63**	**4.12**	**13.47**	**2.33**	**7.67**	**4.78**	**15.66**	**20.58**	**67.44**
2013	8.82	28.97	3.78	12.42	2.52	8.28	4.96	16.29	20.08	65.96
2014	8.76	30.48	2.53	8.81	2.84	9.89	4.74	16.49	18.87	65.67
2015	8.97	27.37	1.96	5.99	3.56	10.86	5.03	15.33	19.53	59.55
2016	9.87	30.08	2.52	7.69	4.27	13.00	5.82	17.73	22.48	68.50
2017	10.53	30.87	2.46	7.22	4.07	11.94	6.22	18.26	23.28	68.29
2013−2017	**9.39**	**29.56**	**2.65**	**8.43**	**3.45**	**10.79**	**5.35**	**16.82**	**20.85**	**65.60**
2008−2017	**9.37**	**30.09**	**3.38**	**10.95**	**2.89**	**9.23**	**5.06**	**16.24**	**20.71**	**66.52**

Source: compiled and calculated based on data [official site state Treasury service of Ukraine: http://www.treasury.gov.ua, the official website of the Ministry of Finance of Ukraine: https://www.minfin.gov.ua/, official site of the state service Statistics: http://www.ukrstat.gov.ua]

The main share of tax revenues to the Consolidated budget of Ukraine is formed by four national taxes: legal entities' income tax, income tax on individuals, value added tax, and excise duty.

On average, over 2008−2017, the share of the value added tax in revenue part of the Ukraine's Consolidated budget was 30.09 %, in 2008−2012 — 30.63 %, in 2013−2017 — 29.56 %. One might conclude that VAT during the studied period accounted for about a third of the tax revenues to the budget of Ukraine. That indicates the important role of VAT among other taxes and all tax revenues.

Thus, the relatively large size of the share of VAT in the GDP of Ukraine (on average, over 2008 — 2017 — 9.37 %) influences the system of redistribution of national income while raising the share of VAT in the indicators for consolidated budget in 2016 and 2017 affects the improvement of fiscal efficiency.

Income tax on individuals occupies second place in the structure of revenues in the Consolidated budget of Ukraine. During 2008 — 2017, the value for the indicator was 16.24 %, 2008 — 2012 — 15.66 %, and 2013 — 2017 — 16.82 %. Based on the above data, we could conclude that the income tax on individuals is one of the main tax revenues to the state budget of Ukraine and occupies an important place in the structure of the Consolidated budget of Ukraine. This indicates a slight increase in the role of the income tax on individuals in the overall structure of budget revenues.

As evidenced by data from Table 2.13, the average indicator for the distribution of gross domestic product via the state budget of Ukraine over 2008 — 2017 is 24.35 %. Based on five-year periods: 2008 — 2012 — 23.66 %, 2013 — 2017 — 25.03 %. Thus, there is a tendency to the increased share of distribution of GDP via the country's state budget, predetermined by the necessity to fill the budget and to increase its revenues because of the state's rising expenditures.

Table 2.13 Specific share of revenue part of the State budget of Ukraine
in the gross domestic product over 2008 — 2017, %

	Tax reve- nues	Non- tax reve- nues	Revenues from capital transac- tions	Official transfers from governments of foreign countries and international organizations	Official trans- fers	Tar- get funds	Total reve- nues
2008	17.71	5.57	0.22	0.01	0.81	0.11	24.44
2009	16.30	5.55	0.12	0.07	0.85	0.07	22.96
2010	15.41	6.01	0.05	0.03	0.61	0.11	22.23
2011	20.09	3.77	0.04	0.04	0.21	0.02	24.16
2012	19.47	4.84	0.09	0.02	0.09	0.02	24.52
2008−2012	**17.80**	**5.15**	**0.10**	**0.03**	**0.52**	**0.06**	**23.66**
2013	18.06	5.01	0.02	0.11	0.11	0.01	23.32
2014	17.66	4.31	0.06	0.34	0.13	0.01	22.50
2015	20.59	6.04	0.01	0.09	0.16	0.01	26.89
2016	21.12	4.34	0.01	0.17	0.17	0.01	25.84
2017	21.02	4.31	0.01	0.05	0.20	1.00	26.60
2013−2017	**19.69**	**4.80**	**0.02**	**0.15**	**0.16**	**0.21**	**25.03**
2008−2017	**18.74**	**4.97**	**0.06**	**0.09**	**0.34**	**0.14**	**24.35**

Source: compiled and calculated based on data [official site state Treasury service of Ukraine: http://www.treasury.gov.ua, the official website of the Ministry of Finance of Ukraine: https://www.minfin.gov.ua/]

Over the analyzed period, the structure of revenues in the state budget changed greatly, predetermined both by the policy of change in revenues, specifically tax policy (change in tax rates, taxation base, tax benefits, etc.), and the allocation of national revenues between different levels of the budget system, as well as the change in the economic situation in general (Table 2.14).

Table 2.14 The structure of revenues in the State budget
of Ukraine over 2008 − 2017, %

	Tax revenues	Non-tax revenues	Revenues from capital transactions	Official transfers from governments of foreign countries and international organizations	Official transfers	Target funds
2008	72.45	22.81	0.92	0.06	3.32	0.44
2009	71.02	24.17	0.51	0.31	3.71	0.30
2010	69.35	27.04	0.25	0.13	2.75	0.48
2011	83.15	15.60	0.17	0.15	0.86	0.07
2012	79.39	19.73	0.36	0.06	0.39	0.07
2008−2012	**75.07**	**21.87**	**0.44**	**0.14**	**2.21**	**0.27**
2013	77.46	21.48	0.08	0.45	0.47	0.06
2014	78.46	19.14	0.25	1.51	0.59	0.04
2015	76.57	22.44	0.03	0.34	0.59	0.03
2016	81.76	16.82	0.03	0.67	0.68	0.05
2017	79.04	16.21	0.04	0.20	0.75	3.76
2013−2017	**78.66**	**19.22**	**0.09**	**0.63**	**0.62**	**0.79**
2008−2017	**76.87**	**20.54**	**0.26**	**0.39**	**1.41**	**0.53**

Source: compiled and calculated based on data [Офіційний сайт Державної казначейської служби України: http://www.treasury.gov.ua, Офіційний сайт Міністерства фінансів України: https://www.minfin.gov.ua/]

The period of 2008 − 2017 saw the increased role of tax revenues, official transfers from governments of foreign countries and international organizations, target funds, and the decreased role of the non-tax revenues, revenues from capital transactions, official transfers.

The average share of tax revenues in the structure of revenues in the State budget of Ukraine over 2008 − 2017 was 76.87 %, at 75.07 % over the five-year period of 2008 − 2012 and 78.66 % over 2013 − 2017. Such dynamics is predetermined by an increase in the rates for:

— excise duty on excisable goods: beer, fortified wines, fermented drinks, ethyl alcohol and alcohol drinks, tobacco products, fuel, fuel for stove;
— rent for the use of subsoil;
— rent for the use of radio frequency resource of Ukraine;
— rent for the specialized use of water.

In addition, in 2015 the state changed proportions in the allocation of mobilized amounts of income tax on individuals among budgets in favor of filling the State budget of Ukraine.

Democratic development of the state implies financial independence of local authorities. This is clearly defined in the European Charter on local self-government. The principles for the organization of local government financial support is based on the following:

— self-government should possess financial resources according to the functions stipulated by the Constitution, laws;

— local and regional governments have the right to their own adequate financial resources, which they could freely allocate within their powers;

— part of the financial resources must be formed through local taxes, fees; the rates are defined by local governments within the framework of the law.

Ensuring the benefits for society requires that the state should have sufficient financial resources at both the national and local levels. The purpose of the decentralization reform is financial independence of local self-government authorities, which implies a sufficient amount of own revenue (including tax) sources and authorities. Practice of the developed countries shows that their own financial resources at the local level should be formed mainly through tax revenues from local taxation. Sufficient tax revenues and powers make it possible for the bodies of local authorities to fill local budgets, promote efficient development of the local economy, etc.

The issue related to searching for possibilities for the optimal redistribution of powers and financial resources between the central and local authorities and self-governance bodies is one of the most relevant ones from the standpoint of improving the efficiency and stability of the budgetary system in Ukraine. The declared large-scale reform of the national budgetary system focuses on the decentralization of budgetary resources to ensure greater financial autonomy and independence of local budgets at the expense of tax revenues.

Specific share of revenue part in the local budgets in Ukraine in the gross domestic product over 2008—2017 is, on average, 7.13 % (Table 2.15).

Changes to the Budget and Tax code of Ukraine as a result of the decentralization reform, which has been in effect from 2014, and aims to transfer powers and finances from the state power to local self-government bodies, were a consequence of the increased share of revenue part int the local budgets of Ukraine in the gross domestic product in 2016 and 2017. The specified indicator is, on average, based on five-year periods: 2008—2012 — 7.36 %, 2013—2017 — 6.90 %.

The growth in the share of revenue part in the local budgets in Ukraine in the gross domestic product in 2016 and 2017 was influenced by the increased role of tax revenues in the formation of local budgets. Over a ten-year period of 2008—2017 the specific share of tax revenues in revenue part of the Ukraine's local budgets in the gross domestic product is, on average, 6.03 %, while on average based on five-year periods: 2008—2012 — 6.13 %, 2013—2017 — 5.92 %.

Table 2.15 Specific share of revenue part in the local budgets in Ukraine
in the gross domestic product over 2008 — 2017, %

	Tax revenues	Non-tax revenues	Revenues from capital transactions	Official transfers from governments of foreign countries and international organizations	Target funds	Total revenues (excluding interbudgetary transfers)
2008	6.25	0.81	0.48	0.00	0.24	7.79
2009	6.48	0.85	0.28	0.00	0.17	7.78
2010	6.24	0.81	0.24	0.00	0.15	7.44
2011	5.61	0.84	0.14	0.00	0.06	6.66
2012	6.08	0.90	0.12	0.00	0.04	7.14
2008—2012	**6.13**	**0.84**	**0.25**	**0.00**	**0.13**	**7.36**
2013	6.27	0.83	0.09	0.00	0.03	7.23
2014	5.50	0.77	0.07	0.00	0.02	6.37
2015	4.94	1.01	0.08	0.00	0.02	6.06
2016	6.16	0.92	0.06	0.00	0.02	7.16
2017	6.74	0.87	0.06	0.00	0.02	7.69
2013—2017	**5.92**	**0.88**	**0.07**	**0.00**	**0.02**	**6.90**
2008—2017	**6.03**	**0.86**	**0.16**	**0.00**	**0.08**	**7.13**

Source: *compiled and calculated based on data [Офіційний сайт Державної казначейської служби України: http://www.treasury.gov.ua, Офіційний сайт Міністерства фінансів України: https://www.minfin.gov.ua/]*

The average share of non-tax revenues in revenue part of the Ukraine's local budgets in the gross domestic product has been relatively stable: 0.86 % over 2008 — 2017, 0.84 % over 2008 — 2012, and 0.88 % over 2013 — 2017. The role of revenues from capital transactions in the formation of the Ukrainian local budgets revenues decreases.

According to acting legislation, namely, according to Article 2 from the Budget code of Ukraine, the budget revenues are composed of tax, non-tax and other revenues on a non-refundable basis, whose collection is implied by the legislation of Ukraine (including transfers, charges for rendering administrative services, own revenues by budgetary institutions).

An important role in the formation of revenues to local budgets in Ukraine belongs to tax revenues. Indicators from Table 2.16 confirm their enhanced budget-forming role at the local level, over 2008 — 2017 they make up, on average, 84.52 % of the revenues to local budgets in Ukraine. Based on five — year periods: 2008 — 2012 — 83.39 %, 2013 — 2017 — 85.65 %.

The key factors for the significant increase in the role of tax revenues in the formation of local budgets revenues in Ukraine during 2016 — 2017 were the fiscal decentralization, a growth in nominal wage, and inflation.

Table 2.16 The structure of revenues in the local budgets in Ukraine over 2008 − 2017, %

	Tax revenues	Non-tax revenues	Revenues from capital transactions	Official transfers from governments of foreign countries and international organizations	Target funds
2008	80.25	10.41	6.20	0.00	3.14
2009	83.28	10.92	3.65	0.00	2.15
2010	83.93	10.89	3.18	0.00	2.00
2011	84.34	12.60	2.11	0.00	0.95
2012	85.16	12.54	1.74	0.00	0.57
2008−2012	**83.39**	**11.47**	**3.38**	**0.00**	**1.76**
2013	86.71	11.53	1.31	0.00	0.45
2014	86.38	12.13	1.12	0.00	0.38
2015	81.52	16.72	1.35	0.07	0.33
2016	86.03	12.80	0.82	0.05	0.29
2017	87.59	11.32	0.81	0.01	0.27
2013−2017	**85.65**	**12.90**	**1.08**	**0.03**	**0.34**
2008−2017	**84.52**	**12.19**	**2.23**	**0.01**	**1.05**

Source: compiled and calculated based on [Офіційний сайт Державної казначейської служби України: http://www.treasury.gov.ua, Офіційний сайт Міністерства фінансів України: https://www.minfin.gov.ua/]

An analysis of practical aspects in the formation of tax revenues to local budgets reveals that up to now the local authorities have received additional, but still insufficient, financial resources to effectively manage the socio-economic development of territories. The main budget-forming tax is still a tax on individuals' income, but its role decreases every year due to the sustained trend towards the growth of the role of local taxes and fees and the property tax.

Under modern conditions of the country's socio-economic development, the budgetary decentralization aims to expand revenue sources, specifically tax, with the simultaneous provision of new, and expansion of already existing, rights for self-government bodies, namely, to independently regulate the size of taxes and fees. However, legislative innovations are not enough to financially ensure the planned budgetary decentralization. The above is explained by the fact that the transfer of additional, and expansion of already existing, sources of budget revenues for local communities is accompanied by a significant amount of additional spending responsibilities assigned to them: funding education, medicine, culture, roads, and housing and communal services. The negative aspect is strengthened by the increased proportion of payments to the State budget of Ukraine from budget-forming local payments that earlier were kept mostly at the local level — the income tax on individuals, the rent for the use of subsoil.

In order to increase the fiscal role of taxes and fees, which generate revenues of local budgets, it is necessary:

— to analyze the reasons for a decrease in the revenues to local budgets compared to past periods, both in terms of taxes and fees and their budget-forming taxpayers;

— to identify possible ways to minimize the negative trends regarding the receipt of tax payments;

— to enable the systematic cooperation and coordination between bodies of local self-government, territorial inspectorate of labor, bodies of the State fiscal service of Ukraine, the State land agency, and all law-enforcement bodies, aimed at filling a revenue part of local budgets;

— that local governments, together with the regulatory authorities, should develop joint plans of activities aimed at the full mobilization of taxes and fees to local budgets;

— to work with taxpayers that have a significant amount of debt for tax obligations to local budgets, and payers that increased it, so that they fully repay their taxes and duties;

— to work out schedules for repayment of tax debt to local budgets and to systematically control their implementation;

— to carry out control measures over the activities of legal entities and private entrepreneurs that violate tax laws when paying wages and do not pay the income tax on individuals.

Creation of appropriate material, financial and organizational conditions for local self-government bodies should imply ensuring the fiscal autonomy and financial independence of local budgets, strengthening the taxation base of local self-government bodies.

Main areas for strengthening the financial independence of local self-government authorities should include:

— the creation of a budgetary system and the inter-budgetary relations that correspond to the development of local self-government;

— the introduction of a transparent system of allocation of transfers among budgets of different levels, which would be based on objective indicators and criteria. Transfers should be defined as the difference between the normative volume of expenditures and the amount of revenues, calculated using the coefficient of regions' tax capacity; they must be provided by a single fund;

— the expansion of own revenue base of local budgets at all levels and the creation of appropriate incentives to increase revenues, specifically tax;

— the introduction of a system of financial equalization and a system of transfers, based on a clear-cut legal basis and objective criteria;

— enhancing the role of local authorities in determining taxation rates for certain local taxes and fees and extending their list (Fig. 2.10).

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┌─────────────────────────────────────────┐
│   Ways to strengthen financial independence │
│        of local self-government            │
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┌──────────────────────────┐     ┌──────────────────────────┐
│  Ensuring budget autonomy  │     │ Strengthening the taxation base│
│  and financial independence│     │   of local self-government   │
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1. Independent formation of local budgets (non-dependent on the time of state budget adoption). 2. Independent choice by local budgets' money allocators an establishment to service own revenues of budget bodies (at treasury bodied or banks). 3. Shorter time for the treasury service to effect payments. 4. Simplified procedure to issue local warranties and taking loans from international financial organizations through introduction of the principle of «silent consent»	1. Expanding the taxation base of local budgets by assigning (or increasing the percentage) certain tax payments and fees to local budgets. 2. A change in the mechanism to tax real estate taking foreign practice into account. 3. Extending the authority of village and town councils in terms of taxes and fees. 4. Extending the list of local taxes and fees with a possible introduction of budget-forming. 5. Applying tax regulation based on the maximal accounting for a territory's tax potential

Fig. 2.10 Tax component in strengthening the financial independence
of local self-government

Thus, strengthening the taxation base of local self-government bodies could be achieved at the expense of assigning (or increasing the percentage) certain taxes and fees to local budgets, improving the mechanism of real estate taxation, providing them with more power on taxes and fees, etc.

Under current conditions, strengthening the financial independence of local self-government authorities may be achieved by following such steps as:

— significant expansion of existing rights of local institutions in the field of taxation;

— a clear delimitation of competence of the central government and local authorities, by the further allocation of taxes and fees among the links of the budgetary system in favor of the local level;

— strengthening budgetary discipline;

— search for additional reserve sources for increasing tax revenues to local budgets.

The European course of Ukraine's development requires a solution to the task on bringing the macro-financial parameters of the domestic financial system to the Maastrichtian criteria (criteria of convergence). The treaty on the European Union defines 5 key criteria of convergence (approaching), relating to the public debt, price stability, budget deficit, stability of interest rates, stability of the national currency. Meeting these criteria are mandatory for Ukraine in view of its aspiration to receive in the future the right to join the third stage of the Economic and Monetary Union.

Among the 5 key indicators that require the expansion and use of current fiscal space, the following two are worth noting: the ratio of government debt to gross domestic product must not exceed 60 %, while the ratio of government deficit to gross domestic product must not exceed 3 %.

As defined by P. Heller, a fiscal space is the «measure of affordability of budgetary actions that would make it possible for a government to find resources in order to achieve the desired objectives without any harm to the stability of the government's financial position. Fiscal space could be created by a government with the help of a foreign aid, by increasing taxes, by external and internal borrowing, by reducing nonessential budget expenditures or borrowing from the banking system.

In recent years, of considerable relevance are the tasks on ensuring the fiscal stability of this state in the medium- and long-term periods. The period of 2008—2016 saw a significant worsening in the indicators for the country's macroeconomic development, as well a growth of the national debt; the reasons for this were:

— devaluation of the national currency — 42.4 % of GDP;
— expenditures for maintaining the banking system — 14.0 % of GDP;
— recapitalization of NAK «Naftogaz of Ukraine» — 13.7 % of GDP;
— primary deficit in the state budget — 11.0 % of GDP.

Only during 6 years, namely from 2012 to 2017, the indicator for a total government debt as a share of GDP increased by 38.10 percentage points to 75.60 % of GDP. Given the value for the debt indicator with a high degree of risk (≥42.8 % of GDP), the existing state of fiscal space is a threat to the further socio-economic development of the country.

I. Chugunov believes that «...achieving the medium- and long-term goals of the state's economic development will contribute to the improvement of the institutional environment of the economic and budget space». One of the main determinants for efficiency in the process of expanding the fiscal space is to ensure the interaction between main components of financial policy: budgetary, tax, monetary, customs, debt, and investment policies (Table 2.17).

A comprehensive approach to the use of macro-financial tools and mechanisms to expand a fiscal space will make it possible for the government to receive sufficient financial resources in order to perform its functions, not worsening the financial sustainability and stability of the country's socio-economic development.

The long-term strategy for the socio-economic development of Ukraine needs to bring down an indicator for the public debt, owned by non-residents, which would reduce possibilities of external political and economic impact on this country. That would require the coordination of budgetary, tax, monetary-credit, customs, debt, and investment policy.

Application of the economic function of taxation makes it possible to adjust the country's economic development, to increase the size of GDP and reduce the indicator for the total external borrowings as a share of

GDP, which would facilitate the expansion of fiscal space. A combination of the regulating potential of the economic function of taxation and the fiscal one would make it possible: first, to increase the financial resources of private sector, which could be used to repay the debt; second, to increase tax revenues to the budget, increasing in this way the state financial resources, which could be directed to repay public debt.

Table 2.17 Macro-financial tools and mechanisms to expand fiscal space

Tool title	Mechanisms to expand fiscal space
Tax policy	Establishment of taxes and fees, their legal regulation and organization of collection to the budgets of all levels. Increasing, or decreasing, taxes, change in forms of taxation, tax rates, exemptions for certain industries, areas, groups of people. Improving the collection of taxes and tax law compliance, expansion of taxation base
Budget policy	Formation, execution, and control of budgets at all levels. Forms and methods to mobilize budgetary resources, and using them to the needs of the state. Determining the sources of financing a budget deficit, main rules of relationships between the links of a budget system. Redistribution and rationalization of revenues, their extension
Debt policy	Actions and measures by government to resolve the accumulated debt problem and avoiding them in future. Restoring and maintaining the country's solvency. Maximizing the positive, and minimizing the negative, effects of funding through borrowed funds. Definition of macro-financial limits and conditions for public borrowing, relationship between its forms and creditors, the order and mechanisms of debt repayment
Customs policy	Expansion or reduction of exports or imports. The definition of mechanisms for the application of customs duties or customs regimes. The choice of forms to implement the customs policy: free trade or protectionism, the use of tariff instruments to regulate foreign trade
Monetary-credit policy	Implementation of government measures in the sphere of monetary and credit markets, which implies adjusting the rate of the national currency, inflation, ensuring currency stability and the stability of banking system
Investment policy	Application of methods and forms to regulate investment policy. Creation of an attractive investment environment, recovery of investment activity, increase in investments

The repayment of the public debt owned by non-residents has the consequence of taking the foreign currency outside the country, which would put pressure on the national currency. The government, by adjusting the tax and customs policy, has the capability to influence exports (receiving foreign exchange earnings in the country) and imports (withdrawal of foreign currency earnings outside the country) and thus neutralize such a negative effect. By using the tax mechanism of administration and control, the State fiscal service of Ukraine could monitor the compliance of the established

term for payments in the sphere of foreign-economic activity when performing export operations and promote the accelerated return of foreign exchange earnings to the country.

In addition to the above mentioned, the State fiscal service of Ukraine is given the function to ensure the recovery of amounts of overdue debt from legal entities to the state for the credits (loans), provided by the state or applying the state (local) warranty, as well as loans from the budget.

Achieving the acceptable fiscal balance in the short term requires the coordination of budget, tax, customs, and monetary policies and the strengthening of the fiscal function of taxation. The result of taxation adjustment would be to increase tax revenues to the budget, to increase budgetary revenues and to reduce the budget deficit. Reducing the size of the negative fiscal balance would require an increase in tax revenues to the budget (the increased role of the fiscal role of taxation), including by reducing the role of the social function of taxation — increasing the tax burden on business and socially unprotected segments of people by: the abolition of tax breaks that have social significance, the introduction of new taxes, increasing existing tax rates, changes in the social parameters built into the taxation mechanism (for example, the subsistence for a working individual) and in the mechanisms of tax calculation (repeal of certain tax rebates), change in the list of tax payers, etc. The specified policy may have the consequence of increasing tax revenues and reducing a budget deficit in the short term. At the same time, it is necessary to ensure the protection of stimulating tax breaks, without increasing the tax burden on education, science, health, physical culture and sports, arts, and culture, and not reducing the citizens' right to use services provided by such sectors. Otherwise, it could lead to not only adverse social, but also economic, effects.

It is possible to reduce the indicator of private external debt as a share of GDP by applying the economic function of taxation in the direction of stimulating the export potential of private sector, which would make it possible to increase the revenues of private lenders, by reducing at the same time pressure on the domestic currency.

Tax revenues are a source of financial resources that the state uses to repay the public debt. The increased role of the fiscal function of taxation would make it possible to ensure a growth of the indicator for average tax revenues and thus reduce the negative value of the debt indicator.

An indicator of the ratio of domestic credit of private sector to GDP tends to decrease. Its improvement might be achieved in the framework of the current financial activities of the state in the interaction between the tax, monetary, and customs policy. The above would require the reduced role of the fiscal function and the increased role of the economic function, which would contribute to the reduction of tax burden and the cost of credit resources, to increasing financial resources and export. Applying the fiscal function of taxation in the regulation of the indicator for the proportion of

private debt and internal loan by private sector in GDP is limited, as the growth of tax payments from private sector could be a result of its compromised solvency at a significant debt load.

Countries with the developed market economies have significant capabilities to use fiscal space and a wide range of financial instruments for its expansion. Among such instruments to support national financial systems under conditions of economic downturn, an important source of stimuli is the tax policy.

The fiscal space of high level makes it possible for the country to have at its disposal significant capabilities for budget maneuvering through the use of such financial instruments as aid, external and internal loans, and taxes.

Under the condition for a fiscal space of the medium level, the variants of the state policy for increasing financial resources are somewhat reduced. The possibilities for using the full combination of financial resources decrease or disappear at all, leaving a government with the following variants to apply:

a) aid + external and internal loans;

b) aid + increased taxes;

c) internal and external loans + taxes.

Under conditions for a fiscal space of the low level, a government could not use the full or partial combination of available financial resources, having the capability to use only one of the tools: taxes, loans, aid.

A significant worsening of the indicators of fiscal space has a consequence of the occurrence of significant constraints and possibilities to use various financial instruments such as taxes, loans (external and internal), leaving a government with the possibility to overcome a crisis only by using external financial aid. That is why the timely measures of tax regulation make it possible to prevent both a significant narrowing and reaching critical indicators for the values of a fiscal space by changing budget revenues.

Measures of tax regulation should be an integral element and must take one of the central places in the model of creating a fiscal space. Directions to create the fiscal space should include three major components: a policy of raising the pace of economic growth and expansion of its base, a policy to improve the efficiency of revenues, and a policy to improve the efficiency of expenditures.

Tax regulation as part of the policy to improve the efficiency of revenues must focus on the further carrying out a tax reform, expanding a taxation base, improving the technology of administration, maintaining the base of taxation and minimizing its transfer to other countries, the implementation of new IT technologies in taxation, improving tax control, the implementation of qualitatively new modern taxes (tax on financial transactions, taxes for technology companies in the sector of digital economy), improving the administration of state fees, reducing transaction costs of tax expenditures, improving control over money transfers received from abroad, the minimization of information asymmetry in taxation (Fig. 2.11).

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┌─────────────────────────────────────────────┐
│        Directions for creating a fiscal space │
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Policy of increasing the pace of economic growth	Policy of improving the efficiency of revenues	Policy of improving the efficiency of expenditures
- use the drivers of growth, generation of new knowledge, technologies; - use of state sector when effecting current and capital expenditures; - stimulate private sector to invest internally and externally; - use trends in demography to grow; - improve production efficiency; - improve the efficiency of state governance; - reform market environment, labor sector, control modes	- carry out a tax reform; - expand taxation base; - improve administration technologies; - maintain taxation base and minimize its transfer; - introduce new IT in taxation; - improve tax control; - introduce qualitatively new taxes; - improve collection of state fees; - decrease the size of tax expenditures; - improve control over money transfers from abroad; - minimize information asymmetry in taxation	- reform a system of state procurement; - improve control over state budget; - reform a system of subsidies; - reform state-owned enterprises in terms of the optimization of their expenditures; - improve adjustment and coordination when pursuing a debt policy; - reform the most import-dependent sectors; - align budget expenditures with the long-term priorities in development

Fig. 2.11 The model of creating a fiscal space

Ineffective use of one of the components in the model of creating a fiscal space would worsen the quality and efficiency of the rest. For example: terminating the bids for the purchase of scanning systems of the stationary type to monitor commercial vehicles and containers led to stopping the process to equip the customs checkpoints in 2017. The above negatively affects the policy of increasing the efficiency of revenues from customs payments, leading to budget losses.

Ensuring a stable expansion of the fiscal space should be carried out through the implementation of the strategy of tax regulation of the country's socio-economic development, which would imply a positive impact of taxation on the gross domestic product, sector of industrial production, wholesale and retail trade, consumer market prices, prices of producers of industrial products, the fiscal unit of public finance, currency and monetary-credit market, agricultural sector, capital investments, foreign trade in goods, foreign direct investment, nominal and real income of people, demographic situation, labor market.

By applying the fiscal function in the process of tax regulation, there is the possibility to expand budgetary parameters within which a government can make decisions and act. It is necessary to expand the fiscal space by not using additional taxation of traditional sources of taxes, but by expanding the tax taxation base at the expense of new objects, taxpayers.

To expand the fiscal space, it is necessary to expand a revenue part of the budget at the expense of:

— the abolition of tax breaks that are not related to the achievement of public priorities, raising taxes on fossil fuels and the expansion of capital taxation, increasing revenues from environmental taxes and charges;

— the improvement of tax administration by improving the system for tracking potential tax defaulters, procedures of tax audit, reducing the transaction costs to collect taxes.

Expanding the fiscal space would make it possible to increase the volume of financial resources, which would be appropriately used to finance structural reforms, the development of human capital, strategic national projects, innovation and highly technological advancements, efficient scientific and technological venture business, etc., which are the drivers of economic growth.

The above-specified would be facilitated by improving the use of available reserves of tax revenues: reducing a tax debt, eliminating typical schemes of tax evasion and avoidance when using offshore schemes, «grey» imports, smuggling, counterfeiting, currency-converting centers, understating a turnover, withdrawal of profits through bogus business entities.

It is necessary to apply in the process of implementation of the financial strategy and tactics to expand the fiscal space the systemic-synergetic approach to the use of the fiscal, economic, and social function of taxation in order to ensure the parity between private interests of taxpayers and the government's budget interests.

2.4 Development of the regulatory mechanisms of the state's tax policy

Tax regulation in the modern form has become an integral part of the country's socio-economic relations. The use of the regulatory potential of the tax system as a tool of financial and economic regulation is an important issue in the financial theory and practice. By using effective mechanisms of tax regulation, the state strives to create and maintain favorable conditions for the sustainable economic growth, for resolving social problems, for the strengthening of public finances.

Tax regulation is complex and purposeful influence of the state on the system of socio-economic relations in the country, by organizing them, in accordance with the stated strategic and tactical objectives for the socio-economic development in the interests of society. From a purely fiscal tool, the tax mechanism evolved into a comprehensive regulatory tool designed to solve the problems of society, which is confirmed by the successful implementation of the policy of financial and economic regulation in many countries.

Defining methodological approaches to the development of the system of tax regulation requires revealing the mechanism of tax regulation. The current mechanism of tax regulation is a set of legal norms, principles, methods and forms, subjects and objects of state regulation of tax relations through a variety of tools to ensure the country's socio-economic development.

Current interpretation of the national principles of building relations in the sphere of tax regulation is represented in the Tax code of Ukraine. Improving the quality level of institutional support for the budget-tax policy requires the implementation of the principles of unification, complementariness, systematic and adaptive efficiency in the process of its formation.

Financial instruments for the implementation of the principles of taxation are taxes and fees, and the levers of action are the tax rates and fees, the order of their calculation and payment, privileges and sanctions. Components of the tax mechanism are the tax law, tax planning and forecasting, tax management, tax penalties, tax rules and regulations when implementing the tax policy must adhere to the principles of taxation.

The most common methods of tax regulation include:
— investment tax credit;
— selection and setting the tax rates;
— deferral of taxes and fees;
— tax amnesty;
— international treaties on avoidance of double taxation;
— tax holidays;
— tax deductions.

Forms of tax regulation are divided into those of direct and indirect influence. The subjects of tax regulation are the President of Ukraine, Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, Ministry of Finance of Ukraine, the State fiscal service of Ukraine, bodies of local self-government. The objects of tax regulation are: consumption, income, property, natural resources, distributed profits, capital.

In the framework of the general mechanism of tax regulation one may distinguish individual mechanisms and classify them, depending on the scope of the regulatory action, as follows:
— systemic mechanisms of tax regulation;
— comprehensive mechanisms of tax regulation;
— local mechanisms of tax regulation.

The systemic mechanisms of tax regulation, which are embedded in the tax system, include the structure of taxation system: the ratio of national and local taxes and fees, direct and indirect taxes on property and capital, on legal entities and individuals, etc.

The simplified system of taxation, accounting and reporting, is a special mechanism for collecting taxes and fees that establishes the replacement of paying certain taxes and fees with a single tax payment with the simultaneous simplified accounting and reporting.

The complex mechanisms of tax regulation include specialized tax regimes (activities in the field of agriculture and forestry, as well as fishing; activities on art collectibles or antiques) and taxation of tax payers under conditions of an agreement on production sharing.

The mechanism of specialized tax regimes regulates activities in the field of agriculture and forestry, fisheries, as well as activities for products of art collectibles or antiques. Such a mechanism of tax regulation includes a system of measures that define a specialized procedure of taxation for certain categories of legal entities that meet certain criteria, by assigning taxes and fees to such taxpayers in line with a specialized order for determining the elements of tax and fees, exemption from certain taxes and fees.

The mechanism of tax regulation consists of a large number of elements, which are the separate tax tools. Significant impact on the effectiveness of tax regulation is affected by legal environment. From a narrow point of view, the mechanism of tax regulation may be represented as a set of tax instruments defined by the Tax code of Ukraine. The tools of tax regulation may be classified in terms of economic or administrative approach.

The most important economic and administrative instruments are:
— the general level of taxation, which affects economic processes;
— the structure of the system of taxes and fees — defining the state and local taxes and fees;
— the ratio of direct to indirect taxes, which determines the allocation of the tax burden on the manufacturer and the consumer;
— the tax rate. It is one of the most important tools of tax regulation. The regulatory effect is achieved through the establishment of basic, boundary, absolute and relative rates of taxes;
— tax benefits;
— determining the set of payers of taxes and fees;
— the procedure for calculation and payment of taxes and fees;
— objects of taxation;
— the procedure for determining the base of taxation;
— the terms of payment of taxes and fees;
— the procedure for calculating the amount of a tax or a fee. For example, when calculating the income tax on individuals, the state takes into consideration the size of the state's social standards (minimum wage, a living wage for a workable individual);
— tax control;
— responsibility;
— tax rebate;
— the rights, obligations, and liability of officials from regulatory agencies;
— the duties and rights of taxpayers that affect their behavior through the established obligations and rights.

The struggle for economic resources of development requires studying the issue on the country's internal tax climate, which is determined by the

ratio of the institutional tax indicators as a result of the policy of tax regulation. One of such defining indicators for tax regulation, which affects the choice of a country for starting a new business or to expand already existing, is the tax rate on enterprises' profit. Ukraine does not belong to countries either with the lowest tax rates on enterprises' profit (Uzbekistan, Turkmenistan, Hungary, Montenegro, Bosnia and Herzegovina, Bulgaria, Kosovo, Kyrgyzstan, Qatar, Moldova, Cyprus, Ireland, Liechtenstein) or countries where enterprises' profit is taxed at the highest tax rates (United Arab Emirates, the United States of America, Argentina, Malta, India, France).

The current tax rate on enterprises' profit in Ukraine (18 %) makes it possible to maintain the parity between the interests of the government and legal entities, it is acceptable, taking into consideration the factor of tax competition between countries, as it is lower by 4.96 percentage points than the average rate for all 202 countries in the world — 22.96 %.

The domestic tax rate on enterprises' profit is:

— almost the same with the mean rate of 49 countries in the European region — 18.35 %;

— lower by 3.82 percentage points than the average tax rate on enterprises' profit in the member states of the European Union — 21.82 %;

— lower by 6.18 percentage points than the tax rate on enterprises' profit in a group of member states of the Organization for economic cooperation and development (24.18 %) with the highly developed economies.

A significant impact on the economic situation in the country is exerted by a tax rate on the value added tax. Domestic VAT rate is 20 %, it is 2 percentage points lower than the average rate in 27 EU member states.

The countries in which the standard rate of VAT is lower than that in Ukraine include: Luxembourg — 17 %, Malta — 18 %, Cyprus and Germany — 19 %. In countries such as Austria, Bulgaria, Estonia, France, Romania, Slovakia, the United Kingdom, the analyzed tax rate is similar to that in Ukraine. In Greece, Ireland, Poland, and Portugal (23 %), Finland (24 %), Croatia, Denmark, and Sweden (25 %), Hungary (27 %), the VAT rate is considerably higher than that in Ukraine.

In many EU member states there is a differentiated approach to setting the rates of VAT on certain goods harmful to citizens: alcoholic beverages and tobacco products. For Ukraine, this practical approach could be one of the sources of additional budget revenues, and thus strengthen the social component in the tax regulation of consumption of harmful products (Table 2.18).

In such EU countries as Denmark, Sweden, Croatia, the VAT rate on alcoholic beverages, beer, wine, and tobacco is 5 percentage points higher than that in Ukraine, while in Hungary it is 7 percentage points larger. Relatively high VAT rates on alcoholic drinks and tobacco are in Greece and Finland.

A great potential in terms of regulation of social and economic processes is demonstrated by a tax on individual income and social contributions (Table 2.19).

Table 2.18 VAT rates on alcoholic beverages and tobacco products
in the member states of the European Union

No.	Country	Alcoholic beverages			Tobacco
		Alcoholic beverages	Beer	Wine	
1	Denmark, Sweden, Croatia	25	25	25	25
2	Ireland	23	13	23	23
3	Greece	24	24	24	23
5	Italy	22	22	22	22
6	Hungary	27	27	27	27
7	Poland	23	23	23	23
8	Portugal	23	23	13	23
9	Slovenia	22	22	22	22
10	Finland	24	24	24	24

Source: compiled and calculated based on data [European Commission. Retrieved from: https://ec.europa.eu/commission/indicator_en]

Table 2.19 The highest boundary tax rates on individual income
in the OECD countries and Ukraine

Country	Highest boundary tax rate		Country	Highest boundary tax rate	
	Personal income tax	Personal income tax and social contributions (general rate)		Personal income tax	Personal income tax and social contributions (general rate)
Australia	49.0	49.0	Korea	39.3	43.2
Austria	55.0	55.0	Latvia	8.5	19.0
Belgium	46.3	59.4	Luxembourg	43.6	45.5
Canada	53.5	53.5	Mexico	35.0	35.0
Chile	40.0	40.0	The Netherlands	49.8	52.7
Czech Republic	20.1	31.1	New Zealand	33.0	33.0
Denmark	55.8	55.8	Norway	38.7	46.9
Estonia	54.7	56.3	Poland	20.9	38.8
Finland	50.0	58.9	Portugal	50.3	61.3
France	54.0	55.1	Slovak Republic	21.7	35.1
Germany	47.5	47.5	Slovenia	39.0	61.1
Greece	55.0	55.0	Spain	45.0	45.0
Hungary	15.0	33.5	Sweden	60.1	60.1
Iceland	44.4	44.4	Switzerland	36.1	41.7
Ireland	48.0	52.0	Turkey	35.8	35.8
Israel	50.0	50.0	United Kingdom	45.0	47.0
Italy	48.8	48.8	USA	46.3	48.6
Japan	55.7	56.1	**Ukraine**	**18.0**	**40.0**

Source: compiled and calculated based on data [Organization for Economic Co-operation and Development (OECD). Retrieved from: http://www.oecd.org/]

Ukraine, having reduced the rate of a unified social contribution to 22 %, belongs to the countries with a moderate tax load on labor. In 2018, the basic tax rate on personal income in Ukraine was 18.0 %. In 33 member states of the Organization for economic cooperation and development the highest boundary tax rate on personal income was greater than that in Ukraine, and in Hungary — 15 %, and Latvia — 8.5 % is generally lower.

The rate of the unified social contribution — 22 % with a 18 % tax rate on personal income, makes it possible for Ukraine to have the overall tax rate on labor — 40 %, which is lower than that in 26 of the 35 member states of the Organization for economic cooperation and development. Only in the Czech Republic (31.1 %), Hungary (31.5 %), Latvia (19 %), Mexico (35 %), New Zealand (33 %), Poland (38.8 %), Slovak Republic (35.1 %) and Turkey (35.8 %) the tax burden on labor is lower than that in Ukraine.

An analysis of tax policy in foreign countries has made it possible to identify the dominant trends in the changes of the mechanisms of tax regulation — reducing the overall rate of taxation and time costs to comply with the norms of tax laws, reducing the number of tax payments.

It is important in the formation of a strategy for development of public finance of Ukraine to take into consideration current international trends in tax regulation. In the process of reforming international tax systems, significant attention is paid to the development of mechanisms to counter washing out the taxation base and withdrawal of profits from taxing. The relevance of such a policy is predetermined by considerable tax losses in the presence of such a problem. The annual loss of states from the non-received taxes due to such activities are estimated in the amount of approximately USD 100−240 billion. Thus, in the near future, the efforts of governments of foreign countries will be aimed at:

— combating fraud and tax evasion;

— improving the transparency and certainty for entrepreneurs and states in the field of taxation;

— strengthening their cooperation to ensure reporting with the aim of a clear vision of the global pattern of activities by transnational corporations;

— terminating unfair tax practices, in particular in the field of intellectual property through the automatic exchange of tax rules;

— improving the rules of transfer pricing to prevent the use by taxpayers of objects to hide profits in the low- or tax-free jurisdictions.

Global trends in the field of indirect taxation are characterized by the following processes:

— the introduction of new taxes on the use of natural resources;

— the creation of a global legal environment for the analysis of international supplies of services and intangible assets;

— certain expansion of taxation bases of indirect taxes;

— active promotion of intensive development of the customs sector.

Achieving sustainable economic growth is an important goal for any government, because it makes it possible to better provide for the needs of its voters. Low taxes, their small number are best for economic growth, improvement of the well-being not only of individual taxpayers, but the entire country. However, not every state, when funding its functions, could afford to maintain this rule. In those countries where a substantial part of GDP is redistributed via taxes and in which the boundary cost of taxation exceeds the maximum benefit, a negative result is possible, which manifests itself in a lower economic growth, reducing incentives to work and increasing the unemployment.

Professor G. Scully argues that for a series of developed countries the tax rate is higher than optimal and he discovered the one that maximized economic growth in the examined countries. His calculations prove that the tax rate, which would maximize the economic growth in the United States is 21.8 % of GDP, and the pace of average annual economic growth under such an optimal tax rate would be 4.8 %. On average, the tax rate that maximizes economic growth in the developed countries is about 20 % of GDP. For example, in Denmark, the optimal tax rate is 18.5 % at current 51.6 %, and 25.2 % for the UK at current 34.1 % (Table 2.20).

Table 2.20 Tax rates that maximize economic growth

Country	Period	Optimal tax rate	Pace of economic growth at optimal tax rate	The boundary cost of taxation*
USA	1929 — 1989	21.8	4.8	3.44
Denmark	1927 — 1988	18.5	7.2	5.70
United Kingdom	1927 — 1988	25.2	3.8	3.34
Italy	1927 — 1988	20.8	4.1	1.59
Sweden	1927 — 1988	16.6	4.7	4.20
Finland	1927 — 1988	18.9	4.4	1.76
New Zealand	1927 — 1988	19.7	5.1	3.43
Mean	1927 — 1994	20.2	4.9	3.35

* *The boundary cost of taxation is the amount of GDP that is lost as a result of each additional dollar of taxes above the norm that maximized the gain*

In general, the taxes on corporations' profits are particularly harmful for economic growth, because they affect the investment behavior of corporations that are making a significant contribution to the country's total output.

The specificity of the negative impact of this type of taxation in Ukraine is in the fact that the domestic corporate sector, in contrast to small businesses, accounts for the greatest contribution to economic growth, and therefore the impact on GDP is much more pronounced than that in the highly developed countries where it is the small businesses that generate a GDP growth.

Taxes on individuals' income have a greater negative effect on economic growth than the taxes on consumption for the reason that they are in progressive to a large degree, as well as they tax income from savings and investments. In addition, income taxation of low-paid employees makes them abandon work and choose a social assistance instead of labor income.

Tax on personal property of individuals has the least adverse effect on GDP per capita, compared with a situation where the taxation base is the property of corporations.

Under current conditions, the highly developed countries more actively use the tools of tax regulation to stimulate new research and development, to increase investment in science-intensive production sectors. Such tax tools, along with the other measures of government support, increase labor productivity, promote the emergence of new high-tech products, reduce the cost of already existing, stimulate exports, which ultimately contributes to the economic growth.

Research and development and innovations are important drivers to support and stimulate economic growth, which is why the highly developed countries are actively using tax instruments to encourage them, applying both an indirect state support (tax breaks), and direct state funding.

Statistical data confirm the growth of general state support for business research, scientific-research and experimental-design work in such leading European Union countries as Belgium, the Netherlands, France, Austria and the United Kingdom.

Given the important role of expenditures on R&D for increasing the level of knowledge, human capital and the country's overall socio-economic development, in order to enhance competitive position on the international arena, Ukraine needs to move away from practices of fragmented approach and to use local tools of tax regulation of such expenditures, by developing the comprehensive and systemic mechanisms of their stimulation.

The above-mentioned conclusion is confirmed by a low place of Ukraine among other countries based on the statistical indicator of current and capital expenditures (public and private) on research and development as a percentage of the country's GDP.

According to data from the World Bank, countries with high revenues direct, for current and capital expenditures (public and private) on research and development, 2.5 % of GDP, on average. In Ukraine, this indicator is only 0.6 % of GDP, which is equal to such countries as Argentina, Costa Rica, Egypt, Ethiopia, and is significantly lower than the average indicator in the countries of Europe and Central Asia — 1.9 % of GDP.

That is why the tax regulation in the medium and long term, following the example of the highly-developed countries, should encourage this driver for this country's socio-economic growth.

Pay attention to the number of organizations (enterprises) that are engaged in scientific and scientific-technical activities, which include organizations

regardless of the organizational-legal forms of entities, which reported the scientific and scientific-technical activity over the year analyzed. Data from statistical observations reveal a clear negative trend in the number of organizations that carry out research and development in Ukraine. Thus, the largest number of such organizations carried out their activities in 2005, reduced to 978 in 2015. Even though the total cost of basic, applied research, scientific and technical developments, carried out by scientific organizations, as well the rendered scientific and technical services (without VAT) is constantly increasing in monetary terms, we note a dramatic decrease in the specific weight of the volume of the performed scientific and technical activities in GDP.

The above-analyzed indicators reveal once again the relevance and the need to develop and incorporate the mechanisms and tools of tax incentives for expenditures on R&D into the domestic institutional architectonics of tax regulation with the aim of strengthening the innovative component in ensuring the country's socio-economic development.

Sort of positive is the dynamics of innovation activity of domestic enterprises in terms of the number of such subjects and the total amount of expenditures on innovation. When analyzing the structure of expenditures by enterprises engaged in innovation, we note that they were mostly aimed at the acquisition of machinery, equipment, and software. Therefore, it is proposed to implement the tax regulation measures by taking into consideration the need to adjust the structure of expenditures on innovation toward increasing such a component of the innovation activity of domestic enterprises as research and development.

At present, there must be a comprehensive approach to the use of tax regulatory tools in the promotion of innovation at enterprises so that such a state financial support is linked not only to the cost of R&D, but also to achieving specific results: the introduction of new technological processes, focusing on low-waste, sustainable processes that would enhance the environmental component in the activities of the state tax regulation, using, as a tool to stimulate, the rent payments and the ecological tax.

A certain disadvantage of the national system of tax regulation of economic development is that the current Tax code of Ukraine misses the word «innovation», there are no defined direct mechanisms to implement tax stimulation of innovative activity of legal enitities. Only the Customs code of Ukraine has a reference to the Law of Ukraine «On special regime of innovation activity at technological parks» when collecting customs payments for equipment, parts and components, as well as materials, which are not produced in Ukraine and imported into the customs territory of Ukraine by technological parks, their participants and joint ventures that are engaged in projects at technological parks, in order to implement such projects of technological parks. Specifically, the accrued amount of import duty is allowed not to transfer to the budget, but to the special banking accounts of technological parks, their participants, and joint ventures.

Despite this situation, some of the provisions of preferential taxation while implementing new technologies, spending on research and development activities do exist (Table 2.21). The current tax elements for the regulation of innovation, research and development, engineering activities in Ukraine, which are represented in the Tax code of Ukraine, include:

— exemption from taxation (temporary) for enterprises that make aircraft;

— exemption from taxation on operations, including temporary;

— not inclusion of certain revenues the target charity help in the taxable income;

— not inclusion of certain revenues in the calculation of the overall monthly (annual) taxation;

— exemption on tax payment;

— not inclusion of certain objects to the taxation object;

— inclusion of certain objects of taxation to the object of taxation.

Table 2.21 Current tax tools to regulate the innovation, research and development, and engineering activity in Ukraine

Tax title	Regulating element	Conditions to implement the mechanism
1	2	3
Income tax	Exemption from taxation of profits (before January 1, 2025) of enterprises that make aircraft	Released funds are used for R&D in aircraft engineering, the creation or upgrading of the material-technical base, to increase the volume of production, to introduce new technologies
	Exemption from taxation of profits	Payment of the cost of basic research, R&D by a person who directly receives such funds from the account of the authority responsible for treasury service of budget funds.
		Free transfer of devices, equipment, materials, except excisable, to scientific institutions and scientific organizations, higher educational institutions of accreditation levels III — IV, included in the State Register of scientific organizations, which are supported by state.
		Free transfer of the property belonging to DK «Ukroboronprom» and state enterprises, which are included to its structure, if such a transfer is carried out to enterprises, institutions or organizations in order to support R&D at state enterprises, institutions and organizations
	Exemption from taxation of operations (before January 1, 2019)	Supply to the customs territory of Ukraine of the results of R & D performed for space activities
	Exemption from taxation of operations (before January 1, 2025)	Supply at the customs territory of Ukraine of results of R&D, performed for aircraft engineering industry

Continuation of Table 2.21

1	2	3
Tax on personal income	Non-inclusion to the taxed revenue	Targeted aid, which is given in any amount to the taxpayer who conducts a scientific research for the reimbursement of the cost of equipment, materials, and other expenditures
	Non-inclusion to the calculation of the over-all monthly (annual) taxed revenue	The amount of funds from the State budget of Ukraine to valid members (akademician) and corresponding members of National Academy of Sciences of Ukraine, the Ukrainian Academy of Agrarian Sciences, the Academy of medical sciences of Ukraine, the Academy of pedagogical sciences of Ukraine, the Academy of law sciences of Ukraine and the Academy of Arts of Ukraine as a monthly lifetime fee for the holding the title of a valid member and a corresponding member
Land tax	Exemption from taxation	Establishments of science, education, which are fully maintained at the expense of state or local budgets
Rent fee for specialized use of water	Non-inclusion to the taxation object	Water that is supplied to scientific and research institutions, the list of which is approved by the Cabinet of Ministers of Ukraine, to conduct scientific research in the field of rice cultivation and for the production of elite seeds of rice
Rent for special use of forest resources	Inclusion to the taxation object	The use of the useful properties of forests for conducting research

Source: compiled based on [Податковий кодекс України: Закон України від 02.12.2010 № 2755—VI (зі змінами і доповненнями): http://zakon.rada.gov.ua/laws/show/2755—17]

In order to develop the national mechanism of tax regulation of research and innovation activities, it would be advisable to introduce:

— preferential taxation which would take into consideration the costs of R&D, as well as the accelerated depreciation of capital expenditures on R&D, innovation and patent applications at the reduced taxation rate of revenues from intellectual property rights generated as a result of conducting R&D;

— the mechanism of a «patent window», which provides a preferential rate of legal entities' profit taxation when selling the patented innovative products;

— a preferential tax rate on personal income in the taxation of scholarships for doctoral students, as well as income in the form of wages for participants of the state scientific-research activities;

— tax incentives for private charitable contributions for R&D, but limiting their size and differentiated for individuals and legal entities,

via targeted direction within the framework of clearly defined activities. One of the variants of such a stimulation could be providing an individual with a possibility to assign to the tax discount the amount transferred to innovative companies, research institutions, other state higher educational institutions and scientific research institutions.

It is appropriate to ensure control over the expenditures on R&D when applying tax breaks to provide them to payers who are already engaged in the analyzed activity over a certain period of time. Evaluation of the possibility to provide incentives for taxpayers must be performed in advance in order to reduce the risks of their inappropriate use.

In order to minimize the risks of tax evasion when using the analyzed tax breaks, it is important to provide them (in case of exceeding a certain size) not at the initial stages of an innovation process, but recognizing the fact of selling a finished innovation product. The above would also strengthen the effect of tax regulation at the final stage of innovation activity, namely when selling designed products or services.

The practice of foreign countries to use tax incentives for R&D shows an active approach to using the tools of tax regulation for innovation activity (Table 2.22). Some countries apply a comprehensive approach to the tax regulation of expenditures on R&D, using as an incentive the following tax tools: R&D tax credit, increased deduction from taxation base on R&D (R&D Super deduction) and a special tax regime for the preferential taxation of results of innovation activities (Innovation or Patent Box). These countries include: Belgium, Hungary, Malta, Turkey, and the United Kingdom.

Among the main current tax incentive tools for R&D one might distinguish the following:
— volumetric tax credit for conducting R&D;
— cumulative tax credit for R&D;
— hybrid schemes that combine both a volumetric and a cumulative credit;
— tax deductions from expenditures on R&D;
— reduction of tax payments for personnel involved in conducting R&D;
— individual special tax incentives for small businesses that are engaged in R&D;
— tax breaks for new firms and startups that specialize in R&D;
— the presence of the boundary amount of tax benefits that their recipient can obtain;
— tax incentives for R&D, linked to the gross income of their developers.

The developed countries employ tax credits for scientific research and experiments (Scientific Research & Experimental Development tax credit); tax credits for innovative R&D (Innovation/Research and Experimentation tax credit); tax incentives for R&D (Research and Development tax concession). In many countries, the tax credit mechanism implies taking into consideration the overall amount of expenditures on R&D (the full-volume tax credit — R&D Volume-based Tax Credit). In some countries, this mechanism of stimulation

defines the size of the tax credit, taking into consideration an increase in the expenditures on R&D over a certain tax period (R&D Tax Incremental Credit).

Table 2.22 Basic tools of tax stimulation of R&D in foreign countries

Country name	R&D Tax credit	Increased deduction from the taxation base on R&D («R&D Super deduction»)	Special preferential tax regime for results of in-novation activity (Patent or Innovation Box)
Australia	+		
Austria	+		
Belgium	+	+	+
Brazil		+	
Canada	+		
China		+	
Czech Republic		+	
Denmark	+		
France	+		+
Hungary	+	+	+
India		+	
Ireland	+		+
Israel		+	+
Italy	+		+
Japan	+		
Kazakhstan		+	
Korea	+		+
Latvia		+	
Lithuania		+	
Luxembourg			+
Malta	+	+	+
The Netherlands	+		+
Poland		+	
Portugal	+		+
Romania		+	
Russia		+	
Singapore		+	
Slovak Republic		+	New legislation is under discussion
South-African Republic		+	
Spain	+		+
Switzerland			+
Turkey	+	+	+
United Kingdom	+	+	+
USA	+		

Such a tax support may increase the expenditures of taxpayers for R&D, to stimulate private investments in innovative research and development. A response to the tax benefits may be different and determined by the size of the payers, operations in high- or low-technology sectors of economy. The effectiveness of the tax regulation of expenditures on R&D for small businesses would be slightly higher, because for them the number of alternative sources of support (for example, banking loans) is much lower than that for big business. The size of private spending on R&D relative to tax benefits may be greater in the presence of a long-term state financial support for such taxpayers.

At present, there is a substantial body of research whose authors give an assessment to the effectiveness of impact of taxation on carrying out R&D (Table 2.23).

Table 2.23 Scientific studies proving the effectiveness of tax credit to conduct R&D

Author and scientific publication	Examined sample	Ratio of an increment in expenditures on R&D to the value of tax breaks	Evaluation of price elasticity
1	2	3	3
Kenneth J. Klassen, Jeffrey A. Pittman, and Margaret P. Reed, «A Cross-National Comparison of R&D Expenditure Decisions: Tax Incentives and Financial Constraints», Contemporary Accounting Research 21 (3) (2004): 639—680	110 firms, 1991—1997	2.96	Not given
Theofanis Mamuneas and M. Ishaq Nadiri. «Public R&D Policies and Cost Behavior of the U.S. Manufacturing Industries», Journal of Public Economics 63 (1) (1996): 57—81	15 sectors, 1981—1988	0.95	0.95—1.0
Philip G. Berger, «Explicit and Implicit Effects of the R&D Tax Credit», Journal of Accounting Research 31 (2) (1993): 131—171	263 firms, 1982—1985	1.74	1.0—1.5
Bronwyn H. Hall, «R&D Tax Policy During the Eighties: Success or Failure?», Tax Policy and the Economy 7 (1993): 1—36	950 firms, 1981—1991	2.0	1.0—1.5 (short-term) and 2.0 (long-term)
Wouldiam W. McCutchen, «Estimating the Impact of the R&D Tax Credit on Strategic Groups in the Pharmaceutical Industry», Research Policy 22 (4) (1993): 337—351	20 large companies, 1982—1985	0.29—0.35	0.25—10.0

Continuation of Table 2.23

1	2	3	3
James R. Hines, «On the Sensitivity of R&D to Delicate Tax Changes: The Behavior of U.S. Multinationals in the 1980s». In A. Giovannini, R.G. Hubbard, and J. Slemrod, eds., Studies in International Taxation (Chicago, IL: University of Chicago Press, 1993)	116 transnational corporations, 1984 — 1989	1.3 — 2.0	1.2 — 1.6
Martin N. Baily and Robert Z. Lawrence, «Tax Incentives for R&D: What Do the Data Tell Us?», Study commissioned by the Council on Research and Technology, Washington, D.C, 1992	12 sectors, 1981 — 1989	1.3	0.75
Janet W. Tillinger, «An Analysis of the Effectiveness of the Research and Experimentation Tax Credit in a q Model of Valuation», Journal of the American Taxation Association 13 (2) (1991): 1 — 29	506 firms, 1980 — 1985	0.19 (in the rage of 0.08 — 0.42)	Not given
Government Accountability Office, «Tax Policy and Administration: The Research Tax Credit Has Stimulated Some Additional Research Spending», GAO/GGD-89-114, Report to Congressional Requesters, 1989	800 large firms, 1981 — 1985	0.15 — 0.36	From −0.2 to −0.5
Edwin Mansfield, «The R&D Tax Credit and Other Technology Policy Issues» American Economic Review 76 (2) (1986): 190 — 194	110 firms, 1981 — 1983	0.3 — 0.6	0.35 (short-term)
Robert Eisner, Steven H. Albert, and Martin A. Sullivan, «The New Incremental Tax Credit for R&D: Incentive or Disincentive?», National Tax Journal 37 (2) (1986): 171 — 183	592 firms, 1980 — 1982	Results are not significant	Not significant

Source: compiled and calculated based on Gauging the Economic and Fiscal Effectiveness of the Credit. Center of American Progress. Retrieved from: http:// usa.cciee.org.cn/WebSite/usa/Upload/File/201207/20120717203427826500.pdf

Some authors give an estimate of the price elasticity of additional expenditures for carrying out R&D as the ratio of change in the expenditures on R&D (in %) at a given change in the financial expenditures of the state to provide the tax credit (in %). The results of these studies indicate that the tax credit is an effective financial instrument for stimulating an increment of private expenditures on conducting R&D if the indicator for price elasticity is equal to, or greater than, 1.

Recommendations for improving the efficiency of state financial regulation of the development of investment-innovative activities using the

leverage of tax regulation on the research and innovation activities include the need to incorporate the following into the domestic taxation mechanism:

— an investment tax credit on R&D (R&D Tax credit), which is given at the initial stage of the innovation process and is calculated based on the amount of investment in the creation of qualified tangible and intangible assets, reducing the amount of actually accrued tax, which would stimulate capital investments in science-intensive sectors of the economy;

— an investment (increased) deduction of expenditures on R&D («R&D Super deduction»), which is calculated as a percentage from the sum of the actual or estimated costs for the creation, acquisition, or reconstruction of certain qualified types of tangible and intangible assets. By adjusting the amount of the deduction and thereby reducing the base of taxation on profits tax, it is possible to stimulate capital investments in science-intensive technology and developments at the initial stage of the investment process: investments in the advances economically safe and energy-saving production technologies;

— a special tax regime of preferential taxation of results of innovation activities «Innovation Box», which would provide a possibility for domestic companies to tax the revenues from intellectual property based on a lowered rate on profits in the case if such revenues exceed the costs of the development of intellectual property;

— a special tax regime «Patent Box» in relation to revenues from the use of intellectual property or their sale, which would stimulate capital investments in science-intensive innovation and technology;

— the accelerated depreciation that applies to equipment and materials that are used both for the purposes of scientific and technical research and in the creation of innovative technologies and products.

The state finance policy should provide support and development of high technologies, by giving tax incentives to highly technological industries, by increasing the intensity of expenditures from private and public sectors on research and experimental development (R&D). Based on the classification of the Organization for economic cooperation and development (OECD), such sectors include: a branch of information technology, aerospace, pharmaceuticals, electronics and telecommunications equipment, production of medical, precision and optical equipment.

Medium- and highly technological industries produce electrical machinery and equipment, motor vehicles, trailers and semi-trailers, chemical products (except for pharmaceutical preparations), rail and transport equipment, machinery, and equipment. Medium- and low technological industries include construction and repair of ships and boats, manufacture of rubber and plastics, coke, purified petroleum products and nuclear fuel, other non-metallic mineral products, basic metals, and metallic products. Low technological industries produce and process wood, cellulose, paper, paper products, they involve printing, including publishing,

production of food, beverages and tobacco, textiles, textile products, leather and footwear.

Under domestic socio-economic conditions, as noted by Academician A. A. Mazaraki, light industry (production of leather, furs, textiles, products from them, and shoes), despite its low manufacturability, is also important for the country's economy because of the considerable capacity of the domestic market of clothes and shoes, higher indicators for productivity and efficiency compared to processing industry in general, lower materials consumption.

By analyzing the commodity structure of domestic export, we note that a significant proportion accounts for:

— low technological products from the following sectors: grain crops (15 % of the total volume), fats and oils of animal or vegetable origin (10.6 %), seeds and fruits of oil plants (4.8 %);

— medium- and low technological products: ferrous metals (20.0 %), ores, slag and ash (6.3 %).

Ukraine is one of the largest exporters of low-, medium- and low technological products: sunflower oil (1st place in the world), semi-finished iron goods (2nd place), corn (3rd place), iron ore (5th place), wheat and flour (6th place). But the proportion of highly technological products in total exports is insignificant: pharmaceutical products (0.4 %), aircraft (0.1 %), optical instruments and photographic equipment (0.4 %). Slightly bigger is the share of export of the medium- and high technological products: diverse chemical products (0.3 %), railroad locomotives (0.5 %), means of transport, except railroad (0.3 %), nuclear reactors, boilers, machinery (4.0 %), electrical machinery (5.9 %). Negative situation is also characteristic of imports, where there is a rather high proportion of medium- and low technological products (Table 2.24).

Measures of domestic tax regulation must be implemented taking into consideration the need to reduce the negative contribution of net exports to economic growth by reducing the import-dependence of strategic sectors of the economy. This could be achieved through tax incentives for innovation and development of new technologies in the process of modernization of such sectors.

Ukraine is characterized by the average percentage of volume of general production in GDP — technological mode III (electrical, heavy engineering, manufacturing and rolling of steel, electricity transmission lines, inorganic chemistry, etc.), a large proportion of technological mode IV (car manufacturing, non-ferrous metals, synthetic materials, production of goods of long-term use) and a a small fraction of technological mode V (electron, measuring, optical-fiber equipment, software, telecommunications, robotics, information services). For comparison, in the United States and China the greatest share of volume of general production in GDP accounts for technological mode V and the average share accounts for technological mode VI (nanoenergy, molecular, cellular, nanotechnologies, nanobiotechnologies, nanobionics, microelectron technologies, nanomaterials, etc.).

Table 2.24 The largest share of goods in the commodity structure of Ukraine's foreign trade in 2017, taking into consideration the international classification of the development of high technologies in the sectors of economy in the OECD member states1

Code and product title	Export		Import	
	USD thousand	% to the total volume	USD thousand	% to the total volume
Highly technological products				
30 pharmaceutical products	192,111.3	0.4	1,767,455.8	3.6
88 aircraft	29,029.1	0.1	28,705.0	0.1
90 optical and photographic instruments and devices	151,566.7	0.4	782,952.3	1.6
Medium- and highly technological products				
38 various chemical products	108,280.5	0.3	1,255,031.9	2.5
86 railroad locomotives	219,663.6	0.5	168,261.7	0.3
87 land transport means, except for rail-road	132,687.2	0.3	3,965,689.6	8.0
84 nuclear reactors, boilers, machinery	1,728,053.5	4.0	5,776,818.0	11.7
85 electrical machines	2,548,778.6	5.9	4,125,804.9	8.3
Medium- and low technological products				
26 ores, slag, ash	2,735,727.6	6.3	554,589.9	1.1
27 mineral fuel; oil and refinery products	790,227.9	1.8	11,699,572.3	23.6
31 fertilizers	129,233.8	0.3	1,126,827.3	2.3
39 plastics, polymeric materials	465,973.1	1.1	2,460,339.3	5.0
40 resin, rubber	95,162.0	0.2	785,461.1	1.6
89 vessels	244,506.0	0.6	19,430.8	0.0
72 black metals	8,666,248.4	20.0	1,134,649.1	2.3
73 goods from black metals	896,540.2	2.1	807,163.8	1.6
Low technological products				
02 meat and meat-based products	531,240.1	1.2	112,024.7	0.2
04 milk and dairy products, eggs, nat-ural honey	494,207.3	1.1	84,884.5	0.2
10 grain crops	6,501,134.3	15.0	176,756.1	0.4
12 seeds and fruits of oil plants	2,060,121.4	4.8	358,269.9	0.7
15 fats and oils of animal or plant origin	4,605,666.2	10.6	266,616.4	0.5
17 sugar and sugar-based confectionary	417,349.4	1.0	47,591.0	0.1
23 residues and waste of food production	1,051,170.0	2.4	167,720.3	0.3
44 wood and goods from wood	1,204,308.0	2.8	241,492.9	0.5
48 paper and cardboard	450,888.6	1.0	813,834.3	1.6
62 clothes and garments, textile	378,721.2	0.9	187,919.6	0.4

[1] *excluding the temporarily occupied territory of the Autonomous Republic of Crimea, Sevastopol, and part of the temporarily occupied territories in the Donetsk and Lu-hansk oblasts.*

Source: *compiled and calculated based on data from [official Web site of the state service statistics: http://www.ukrstat.gov.ua]*

Only in 2017, the 1,000 largest corporations in the world increased their investments in research and development (R&D) by 3.2 %, and the total expenditures reached USD 702 billion. The leading country whose firms invest in new developments is the United States of America.

In 2017, Ukraine's GDP grew by 2.5 % (after 2.4 % in 2016), which is a weak recovery, since it was preceded by the cumulative (16.4 %) reduction in 2014 — 2015. A significant duration of the phase and the depth of drop in domestic GDP and industrial production predetermines the need for transition from the concept of catching up development to the concept of advance economic development that would enable this country to abandon the status of the «raw appendage», a market of «cheap» labor force and a market for selling «cheap» products. Thus, it is necessary to introduce the qualitatively new tax incentives for the institutional motivational mechanism to stimulate economic development based on the innovative-investment approach, which would comply with the basic principles and guidelines of the advanced economic development.

It is necessary to enhance and expand financial regulation of the system of innovative development as part of the advanced strategy for economic development, based on the qualitatively new tax instruments and mechanisms taking into consideration a synergistic approach through the reinforcement and coordination of interaction between components of the system of interconnected totality «sectors of economy-budget-the country's socio-economic development». The real sector of economy forms the largest size and share in the total structure of tax revenues, thereby affecting the budgetary policy of the state, defining fiscal opportunities for ensuring budget financing of programs for the country's social and economic development.

According to the Office of large taxpayers at the State fiscal service of Ukraine, the distribution of tax revenues in the total structure of the economy's sectors in 2017 was as follows: processing industry — 28.6 % (2016, 28.7 %); extractive industry — 24.8 % (2016, 20.5 %), electricity generation — 10.8 % (2016, 9.9 %), wholesale and retail trade — 10.5 % (2016, 12.0 %), transport industry — 9.0 % (2016, 9.8 %), other industries — 16.3 % (2016, 19.1 %).

The choice of the model of financial policy and the tools for its implementation should be carried out with respect to the cycles in the country's socio-economic development. Under current conditions, it is necessary to actively use the tools of tax regulation for the development of the real sector of the economy, as part of financial mechanisms and instruments aimed to facilitate the transition from the policy of stabilization to the policy of economic growth by expanding the system of tax stimulation for the development of sectors on an innovation-investment basis.

In order to create new jobs, promote research and innovation, effective functioning and improvement of the mechanism to increase competitiveness of domestic industries in the world markets under market conditions, it is necessary to introduce a system of tax levers: tax credits for scientific

research and experimental development (R&D Tax credit) that would im-
prove institutional conditions for the state financial support for the deve-
lopment of these industries in the medium and long term.

In the domestic import, a large percentage of high-, medium-, and
highly technological production accounts for industries with a significant
added value: pharmaceutical products — 3.6 %, optical and photographic
appliances and devices — 1.6 %, diverse chemical products — 2.5 %, means
of transportation, except railroad — 8.0 %, nuclear reactors, boilers, machi-
nery — 11.7 %, electrical machines — 8.3 %.

The specified situation, especially in the sectors that produce a variety
of chemical products, means of transport, except railroad, nuclear reactors,
boilers, machinery, electrical machines, results in the negative contribution
of net exports to the country's economic growth. In 2017 alone, such products
accounted for USD 15,123,344.4 thousand. That is why it is a relevant task
to implement a system of tax levers — tax credits for scientific research and
experimental development (R&D Tax credit) for taxpayers from industries
engaged in: development and release of products related to the fifth and
sixth technological modes; design of innovative technological equipment and
innovative technologies in the reproduction of cells; achievement of comp-
liance with the standards of emissions in production; improvement of produc-
tion processes through their automation; development and implementation
of new safety systems in production; improving product quality, crop yields,
economic and operational efficiency of production; optimization of opera-
tional processes; implementation of new production processes and standards.

It is necessary to improve tax incentives for the pharmaceutical in-
dustry, specifically: production of medicines and medical products; de-
velopment of new preparations and improving the terms of their storage,
medical equipment and instruments of the new generation; introduction of
automation and robotics in the manufacturing process; conducting clinical
trials of new preparations, including to comply with foreign regulatory re-
quirements; creation of new biotechnologies.

This country needs to develop export potential of strategically impor-
tant aviation and space-rocket industries (export revenues in 2017 accoun-
ted for only USD 29029.1). The products of such industries is the «business
card» of a country in the field of international cooperation and trade, and
therefore it is necessary to introduce tax credits for R&D for payers of tax
and fees that develop new, or improve existing, and implement innovative:
models of space vehicles or aircraft, techniques to increase power and
reduce weight; technologies and methods of production; methods for fas-
tening elements of structures and the tools for gluing them; alloys of struc-
tural materials; methods for molding, machining, and welding metals; tech-
niques for machining and improvement of surface of aircraft; procedures for
heat treatment; ways to improve productivity and reduce production cycles;
methods of testing and verification that contribute to the improvement of

the quality of products; techniques to increase power and reduce weight; large-scale industrial processes; automated and robotized production processes; alloys and composite materials.

Considering that in 2017 the largest amount and the share of imports, UDS 11699572.3 thousand and 23.6 % of the total volume, respectively, accounted for mineral fuel, oil and products of its distillation, it is important to regulate by taxes resource saving that would make it possible to reduce the energy component of the high level of import dependency of the national GDP.

In the framework of the development of the system of national security of Ukraine under conditions of the external hybrid aggression, the issue of energy saving and energy efficiency is a key to ensuring national economic interests. Its solution would affect the further economic and social development of the country, which requires enhancing the institutional potential of tax regulation in the direction of stimulating energy-efficiency and energy-saving measures: design and development of energy-saving forms of buildings, buildings' facades, highly energy-efficient lighting, air conditioning systems, alternative heating and cooling systems; creation of materials that improve conductivity of electricity; construction of energy saving building structures; certification of LEED «Leadership in Energy and Environmental Design»; programming of electronic energy-saving control systems.

Tax regulation of the activity of enterprises in construction industry should stimulate construction, renovation, and technical re-equipment of buildings in order to reduce the volume of consumption of energy resources and to engage advanced energy-efficient technologies.

The traditionally high export orientation and significant amounts of export revenues from products of metallurgical (ferrous metals — USD 8,666,248.4 thousand, articles made of ferrous metals — USD 896,540.2 thousand) and agricultural sectors (grain crops — USD 6,501,134.3, fats and oils of animal or plant origin — USD 4,605,666.2 thousand, seeds and fruits of oil plants — USD 2,060,121.4 thousand) make it possible to maintain a stable situation in the interbank currency market.

Tax regulation should create financial conditions to counteract import expansion and to stimulate domestic export-oriented manufacturers to meet the demand for goods not only in the foreign, but in the domestic market. The domestic metallurgical production has a possibility to substitute import: import of ferrous metals in 2017 totaled USD 1,134,649.1 thousand (2.3 % of the total volume), and products made of ferrous metals — USD 807,163.8 thousand (1.6 % of the total volume).

The innovative expenditures that may be subject to the tax regulation via tax credits in the field of metallurgy include the following: development of new, and improvement of existing, processes, technologies for processing, techniques to process materials in industrial waste; improvement of durability of materials; development of new composite materials;

new testing systems for products; improvement of methods for welding metals; development of new equipment for the production of goods; improvement of stamping processes; improving the reliability of materials; automation of production processes; improvement of production technology; reduction of metals contamination.

A pressing issue is to improve the efficiency of using the natural resources of the country, as part of the competitive advantages in foreign markets, by enhancing the tax regulation mechanisms for the development of agri-industrial complex. Providing tax credits should help increase the volume of production and sales of agricultural products with a high added value, enhance the competitiveness of agricultural enterprises in world commodity markets, the country's food and financial security. Such tools of tax regulation could be used by agricultural producers that perform activities related to: increasing the digestibility of feedstock; the development and implementation of innovative technologies to clean agricultural products from contaminants; reduction of industrial waste; the introduction of systems of sewage water treatment; improving the systems to store products; increasing the efficiency of pre-treatment of produce; improvement of the processes to segregate infected and high-quality products; increasing the nutritional value of produce; the development of an innovative product that is new to the internal and external markets, new biological preservatives that increase the terms of storage of products, the methods of selection, products with extended shelf life; introduction to the production processes of the product quality and safety management systems in accordance with the international standards ISO 22000:2005 «Food safety management systems. Requirements for any organizations within the food chain», ISO 22006:2009 «Quality Management Systems — Guidance on the application of ISO 9001:2008 in plant agriculture», as well as those industry and regional standards that acquired international status: GAPs, GlobalGAP, BRC, IFS; the introduction of new methods to increase crop yields and cultivation technologies; the development and practical implementation of new techniques to protect crops from diseases; improvement of the technique for harvesting crops.

Tax regulation should be directed to develop tourism and resorts by stimulating private investment. Such stimulation could be performed by introducing tax holidays (applying a zero tax rate) for enterprises' profits taxpayers that invest, expand, upgrade this sector. The practical experience of India demonstrated that the five-year tax break gave the incentive to powerful international tourist investors to build in that country the network of hotels, resorts, and conference centers (Hilton, Accor, Marriott, Berggruen, Cabana, Premier Travel Inn, and InterContinental). In addition, such companies have already announced plans to invest in the tourism industry of that country in the future. Some states of India provide during construction of new entertainment parks and cable roads a 100 % five-year tax exemption

for investors. Other tools for tax stimulation of this sector could be the tax credits for a certain period for taxpayers that invest resources in priority tourist activities, areas or objects. It is necessary to develop tax regulation for subjects of tourist and resort industry, through preferential taxation of their profits subject to reinvestment of certain part of them into this business activity, as well as the establishment of a dependence of low tax rates for enterprises' profits on the size of the investment.

Current studies confirm that Brazil, owing to the programs of tax credits in the tourism industry over 2002−2009, created 34 % more jobs: in absolute terms − 45,905. In 2009, one work place out of four in the tourism industry was the result of such a fiscal policy. What is important is that the tax credits when creating new jobs made it possible to increase employment in the tourism sector in the least developed regions of the country without destroying jobs in neighboring municipalities, which could not take advantage of such tax incentives.

In order to create favorable conditions for the development of tourism and resorts based on compliance with the international quality standards, it is necessary to stimulate the implementation of main international standards ISO 14785, ISO 18065:2015, ISO 21101:2014, and 2015:13009 ISO, EN 15565:2008, which would make it possible to integrate it into the international tourist market based on the improved competitiveness, and thus ensure the socio-economic development of both regions and the state.

The key objectives for government in the field of security and defense is the financial support and maintaining the country's defensiveness under conditions of the external hybrid aggression, requiring the need to introduce the examined instruments of tax regulation for enterprises engaged in the development of: new, or improving existing, military products; production processes for making weapons, improving its productivity and compliance with regulatory requirements; innovative and cost-effective operational processes; new materials that improve function, safety, quality of weapons, reduce its weight and improve strength. The above would help strengthen the country's defensive potential and the possibilities for its protection.

Under current conditions, it is necessary to provide for the formation of an institutional environment for the implementation of the ideas of sustainable development based on a comprehensive strategy of state financial incentives to enterprises from all sectors of the economy that process, bury, detect, and dispose of waste. Tax regulation in this direction should include tax breaks that would make it possible for Ukraine to meet current trends in the development of leading countries on the principles of sustainable development. Such benefits should be given: for the development of new processes of irrigation and sprinkler systems for composting the waste, alternative methods for waste incineration, methods to deal with pathogenic microorganisms, methods for extraction and purification of waste landfills from gas pollution, methods for recycling, disposal or processing of used

chemicals and by-products; for the design of new equipment for waste treatment; recovery of used fuel; for improving the existing systems of control over pollution, dumps and attempts to prolong their use; for introducing new, and improving existing, technologies to restore energy, systems approach in the environmental management of production, which is based on the requirements of international standards from the series ISO 14000; for research and development of new methods for wastewater treatment; for the design of control systems over pollution; for improving the systems of detection and control of air quality; for creating new processes to remove toxic waste; for the restoration of waste landfills or their renovation.

The above-specified tax regulation in all sectors of the economy, including housing and utilities complex, would make it possible to ensure efficient and safe waste management, to reduce its level of danger, to stimulate the implementation of modern innovative technologies for its disposal in accordance with European practice.

In order to form and implement the concept of advances economic development through enhancing the state's role in providing the institutional conditions for the implementation of the strategic course of the structural modernization of industries, it is required to ensure: the creation of institutional tax environment and prerequisites for development and wide implementation of innovations in all sectors of the economy, the improvement of state's policy of tax regulation in these areas, the introduction of qualitatively new tax instruments for the institutional motivational mechanism to stimulate economic development based on an innovative-investment approach taking into consideration the country's features of socio-economic development, which corresponds to the objectives of the Agreement on the association between Ukraine, as one party, and the European Union, the European Atomic Energy Community and their member states, as another party.

Such mechanism and the tools of tax regulation should be directed towards: stimulating and supporting investment-innovative changes in the identified promising and strategically important sectors of the country's economy; development of new, higher technological modes V and VI; scientific and technological upgrading of enterprises in traditional industries representing technological modes IV and III; production and export of highly technological products with a high added value, which brings along significant export revenues; development of industries based on the principles of sustainable development; financial support and maintaining the development of the country's military capabilities under conditions of the external hybrid aggression.

In the near future, the priority directions in the development of tax regulation must include:

— construction of efficient mechanisms to tax operations in the digital economy;

— improvement of rules for controlled foreign companies;

— further improvement of constraints in the dilution of the taxation base;

— extension of mandatory and clear rules for disclosure of information about taxpayers and the objects of taxation;

— improving the effectiveness of mechanisms to resolving tax disputes;

— improvement of the mechanisms to change bilateral tax agreements.

Human capital plays a special role in the model of endogenous economic growth. It makes a key contribution to the research sector, which is a generator of new products or technologies that underlie technical progress. Countries with initial or accumulated reserves of human capital have better opportunities to introduce new products or manufacturing technologies that are the factors for accelerating the economic growth.

A key factor in determining the rate of economic growth in the long term is the efficiency of labor, as a reflection of the ratio of the volume of produced tangible and intangible assets to the amount of labor used for this work. The effectiveness of labor depends on productivity, efforts, and skills. A skilled educated worker would produce more products than a less experienced employee with fewer skills, at the same amount of time used on production.

Current taxation is an important element in the system of state financial stimulation of the development of human capital. Depending on the field, which creates and develops human capital, the significance of taxation varies. When considering education, taxation plays an important role, because the taxes paid, while performing a fiscal function, are the most important source to fund the preparation of specialists for educational institutions of all levels at the expense of budget expenditures.

According to the annual report «Education at a Glance: OECD Indicators», the OECD countries on average receive a net profit in the amount of about USD 100 thousand in the form of the increased tax revenue and savings per every person who they financially support in higher education, which is almost four times the size of the government capital investment. In many foreign countries investors into human capital, namely households, have a clearly expressed preference in a possibility to obtain tax breaks compared to the corporate sector. Building a tax mechanism to stimulate the formation of human capital occurs taking into consideration the important role of households in this process, as the socio-economic formations that are the primary links in the organization of social life. This is most clear in Austria, Canada, Finland, the Netherlands, Sweden, and the United States of America. The exception is Japan, where individuals (employees and self-employed persons) pay income tax based on a progressive scale that has six rates — 5, 10, 20, 30, 40 and 50 %, which are calculated depending on the amount of earned income. Thus, for Japan, it is a more acceptable system to invest in human capital through the corporate sector.

Features of current mechanism of tax incentives for the development of human capital in education are related to: first, the mechanism of taxation

of pupils, students, post-graduate students, interns, postgraduates (their relatives of the first degree of relationship); second, the mechanism of taxation of institutions that render educational services; third, the mechanism of taxation of employers that pay for educational services to local higher and vocational educational institutions for individuals that study there.

Note that in the national taxation practice widely employs the following financial instruments that contribute to the stimulation of the development of human capital:

— a tax social privilege;

— a tax rebate;

— an exemption from taxation.

In addition, the list of expenditures that may be included to the tax rebate includes the following expenditures:

— the amount of money or the value of property paid (transferred) by a taxpayer in the form of donations or charitable contributions to non-profit organizations (educational institutions);

— the amount of money paid by a taxpayer to educational institutions to compensate for the cost of attaining secondary vocational or higher education by such a taxpayer and/or a member of his family, the first degree of relationship, who does not receive a salary.

This mechanism of the state financial support to people who study has certain disadvantages: a tax rebate could be applied solely to the income received during a year by a taxpayer in the form of wages. In this case, the total amount of the assessed tax rebate cannot exceed the amount of the total taxable income of the taxpayer acquired during the reporting year as wages. Thus, such a tax mechanism to stimulate the development of human capital does not fully provide assistance to payers with small incomes in the form of wages. Such taxpayers are not able to afford spending the earned income on attaining the paid-for education, even if a fraction of the cost of studying may be compensated in the form of return from the budget, to payers, the amount of income tax overpaid on their salaries in the past fiscal year.

Still to be resolved is a possibility to implement the law on granting a tax rebate to taxpayers on the income of individuals. Specifically, if a taxpayer does not, until the end of the tax year following the reporting, use the right to charge a tax discount after the fiscal year, he is not eligible to use this right over the following tax years.

In Ukraine, this issue is regulated in the framework of the special limitation period, in contrast to the United States, where the rules of the general limitation period are applied (limitation period is set for three years within which a person may apply to the court with the demand to protect his civil rights or interest). In that country, only after the end of a three-year period, the legislative provisions relating to the return of the overpaid taxes, ban the issuance of checks to return overpaid taxes, as well as the application of a credit, including the surplus for paid or withheld taxes.

Students from foreign countries are provided with quite a wide range of financial assistance from state, designed to stimulate to involve as many young citizens as possible in the educational process. This financial assistance includes:

— scholarships;
— special subsidies;
— state loans;
— loans from private financial institutions (commercial loans);
— loans from private financial institutions (state supported);
— help for children, depending on the status of the student, age;
— tax benefits.

In foreign countries, tax benefits are in various forms:

— lower taxes, depending on the status of a student (Greece, France, Luxembourg (for students over 18), the Netherlands (for students who study abroad and do not get a scholarship), Hungary, Slovakia);
— tax deductions (Estonia, France, Hungary, Poland) for the purchase of educational goods and services (office supplies, computer equipment, software), payment for additional services in education (Estonia, Poland — costs of transportation children to school and back);
— tax benefits related to the interests on student loans (Norway, Finland);
— reduction of income tax on individuals, not connected to the status of a pupil or a student (Belgium, Italy);
— lower taxes, related to specific criteria: income or expenses of a family (Greece).

In countries such as the Netherlands and Finland, students pay taxes on earned income, including the scholarship.

In many foreign countries, quite common is the practice of providing tax incentives (discounts) to parents and students in a certain fixed amount annually, or monthly, so they could compensate for part of the funds invested in education. For example, in Germany, parents of students receive a monthly family allowance of EUR 184 for the first two children, EUR 190 euro for the third child, EUR 215 for the fourth and each subsequent child, as well as a one-time tax benefit (EUR 3,504 per year) to students under 25.

Parents also have the right to increase the untaxed minimum of income if they or their children (students) have expenditures on education (Belgium). Usually, tax benefits for parents of students in foreign countries are available until a student achieves a certain age (Austria, Czech Republic, France, Germany, Latvia, Slovenia), and their amount depends on the number of children who study (Austria, Belgium, the Czech Republic, Estonia, Germany, Poland, Slovenia). In Switzerland, in addition to federal rules, at the level of cantons, the right and the amount of tax benefits for parents of students may vary.

The mechanism, similar to the domestic taxation of consumers of educational services, operates in Lithuania. In that country, parents of students

who pay tuition have the right to an annual return of a revenue tax if such a student attains the first education. The mechanism of calculating the revenue tax, to be paid to the budget, accounts for the return of up to 15 % from the amount paid for education.

There are countries where state financial incentives for consumers of educational services, through tax breaks for parents and family tax discounts on training, are insignificant or absent at all — Bulgaria, Croatia, Cyprus, Denmark, England, Finland, Hungary, Iceland, Montenegro, Norway, Spain, Sweden, Turkey.

In such highly developed countries as England and Norway, family discounts and tax breaks for parents do not play any important role in the system of the state financial support of students. In the financially established countries: Denmark, Finland, Sweden and a number of other foreign countries, there are no tax breaks for parents and family discounts.

The European taxation policy to stimulate the development of human capital in education aims directly a student as a person in need of support, or his family, due to some cultural differences in Europe. The Scandinavian model provides tax benefits directly to a person (student) who uses educational services and needs financial support. In other European countries, such a tax support may vary depending on general family circumstances, while tax benefits can be addressed to other members of a student's family, specifically his parents. Such a model of tax stimulation of education is typical for approximately half of the countries in Europe.

It is necessary to implement in Ukraine the system of preferential taxation of endowment funds — targeted funds intended to use for non-commercial purposes (financing the institutions of education, medicine, culture).

In the United States, donors of an endowment fund have tax benefits on profits, and their contributions are deducted from the amounts subject to taxation. In addition, that country allows the deduction from the tax of certain expenses of educators. Such employees are allowed to deduct of up to USD 250 if they purchased books, supplies, computer equipment (software and services), other equipment, and additional teaching materials used in the educational process.

In Kazakhstan, in order to expand the tools of state financial support for attaining paid education, the State educational accumulation system was introduced, the essence of which is the possibility for any citizen of Kazakhstan to open, in his name, or the name of a child, an educational savings deposit, which in future may be used to pay for education in the country or abroad. The savings deposit has an interest rate from the bank (to 10 %), as well as an additional annual calculation of the State premium (5 or 7 %). The state encourages citizens to invest in the educational savings deposit by exempting the additional income from taxation in the form of the State premium.

The United States have a Program to pay for education that gives the right to tax benefits (Plan 529). Advantages from the creation of such

a program are as follows: the account accumulates funds that are tax-free, and payments from such an account, used to cover the requirements for educational expenditures, are tax-free. As a rule, a beneficiary is required to include the amount of payments received under the Program to pay for education, which gives the right for tax benefits, except for cases where the amount of payments exceeds the amount of educational costs.

To improve and enhance the effects of tax regulation to stimulate the development of human capital in Ukraine, it is required:

— to implement a comprehensive approach in tax stimulation for the development of human capital, because high rates of income taxation may affect the employee, and this would reduce the efficiency of using human capital;

— to conduct tax stimulation of human capital at the early stages of its formation. This applies first of all to young people who study, thus prolonging the time of its active use;

— to introduce a mechanism to calculate the returned part of money paid by a taxpayer to domestic educational institutions to compensate the cost of attaining secondary vocational or higher education by such a taxpayer and/or a member of his family, first degree of relationship, who does not receive wages;

— to settle the issue on the implementation of the right to accrual a tax discount within the rules of the general, rather than special limitation period, that is, the inclusion of such a right within the following 3 tax years;

— to allow employees in education to include in a tax rebate of the limited amount of expenditures related to their professional activity, namely the purchase of books, supplies, computer equipment, other equipment, and additional teaching materials used in the educational process;

— to establish a system of benefits for individuals and legal entities that are donors to endowment funds;

— to resolve an issue on establishing accurate statistical accounting of indicators for the state fiscal support to actors in the educational process and systematic informational support about its results;

— to implement a State education accumulating system to give individuals tax benefits, by exempting additional income in the form of accrued interest and the State premium from taxation under conditions of their proper use to pay for educational services.

Chapter 3
Budget policy under economic transformations

3.1 Budget regulation in the field of expenditure part of budget

Budgetary regulation in the area of expenditures as part of the fiscal policy significantly affects the pace of the country's social development, the creation of optimal conditions for the structural adjustment of economy, the enhancement of processes of innovation development, contributes to the development of the social infrastructure, which are the prerequisites for ensuring society's cultural and spiritual development, medical services, reduction of unemployment. The degree of the state regulatory intervention, specification of fields and areas, the choice of forms and methods, are defined depending on the existing stage of the country's socio-economic development, historically formed social-economical vision of the extent to which the state intervenes in the processes of redistribution of centralized state finances. Budgetary regulation is seen as a macroeconomic controller of reproduction processes, aimed at the implementation of the country's strategic priorities of socio-economic development. Through the use of aggregate budgetary instruments of influence on the process of formation and execution of the budget, budgetary regulation of expenditures makes it possible to reach the required macroeconomic proportions and indicators of economic growth, to promote the development of legal entities and social transformation. Every society forms its own system of state regulation, which is based on many components — the type of economy; general state approaches to the development of each area of economic mechanism; historical traditions of management; the dominant theory of economic policy and practice of its application; socio-cultural values, stereotypes, approaches to the role of the state in the pursuit of social welfare.

The purpose of budgetary regulation is the proper interaction between all components of the budget system directed to effective functioning. The economic essence of budgetary regulation in the area of expenditures is revealed through a set of interacting economic, legal, institutional components, associated with forecasting and macroeconomic planning, determining

the priorities and main directions of fiscal policy, formation and implementation of the budget, conducting measures of state financial control at all stages of the budgetary process.

The methods of budgetary regulation in the area of expenditures must include the distribution of expenditures among budgets, which are included in the budget system; balancing the budgets of all levels due to irretrievable provision of financial resources in the form of subventions, grants, subsidies, transfers; reducing budget expenditures through the sequestration of the budget if required. By redistributing funds within the budget system in order to balance all kinds of budgets, providing funds from national sources that are assigned to budgets of the higher levels to budgets at lower levels with the aim of balancing them at the level required for the implementation of respective authority, through the implementation of plans for economic and social development at a particular territory, the state thus ensures budgetary regulation in the field of expenditures.

The mechanism of budgetary regulation is the totality of economic methods, techniques, standards, and legal norms, which aim at the implementation of the principles of the budgetary order in the country, their interrelation and interaction. This is achieved by assigning a certain order in the movement of financial flows through the levels of the state's budget system: the direction of these flows, the proportions of their allocation at the levels of the budget system, the purpose and organization of economic relations that relate to it, which is the basis of the mechanism of the budgetary regulation. This mechanism implements the execution by regional authorities and bodies of local self-government of their representative and executive authority in compliance with the requirements of the formal financial independence in their policies on the higher levels. Effectiveness of state regulation in the sphere of expenditures depends on a series of factors, specifically: the relative size of expenditure volume, their share in the gross domestic product; the structure of expenditures; efficient use of funds.

Thus, the budget regulation in the field of expenditures is an important component of the financial policy, which significantly affects the country's socio-economic development and its administrative-territorial units, creating the appropriate conditions for the effective structural, innovative restructuring of the economy, development of human capital, the development and implementation of science-intensive, competitive technologies. The institutional approach implies consideration of budget regulation in the field of expenditures as a dynamic system that is constantly being improved and adapted to the main tasks of socio-economic development of society.

Budgetary regulation, budget planning, budget process organization, budget control, are part of the budgetary policy. It is important to understand the essence of a budgetary policy in the field of expenditures and the content of its mechanisms of formation in order to solve the tasks that the state faces in the public sector. The budgetary policy, as stated in Article 10

of the Commercial code of Ukraine, being part of the main directions of economic policy that are determined by the state, is aimed at optimizing and streamlining the formation of revenues and using public financial resources, at improving the efficiency of public investment in the economy, at coordinating national and local interests in the field of inter-budgetary relations, management of the public debt and ensuring social justice during redistribution of the national income. According to the organizational-management approach, a budget policy is regarded as a theoretically-substantiated system of measures to plan, regulate, and control authorities at all levels of the budgetary system in the field of financial relations in the process of creating and using the centralized funds of monetary means in a state. A budgetary policy is formed in the course of a budget process, it implies defining goals and objectives in the area of finance, development of the mechanism for mobilizing monetary funds to the budget, choosing the areas of use of monetary means, management of finances in the budget sphere, organization, by applying financial-budgetary instruments, of regulation over economic and social processes. Consequently, the budget policy as one of the main instruments for implementing the country's economic policy largely determines the place and role of the state in the regulation of economic processes and ensuring macroeconomic growth.

Important tasks at the present stage of socio-economic development of countries with the developed and transitional economies are to improve the quality, standard of living, to increase the welfare of people, which must be influenced by positive structural changes in economy, enhancing its competitiveness as the basis for the balanced growth of standards and indicators of economic development. The basis for a sustainable long-term economic growth is the measures of government regulation that are implemented by applying appropriate economic levers. At present, budget regulation in the field of country's expenditures is formed under conditions of the socio-economic policy, which proceeds from the need for equal participation of the state in the world economic and financial relations, improvement of the quality of state social services, which requires the implementation of a strategy of the accelerated economic growth at the new technological level.

A series of problems that adversely affect the state of public finances, the state budget, which pose the risks for the state to fail to fulfill its social obligations, and slow down economic development include: a considerable level of redistribution of the gross domestic product via the budget and off-budget funds, which leads to the increased fiscal burden on businesses, the high deficit of the public finance sector. Among the reasons are the ineffective and non-flexible budget expenditures; chronic overstatement and a rapid growth of commitments regarding budgetary resources, which leads to a continuous adjustment of the budget; limiting the budgeting to a one-year planning horizon; focus of the audit of public finance on the financial aspects; the non-transparency of state finances. It is a pressing issue to

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optimize the system of management of public finances, to improve the system of medium-term budget planning, to improve the efficiency and flexibility of expenditures in general, and to improveg the efficiency of capital expenditures in particular.

Directions for enhancing the efficiency of public spending are focused on the following: to improve the planning and funding of capital expenditures by applying, at the level of the main allocators of budget funds, medium-term investment plans for the projects that passed a procedure of evaluation, within the boundary sums of medium-term budget; to improve the methodology and legislative provisions for the evaluation of investment projects, taking into consideration the potential benefits and losses; to integrate the process of formation of investment projects into the overall budgeting process and to clearly divide their respective powers at all stages of projects. Enhancing the transparency of public finance should be reached, in particular, owing to the information which is submitted when adopting a budget and when reporting on the implementation of the budget; to set the standards for the monthly publication of information on the status of implementation of the budget, including the use of the Internet. In order to improve management of public finances, it is necessary to improve the methodology of medium-term planning; to comprehensively use a program-target method for planning budget expenditures to budgets of all levels; to improve the system of monitoring and evaluation of the effectiveness of budget programs; to harmonize the standards of internal audit with the standards of the European Union.

Improving the effectiveness of budget expenditures is linked, in particular, to carrying out the reforms of social sectors: a transition to targeted social assistance, stabilization of solidary pension system, a change in the principles and mechanisms to finance the public sector of health and education. The corresponding reform of management system in the field of expenditures should be conducted in three stages; according to the results of reform, it is expected to use in the budgetary process for budgets at all levels of the medium-term and program-target method to form budget expenditures; optimization of the number of public and targeted budget programs; implementation of internal audit, harmonized with the EU standards. Among the expected results are the implementation of a comprehensive integrated system to manage public finances, including budgets of all levels, off-budget funds, resources of state enterprises.

The need to improve the regulating role of budget expenditures, to enhance the effectiveness of planning and using budget funds as effective tools for the country's socio-economic development and one of the main tasks for fiscal policy is specified in the Main directions of the fiscal policy of recent years, both in countries with the developed and transitional economies.

With regard to ensuring the optimal parameters and conditions to use budget funds, it is an important task to substantiate measures to improve

the management system of budget funds and formation of expenditures at the level of the main allocators of budget funds, in particular, conducting the inventory of priority state target programs in respective areas in order to concentrate budget finances for the implementation of priority measures; to organize departmental structure of the main allocators of budget funds, to optimize the number and structure of budget programs through the gradual concentration of expenditures assigned to allocators that are leading in the field; to continue the transition to the allocation of funds based on the principle to pay for services rendered, work performed, to reject the principles to maintain budgetary institutions.

In order to implement targeted investment projects, it is important to promote the growth of engaged funds of international financial organizations. To implement infrastructure projects based on public-private partnerships and concessions, it is needed to contribute to the creation of appropriate conditions. An important task is to strengthen state control over the priority direction of state investment resources to implement the social and infrastructure projects in regions and to prevent the inefficient use of budget funds.

The areas to ensure the reached level of state social standards include: indexing of monetary income of people; determining the level to provide for a living minimum, taking into consideration financial possibilities of the state budget and actual growth in the gross domestic product; coordination between an increase in the amount of minimum wage and the official salary for the employee of the first tariff on a Unified tariff scheme according to the inflation rate; enhancing the targeting of providing benefits, housing subsidies; providing benefits, compensation, public assistance only to low-income groups; development of the state system of professional orientation of people according to the priorities of socio-economic policy. It is expedient to develop and implement state social standards of rendering guaranteed state services in the socio-cultural field, mechanisms for an integrated approach to determining the need for social services when effecting social payments based on a single application.

In order to ensure the positive dynamics of economic growth in countries with the transitional economies, it is appropriate to take effective measures for the transition to a new economic model of functioning of sectors in the budgetary field. To reduce the burden on the general fund of the state budget, it is necessary to expand the list of paid services that could be rendered by scientific institutions, education, culture, sports, health care establishments, social protection of people; to implement the optimization of the network of budgetary institutions, to develop and approve staff norms and common staff structure for budgetary institutions. In the educational field: to improve the mechanism of the formation of state order on personnel training by educational institutions of different levels of accreditation in accordance with the needs of the economy and labor market; to approve the methodology for calculating expenditures on training specialist,

scientific and pedagogical personnel per capita; to introduce legislative changes concerning the provision of educational institutions with the right to adjust the size of the fee for studying, additional educational services; to improve the system of payment of scholarships. In the scientific field, it is important to gradually transfer to financing the scientific and technical projects taking into consideration government priorities and based on results of open contests. It is necessary to reform the field of culture, in particular providing state support only to specific projects of national importance. In the medical field, to establish the comprehensive list of state-guaranteed free medical services and paid services, it is necessary to define at the legislative level the concepts of «medical aid» and «medical service»; to organize a system of preferential provision of people with medical services; to develop and approve of standards of medical care. An important task is to implement a series of measures to optimize the formation of budget expenditures for performing such functions of the state as defense, public order, security, and judicial authority. For housing and communal services: to provide budget support on a repayable basis in order to stimulate the implementation of energy-saving technologies. It is necessary to transfer energy-generating companies TPP to sign direct agreements with coal-mining enterprises and the definition of the new order of government support for partial coverage of costs of coal production; to finance priority projects for renovation and modernization of TPP and heating plants; state support of investment projects on the renewable types of fuel; to draft bills to expand the sources of filling the special budget fund, which is necessary for financing the construction, renovation, repair, maintaining public roads.

In order to create conditions for overcoming the consequences of the financial crisis, to transfer to the investment and innovation model of economic development, to increase the level of employment of people, to increase the size of wage remuneration, it is appropriate to form a draft of the State budget based on realistic macro-indicators of the country's economic and social development considering the set objectives, such as: to stimulate a sustainable economic and social development; to render public services taking into consideration actual financial possibilities of the state budget; to gradually raise social standards; to concentrate budget resources to implement the priority state target programs. The main directions are: to save a share of the estimated annual volume of the gross domestic product, distributed through the consolidated budget based on the justified level; to attract loans from international financial institutions to implement projects of the country's economic and social development; to direct capital investments into financing facilities that provide growth and maintaining capacity in the next few years; to develop the medium-term budget planning and a program-target method for budgeting, to use modern forms and methods to manage budget funds, improving the system of state internal control and strengthening the responsibility of all participants in the budget process.

In countries with the transitional economies, it is a pressing issue under current conditions to improve legislation in the field of public procurement, which would enhance the efficiency and transparency of using public funds and harmonize the domestic legislation with the requirements of the World Trade Organization and the EU. In the scientific field, it is necessary to continue optimizing the ratio between the volumes of budgetary financing of fundamental and applied research, scientific and technical developments, taking into consideration an appropriate evaluation of the effectiveness of such research based on the main allocators of budget funds and research areas. In the field of social security, the state plans to systematically raise the minimum wage, the salary (tariff rate) for the employee of the first tariff rate in the Unified tariff scheme, a minimum living wage, and to provide the subsistence minimum. When providing social assistance and benefits, it is expedient to take into consideration the material situation of the family, to provide targeted assistance, in particular as regards discounted transportation rate; to engage funds from enterprises and institutions to provide benefits and compensations for professional attributes to respective categories of citizens, taking into consideration their financial situation as well; to increase the amount of social assistance when a child is born, child care assistance until it reaches three years of age; to approve state social standards and standards to render services by budget-financed institutions in relevant areas.

As part of improving the quality of the formation of budget expenditures, the main directions of budgetary policy include a series of measures: to improve the departmental classification of budget expenditures, in particular concerning the main allocators of budget funds and budgetary institutions, authorized by the state to implement state policy in the respective field; to arrange the structure and titles of budget programs based on the need to improve the quality of their implementation and the achievement of their ultimate goal; to optimize expenditures by the main allocators of budget funds by eliminating non-priority and inefficient expenditures and those that do not meet their main functions and tasks; to improve the system of evaluation of the effectiveness of budgetary programs based on the performance indicators of their fulfillment identified in the passports of these programs; the performed evaluation of the effectiveness of budgetary programs shall be taken into consideration in the preparation of the draft state budget for respective year; to carry out a staged transfer of departmental budgetary institutions for socio-cultural purposes to the field of management of executive bodies responsible for the implementation of the state policy in the respective area; to arrange the list of budgetary institutions financed by the state budget by giving some of them the status of recipients of budget funds taking into consideration specific weight of the paid services, legal grounds, the presence of self-supporting state enterprises of a similar profile; when allocating budget funds, to take into consideration the stimulating role of the government order. As part of strengthening budgetary

discipline, it is stressed on the need for measures on a comprehensive settlement and prevention of groundless accounts receivable and payable by the authorized allocators of budget funds.The system of national values implies the formation of major areas of fiscal policy aimed at ensuring the country's socio-economic development; directing the fiscal policy on building an effective state; ensuring growth of standards of living; maintaining and accelerating the development of human capital by increasing the efficiency and ensuring the stability of social security, improving the quality and affordability of health care and education; modernizing the infrastructure and basic industries, specifically energy-generation, coal mining, oil and gas industries, agriculture, transport, housing and communal services, defense industry, as well as the transition from the system of granting subsidies to the system of self-sustainability of production.

The main result of the implementation of budgetary policy must be economic growth, forming a favorable investment climate, based on expanding investment and domestic consumer demand, strengthening the competitiveness of the national economy, improved efficiency of using production resources and the scientific and technological potential. Development of the national economy should proceed under conditions for creating financial opportunities for the recovery of investment activity and activating the process of modernization of the national production by improving business climate, revitalizing lending from the banking system to the real sector of economy and reducing the cost of credit resources; for the implementation of sound social policy aimed at improving the quality of life of people, consistent with the capabilities of economy.

Development and implementation of scientifically-substantiated principles of state regulation in the field of budget expenditures would enhance the controllability of the country's economic development, the balance of public finances, the efficiency of the budget process, which would positively affect the success of the implementation of the administrative functions of the state. Achieving goals and objectives, outlined over recent years, requires the application of a strategy of the accelerated economic growth at the new technological level. Effective fiscal policy in the field of budget expenditures takes an important place in the process of regulating the country's economic development. Allocation of funds for the implementation of the state's priority tasks, aimed at the development and use of innovative technologies, development of human capital, is an important prerequisite for improving the efficiency of budgetary policy in the area of expenditures.

Balance, consistency, and substantiation of fiscal policy in the field of budget expenditures, as one of the necessary preconditions for development, and given the limited financial resources in the budget, the currently existing conditions for economic reforms, would make it possible to achieve the further stabilization of public finances, and continue to build a competitive and science-intensive economy, which would have a positive impact

on the overall economic growth and balanced development of the state and society, would make it possible to raise standards of living and welfare of the citizens of the country. After all, as one of the main factors in the implementation of the country's economic policy, the budget policy embodies the role of the state in the regulation of economic processes, ensuring macroeconomic growth, improving the structure of social production, provision of social guarantees for people.

To ensure coherence, consistency, and the effectiveness of fiscal policy, it is necessary to develop a long-term macroeconomic and budget strategy in the form of the systems of predictions in the field of monetary-credit and tax-budget policies, to reform state enterprises, etc. A necessary condition for the financial and fiscal policy is to balance the budgets that are included in the budgetary system. Setting the objectives of socio-economic development and the indicators to achieve them without taking into consideration macroeconomic indicators: budget fiscal possibilities, objectively predetermined limitations of budget deficit and growth rates, the level of public debt, could lead to failure to meet legally established social guarantees and fulfillment of social obligations, without which the country's sustainable socio-economic development is impossible. The forced reconsideration of declared goals of fiscal policy, a suspension of regulatory legal acts, including those that set social commitments, introduction of a sequestration of budget allocation, refusal to perform part of expenditure commitments, cancellation or prolongation of the implementation of planned measures, including adopted programs, failure to fulfill state contracts, lead to a decrease in the level of trust in the state. Under such circumstances, planning activities of the allocators of budget funds are complicated, their responsibility for defining and achieving the objectives and indicators for the effectiveness of their activities reduces, there occurs the opportunity to constantly «bloat» expenditures that do not have clear-cut criteria for the assessment of their necessity and sufficiency to solve tasks of state policy in respective areas.

One of the main tasks for budget expenditure policy is to create conditions for an equitable allocation of revenues and providing a vital level and benefits for society as a basis for creating conditions for improving the quality of human capital. The important factor in ensuring the economic growth of the state is to improve the quality and volume of the development of human capital. The state, by influencing a gradual improvement of the quality of human capital by increasing the educational-cultural, professional, and qualification level of people and by the appropriate use of their potential, multiplies the country's capabilities in providing socio-economic growth. Current vision of the developed countries regarding the directions of social support is based on the priority of the development of human capital as a prerequisite for the further socio-economic development of the country. The developed countries have rather high standards of social welfare and the appropriate level of spending on social needs; states assume

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a significant portion of expenditures to reproduce human capital, the dissemination of knowledge and information, stimulating the demand for scientific knowledge and innovation and expanding their offerings by financing educational, cultural, and scientific programs, measures related to technological and innovation development, promotion of innovation-active enterprises. At the same time, one should consider capacity of a budget regarding the implementation of such measures in the medium- and long term.

At present, countries with the transitional economies pay considerable attention to the issue of maintaining the volumes of expenditures to social area at appropriate level, which, taking into consideration the need to increase the level and quality of life of people, is necessary and relevant. It is necessary to take into consideration capabilities of a budget for the implementation of such measures in the future. Despite different visions on society on determining the level of social expenditures, there is a common understanding that a high level of social protection of people is impossible in a poor country, so the only prerequisite to improve it is the implementation of the strategy of the accelerated economic growth. The focus of fiscal policy on the implementation of the strategy for accelerated economic growth does not preclude maintaining the existing level of social support, and even its increase, under conditions for the optimization of the structure of social expenditures, ensuring their priority for the development of the person.

Budget expenditures for development must in the long term ensure the implementation of the country's socio-economic plans, as well as society. It is required to determine the amount of that part of the budget, which the state plans to spend on development; determining this share depends both on the position of the state concerning the degree of intervention in economic processes and the tools available, which must provide control over efficient use of budgetary funds. Prediction of the amount of funds planned to spend on the implementation of promising tasks of economic development should be a target for the improvement of tax policy.

The issues of priority direction of state regulation in the field of expenditures are extremely varied and diverse, which requires the scientific substantiation of the system to select social priorities and mechanisms for their implementation. The state uses expenditures as a tool to implement effective economic policy. The required decisions in the field of budget expenditures are taken in order to implement the country's economic, scientific — technical and social policy, ensuring meeting social needs in funding priority areas for development, in particular, strategic industries, technical modernization of production in the state sector, social sphere: education, culture, health and environment protection, creation of new jobs.

At present, still relevant are the issues related to the need to overcome the consequences of the economic downturn, achieving the pre-crisis indicators of the gross domestic product, creation of effective prerequisites for the further sustainable development of the country and society. Addressing key

development tasks implies the consideration of external factors, specifically the deterioration of economic situation in a series of the developed countries.

The EU countries pay much attention now to the issue of strengthening the state regulation in the area of expenditures, searching for optimal parameters to conduct fiscal policy, in particular in the area of expenditures; different approaches regarding the expenditure policy are applied. There is no any unified vision among practitioners, academics on the issue: in times of crisis, should the state save more or spend more, particularly to finance the strategic areas of economy. However, there is a common vision of the necessity to search for new ways and mechanisms to manage budget expenditures in order to strengthen their impact on stability and steady social development. The EU countries over the past two years have followed an unchanged policy: state spending need to be cut during crisis, to follow the austerity policy, strict fiscal discipline, budget consolidation, which would contribute, in particular, to the reduction of debt obligations of national economies, reduction of a budget deficit. However, recent years have shown that the policy of reducing public spending does not protect from the effects of a financial-economic crisis: in a number of European countries it leads to an almost zero growth in economy, rising unemployment, falling domestic demand, specifically for goods by domestic producers. According to J. Stiglitz, saving the financial resources of a budget alone would not solve problems, but on the contrary may have the reverse effect: the policy of financial asceticism would only worsen the economic downturn; without economic growth a debt crisis would only increase. Increased investment in the modernization of economies could stimulate economic activity, promote the creation of new jobs. The scientist notes that the more progressive taxation would promote the formation of budget revenues, which in turn could be directed for state investments, to develop productive sectors of economy, to decrease unemployment, to provide social guarantees to the most vulnerable layers of the population.

An important prerequisite for effective fiscal policy is to define its priorities, based on the national priorities of the country's strategy of economic and social development, the principles of monetary policy and foreign economic activity. Under these circumstances, the state would create conditions for fulfilling its functions, supporting financial stability in the country and achieving specific goals in economic and social development. An important tool of the state regulation of economic and social processes is a perspective prediction of budget expenditures because it justifies the directions to use budget funds in the future, taking into consideration the country's goals and priorities in the socio-economic development in the medium and long term. With further development of the methodological principles for perspective forecasting and strategic planning of budget expenditures based on their impact on the dynamics of socio-economic indicators and trends of social development, it is necessary to accelerate the transition

to prospective budget planning of expenditures for the main allocators of the budget; of special significance is the issue on the optimum allocation of limited budgetary resources among areas of the country's socio-economic development and ensuring that the structure of budget expenditures matches the specified strategic priorities; prospective budget forecasting includes determining the forecasted budget indicators for the substantiation of a tax-budgetary strategy in the medium and long term periods, which should provide for solving the major tasks of the further socio-economic development of the state and achieving the target objectives of the investment-innovation model of economic development. Prospective forecasting of budget expenditures as an important instrument of budget regulation in the field of expenditures justifies the main directions to use budget funds in the forthcoming budget period taking into consideration the identified goals and priorities in the country's socio-economic development.

Along with this, the process of reforming and improving budgetary regulation in the field of expenditures is rather long, given the gradual evolution of approaches and methods. When developing and implementing the new research-based methods, program documents on strengthening the regulatory effectiveness of respective institutional approaches to the formation of budget expenditures, one should take into account the experience gained, the stage and state of economic and social development, factors of external and internal nature, which would enhance the manageability of the country's economic development, would help balance the budgetary system.

Budgetary regulation in the field of expenditures in the next budget periods should be aimed at increasing the level and quality of life of people — that must become the main goal of budget policy, fulfilling all obligations to citizens, supporting strategic and innovative sectors, creating the potential for sustainable economic development. The basis for solving social problems should be the high rates of sustainable economic growth that would make it possible to create new jobs, to increase wages in the economy, to expand the country's financial possibilities. It is necessary to continue the implementation of the fiscal policy, aimed at enhancing the effectiveness of management of public finances, at the implementation of measures to restructure and optimize expenditure commitments strengthening the target character and improving the effectiveness of budget expenditures.

Improving the efficiency of budgets expenditures in the system of state regulation should be considered as an important part to reform a budgetary process, which requires the development of appropriate recommendations taking into consideration practical experience of solving the tasks on expenditures optimization. The issues of ensuring the effectiveness of using budget funds at all stages of the budgetary process are more and more important in the context of the need to implement the established objectives of socio-economic development, fiscal policy, program and project documents in support of the various fields of economy under current conditions of

limited financial resources, on the one hand, and constantly rising needs in expenditures on economy and society, on the other hand. The effectiveness of budget expenditures is determined by the degree of their influence and contribution to solving the country's economic and social development under existing internal and external conditions; motivated by the need to redistribute financial resources to ensure social justice, the need to ensure a certain level of public services, the existence of a not fully functioning system of state management, particularly in the field of finance. In addition, it is possible to consider the effectiveness of budget expenditures through the lens of expecting more gains from the use of financial resources in public sector extracted from the private sector. That is, the funds, accumulated by the state, must bring to society a larger result than they would have brought if used in the private sector. It is not possible to meet all the material needs of the state and people, since the budget's financial resources are limited, and the needs of the economy and society are confined particularly to the size of financial resources available in the budget. Therefore, it is an important task at a current stage of transformational change in the economy to identify the ways and means to more effectively use the existing budget's financial resources in order to achieve the maximum degree of meeting the existing needs of societal development.

Over the past decades there has been a discussion on the topic of optimal volume and structure of the country's budget expenditures, analyses of the causes of ineffectiveness of such spending, development and implementation of various proposals regarding the mechanisms to improve the efficiency of using financial resources of the budget and the adoption of effective decisions in the field of budget expenditures. The effective organization of the process of activities of all participants in the system of state governance, in particular it concerns the area of management of public finances, now appears one of the main issues. It is not possible to use only administrative and market instruments in order to ensure a sufficient level of social quality of public administration under conditions when it faces the demands of competitiveness, diversity of services, and, at the same time, increasing state expenditures and the maximum equity in their allocation. According to M. Crozier, potential of any transformations in the state, and their quality, depends not so much on the impact of management on society, but on the reverse influence of the society on the management apparatus and on its reforming. For the purposes of analysis, it is necessary to understand what the effectiveness of management decisions means regarding the management of budget resources, their influence on the inefficiency of budget expenditures, the reasons for the adoption of inefficient budget decisions, the effectiveness of budget expenditures, it is necessary to consider modern approaches to solving the tasks on improving the efficiency of expenditures from the state budget. The category of «efficiency» is understood as the evaluation category, the degree of efficiency is determined through a ratio

of expenses to the resulting obtained. In microeconomics, efficiency is often understood as a production function, which defines a dependence of costs and output or achievement of the greatest volume of production of goods and services using the resources of a certain value.

The evolutionary development of society introduced significant changes to understanding the parameters of efficiency: while maintaining the concept of efficiency, there occur not only quantitative, but also qualitative changes in these parameters. Thus, when considering the effectiveness of the allocation of budgetary resources, the relativity of the specified concept should be noted, referring to a comparison of at least two states of wellbeing associated with the distribution of wealth in society. A comparison of wellbeing states is considered from the point of view of economic efficiency, or Pareto-efficiency, the essence of which is the impossibility to improve the well-being of any participant in the economic process, while not reducing the well-being of at least one of the others. Therefore, the degree of effective distribution of public expenditures is determined by the requests of consumers of public goods, reflects the level of organization of redistribution, at which the society gets the maximum benefit from the resources consumed in this way, at which it is impossible to increase the share of one individual in the result obtained by not decreasing the share of another one. The plurality of meanings and different interpretations of the notion of «efficiency» are reflected in terminology: thus, in the English-language literature, when assessing economic activity, they use the concepts of «effectiveness» and «efficiency». The essence of the first notion means effectiveness and is the ratio of cost to the results obtained in order to achieve the goal; minimizing the cost characterizes the effectiveness of resource used. This method is applied when determining the effectiveness, calculating indicators for profitability, return on investment, productivity. They employ both value and natural indicators. The second concept means performance, this notion is used in the developed countries to assess the effectiveness of budget expenditures, the essence reflects the degree of closeness of results to the declared objective, that is, they estimate the result of activities. The concept of «performance» is also applied as a degree of operational efficiency, which makes it possible to introduce the qualitative aspect to determining the efficiency of organizations. To assess the efficiency of using state resources, the world developed and has applied appropriate tools: the analysis «cost-benefit» has become the basis for constructing evaluation technologies of efficiency at the macroeconomic level. The essence of the specified method is to compare aggregated benefits, assessed in monetary terms, obtained when using budget resources in specific areas, to expenditures used for receiving these benefits. The specified analysis method is applied when social benefits can be treated via value measurement.

Despite the complexity of the evaluation of certain benefits and assessing the social discount rate, a given method of analysis makes it possible to

compare different areas of state expenditures, state programs, by matching their net benefits. A given analysis method is applied in world practice to evaluate government programs in education, health and environment protection. When evaluating budget expenditures, there is often a need to aggregate social outcomes; in such cases one applies the analysis method «cost-weighted performance». The results obtained are used as a tool for decision-making in the field of budget expenditures.

Application of the evaluation analysis method «cost-weighted performance» and development of an appropriate system of indicators and indices of social effect in certain areas of funding would make it possible to detect and eliminate the shortcomings of a budgetary program, and to determine the most effective variants to use budget's financial resources. Employing the valuation methods in a budgetary sector would make it possible to develop the methodological basis for new technologies of the state financial audit in accordance with the principles of the program-target method, to exercise financial control over the state of spent budget funds.

One of the key conditions for ensuring the country's socio-economic development is the effectiveness of state expenditures, which is directly affected by the overall level of quality and effectiveness of public administration in respective areas. Improving the effectiveness of public administration under current financial and economic conditions acquires special significance. Efficiency in the state sector is determined depending on the extent to which government spending contributes to the fulfilment of tasks according to priorities in the country's socio-economic development. Implementation of strategic plans and projections of socio-economic development occurs through activities of the state structures, through the implementation of national projects and target programs. Development and implementation of plans, forecasts, projects, and programs cannot be conducted separately from the budgetary process, within which their financial support is maintained. In other words, obtaining a socio-economic effect directly depends on the capacity of state institutions to effectively perform their functions in accordance with the obligations imposed by society on the state. However, to identify a positive or a negative influence of decision-making by allocating-executive structures, a comparative base in the form of specific standards is required that would characterize a degree of effectiveness of using state financial resources.

At present, a simultaneous solution to important issues is needed, primarily related to improving the effectiveness of budget expenditures to ensure rendering public services at lower amounts of budgetary resources; control over budget finances at all levels and stages; the possibility of releasing budget funds for the implementation of major infrastructure investments to create of favorable conditions for the long-term growth and diversification of the economy. Reducing unproductive expenditures would free up resources that could be directed at upgrading the worn-out infrastructure that would

facilitate the implementation of goals related to the modernization and diversification of the economy. That would also require the improvement of institutional foundations, including the practice of public procurements. To improve the quality and accessibility of public services rendered by government, it is necessary to improve the structure of remuneration of for the employees in the state sector, to conduct the re-evaluation of priorities in the state sector and to optimize the number of employees.

It should be noted that the issue of improving the effectiveness of budget expenditures at all stages of the budgetary process is relevant to many countries, given the worldwide trends towards the increased government financial obligations. The last decades of the last century required a substantial increase in the budget expenditures due to a rapid growth in the specific weight of people at their retirement age and the respective demand for health and social services, increasing the load on the areas of education and health services in proportion to their strengthened role in economy, in particular a transition to the model of continuous education; instability of a modern family, consistently high unemployment level, the need to introduce new modern programs: environmental, nano- and science-intensive technologies. Release of budgetary financial resources due to a sequestration of the budget, reducing government programs, filling a budget by selling state property or other measures of extensive nature would not solve the problem of economic inefficiency of budget expenditures. This practice can provide only a short-term positive economic effect. The specified measures for ordering expenditure commitments, implemented in a series of countries in the 1980s, led to the stabilization or slowing down the increase in spending, but, from the start of 1990s, the tendency of their advanced growth, compared with a gross domestic product, rebounded. Focus in the policy of curbing the growth of public spending inevitably shifted to their more efficient use — rational planning, allocation and expenditure savings in terms of each program and economic operation. The process of reforming the country's economic activity is accompanied by searching for the most effective methods of using budget funds. When considering the economic incentives and a toolset, different countries increasingly pay attention to the gained experience in the real sector of economy: those mechanisms are revealed in it that could oppose monopoly in the public sector as well, stimulate the dynamic allocation of resources, enhance the orientation when planning expenditures towards more clearly defined needs, generate competition among producers of public goods for the consumer and put their reward in direct dependence on the volume and quality of the social product.

The issues on raising the efficiency of managing budget resources undergo a change in the focus of reform, in particular, while attention was traditionally paid to the structural changes in the entire system of public finances management, at present there is a need to improve the effectiveness of activities of such government bodies as the main allocators of budget

funds within the framework of the current system and obtaining positive financial results in the form of the increased quality and affordability of public services, ensuring the achievement, the implementation of effective indicators of budget programs, compliance with financial discipline, particularly in reducing losses of the budget due to the non-justified generation of debt in accounts receivable and accounts payable, striving for rational use of budgetary resources, saving budget funds.

The gained experience of reforming the management of state expenditures in many countries related to improving their effectiveness could be used in domestic practice, in particular related to the transfer of the right to render social services to non-state legal entities on a competitive basis, under conditions of public-private partnership; to the transition from the practice of direct budget allocations to institutions to allocating funds to consumers in the form of social address vouchers of different purpose; providing a consumer of public services with the right to choose by a possibility to independently determine a provider of such services.

The ideology of the efficiency of budget expenditure management could not be initiated only through the adoption of respective legal documents. Effective management at government bodies is possible only in the case when the authorities themselves demonstrate the initiative and readiness to provide the expected result in the most effective manner. To ensure the motivation of state bodies to improve the effectiveness of their activities, it is necessary to establish the interdependence between the following control elements: formalized objectives and tasks for a state authority in the form of indicators of effectiveness; current activities, which are carried out directly by departments and employees to achieve goals and objectives; resources of all kinds, which a state body uses. The economic essence of the efficiency of state expenditures as part of the system of budgetary regulation of socio-economic development implies the totality of achieved effective indicators that meet the basic goals and tasks of budget assignments taking into consideration the amount of effected budget expenditures, the effectiveness of the institutional transformation of development of the social environment. It is expedient to improve the institutional foundations of budgetary system efficiency, including effective planning and use of budget expenditures, based on the cyclic nature of economic development, the state of public finances, which would promote the dynamic balance of the budget as an important tool to development the country's socio-economic relations.

To assess the effectiveness of budgetary programs, one could use official statistical data, financial and other reporting, data on accounting, statistical, and internal management accounting, information about results of control measures, etc. The chief allocator, when organizing the assessment of effectiveness of budgetary programs that are implemented by its central apparatus, budgetary programs that are executed by a lower-level fund allocator, independently defines the scope and structure of the information,

which would be the base for the assessment of effectiveness of budgetary programs, considering the specificity of their activities, goals and tasks of each budget program; the source of information; a procedure and frequency of information gathering, a technology for processing and analysis of information received. The results of the evaluation of effectiveness of budgetary programs, including findings by competent bodies, authorized to exercise financial control over compliance with budget legislation, are used to make decisions about the introduction, in the predefined manner, of changes to budgetary assignments over the current budget period, respective proposals to the draft budget over the planned budgetary period and to the forecast on budget for the two budgetary periods following the planned year, including a suspension of the implementation of respective budget programs.

Methodological guidelines consider the principles to assess the effectiveness of budgetary programs when compiling a draft of the state budget and while fulfilling the state budget. Evaluation of the effectiveness of budgetary programs when compiling a draft of the state budget is carried out by analyzing: correspondence between a budget program and the priorities of the country's socio-economic development, as well as certain sectors of the economy: the areas of activity, a region; compliance of a budgetary program to the activity plan of the chief allocator for the planned period and the two budget periods following the planned period; correspondence of a budget program to regulatory acts based on which it is supposed to be performed; the targets, tasks of a budgetary program and directions to use budget funds in terms of realism and feasibility of their implementation over the planned budget period, their focus on achieving a certain result; effective indicators of a budgetary program, which are supposed to be achieved when implementing the budget program over the planned budget period, regarding their correspondence to the goal and tasks of the budget program; the actual results of implementation of the budget program over previous budgetary periods; liabilities and the state of payments for them.

The main tasks in the evaluation of effectiveness of budgetary programs, the fulfillment of the state budget, must include: to determine the level of effectiveness and efficiency of a budget program by establishing a relationship between achieved results and used amount of budgetary funds; to determine the degree of achievement of the planned objectives, fulfillment of the tasks of a budget program by analyzing the fulfillment of effective indicators; to identify factors that inhibit the implementation of budgetary programs and the achievement of the planned effective indicators of a budget program; development of suggestions on improving the effectiveness of using budget funds; to make management decisions aimed at increasing the efficiency of using budget funds. When analyzing the effectiveness of a budgetary program based on the criterion «Implementation of a budget program based on the areas of using budget funds», an analysis is conducted into the implementation of the budget program

based on a comparison of the amount of effected expenditures, that is, cash expenditures and the loans provided by the budget over the reporting year, with the amounts approved in the passport of a budget program, taking into consideration the changes, introduced during the year, including directions to use budget funds; there should be explanations for the causes of deviation of actual indicators from those planned, including each direction of using budget funds.

When applying the criterion «Implementation of a budget program based on the sources of revenues to a special fund», the following is analyzed: the remaining revenues to the special fund at the beginning and at the end of the year, including own revenues and other revenues to the special fund, explaining the reasons for their presence; the revenues to the special fund, including its own revenue, revenues from loans and other revenues to the special fund, based on a comparison of actual and planned volumes, explaining the reasons for respective deviations. When analyzing the execution of effective indicators of a budget program based on the areas of using budget funds: an analysis is conducted into the execution of effective indicators based on the areas of using budget funds by comparing the actual effective indicators for the reporting year with the indicators approved in the passport of the budget program, explaining the reasons for differences between them. When assessing the fulfillment of indicators of a budget program compared with the indicators for the previous year, the following is analyzed: the dynamics of indicators of a budget program based on a comparison between the amount of incurred expenditures and the loans granted from the budget over the fiscal year and the respective indicators for the previous year, including the directions of using budget funds, providing an explanation concerning the increase or decrease in such volumes, on changes in the structure of areas to use funds for a budget program; the implementation of effective indicators for the areas of using budget funds based on a comparison of the actual indicators for the fiscal year with the respective indicators for the previous year, providing explanation on the dynamics of effective indicators for the corresponding direction of using budget funds. The assessment criterion «Presence of financial violations based on the results of control measures» implies specifying the volumes of revealed financial violations in a budget program. Including those that led to the loss of financial and material resources, and those that did not lead to the loss of financial and material resources; the volume of repaid loss of financial and material resources; the volume of eliminated financial violations. In assessing the state of financial discipline, one carries out an analysis of debt in the accounts receivable and accounts payable, including overdue, indicating the reasons for the presence of, or an increase in, the debt of accounts receivable and accounts payable, including overdue. Methodological recommendations also imply determining by the main allocator of budget funds the relevance of a budget program, specifying

the degree of meeting state needs during implementation of the program, whether the program is still relevant for its further implementation, whether there was a duplication of activities of the program and other programs.

The summary results of the effectiveness of a budget program include the level of achievement of the goal and fulfillment of objectives of the program using the appropriate amount of budget funds, a possibility to achieve better results when using these funds, they identify shortcomings and omissions of organizational, legal and financial nature, as well as those related to the improper implementation by the main allocator of the functions to manage budgetary funds, in particular, the late approval of passports for budget programs and orders to use budget funds, failure to comply with the orders to use budget funds, improper organization of public procurements, improper organization of work with the allocators of lower-level budgets, and recipients of budget funds, etc., as well as they include suggestions to eliminate shortcomings when fulfilling a budget program and to improve the budgetary funds management.

The usefulness of a budget program is defined in terms of the socio-economic impact of the implementation of the program, obstacles that prevented the achievement of the required results of the program. The long-term consequences of a budget program indicate whether results of the program could be used upon completion of its implementation. The results of evaluation of the effectiveness of budgetary programs, signed by the director of accounting services of the chief allocator, should be taken into consideration by the Ministry of Finance of Ukraine when forming a draft of the state budget for the planned budget period and a forecast of the state budget for two budget periods following the planned period for the purpose of rational allocation of budgetary funds, as well as when preparing the report on budget implementation.

Improved effectiveness in spending budget funds would be promoted by the development of a system of state financial control, including the audit of budget programs, compliance with financial and budget discipline, rational use of budgetary resources. As noted, Ukraine has in recent years seen a consistent work on reforming the management of state resources, aimed at financial stabilization, the optimization of structure in the areas of state budget expenditures, the establishment of a clear control over the efficiency of spending. There is a necessity to improve existing forms of the state financial control and regulatory mechanisms and to create new forms and methods of control measures that influenced the emergence of such forms of control as the state financial audit, audit of the efficiency of budget programs, which are the means of carrying out, in particular, the evaluation of effectiveness of budget expenditures. By introducing a practice of the state financial audit, the system of state financial control entered a new stage of development of control activity, which to a larger degree corresponds to the civilized economic relations in the market.

One of the factors that could adversely affect the efficiency of using budget funds, specifically on the balance of the budgetary system in general, is a tendency to generate by the state entities, in the process of budget resource management, of significant sums of debt in accounts receivable and accounts payable, with overdue payments. In order to prevent the diversion of budget funds for the generation of receivables, it is advisable to introduce constraints on prepayment when purchasing, using budget funds, a list of goods, work, and services, and directly the terms of prepayment. Strengthening the responsibility of the head of the body that manages budgetary funds when accepting budgetary commitments, the need for continuous reconsideration of obligations accepted in the financial and economic activities, the introduction of a system of permanent operational monitoring and collecting of information about the state of accounts payable would make it possible to significantly reduce financial obligations related to budget funds under conditions of their limitations. The effectiveness of budget expenditures planning, as one of the most important components of the budget management system, is essential in ensuring stability of the country's financial system, its sustainable economic growth. The system of the chief allocator of budget funds at the stage of expenditure planning related to improving the effectiveness of budgetary programs could be enhanced though the preparation of strategic plans of their activity, the optimal structure of budget programs within the limiting sums of medium-term budget, detailing the tasks and directions of budget expenditures by dividing the expenditures on consumption and expenditures on development, the establishment of a clear relationship between the planned volumes of budget funds and expected results.

To further implementation the above-specified principles, it is advisable to plan the implementation of the following main measures: to form a long-term forecast of social-economic development and a long-term budget strategy; to reduce the least efficient types of financial aid, to increase the concentration of inter-budgetary transfers along the most important priority areas; to optimize the number of tax benefits, in the event of application of such tax breaks, to reflect them in respective state programs with regular evaluation of their impact on the achievement of the stated program goals; to improve the organization and methodology of forecasting fiscal fulfillment of the budget with the establishment of responsibility for the main allocators of budget funds for the quality and compliance with indicators of the cash plan; to establish medium-term indicative cost indicators for the respective directions of state policy — in the context of state programs, budgetary programs, which would create conditions for the increased flexibility in using budget assignments to achieve the declared goals and, if necessary, and initiated by the respective bodies of executive power, to restructuring expenditures. Important is to enhance the level of effectiveness and transparency in the mechanisms related to the procedure of public

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procurement. Application, when planning budget expenditures, of support to priority areas of the economy would have a positive effect on the creation of new jobs, improving the quality of respective public services.

Improving the effectiveness of budget expenditures requires compliance with a series of macroeconomic conditions, including the balanced budget, planning budget expenditures taking into consideration priorities in the state policy of socio-economic development, extending a horizon of budget planning, expansion of financial powers of allocators, recipients of budget funds, with a simultaneous strengthening of responsibility by heads of institutions for achieving the results of fulfilling budget programs. The presence of a medium-term budget planning, a long-term budget forecasting, is the basis for the consistent fiscal policy and the achievement of adequate level of efficiency of budget expenditures.

Improving the effectiveness of budget expenditures in the system of state regulation at all stages of the budgetary process is possible due to the establishment and maintaining the clearly stated principles of effectiveness, which may include: conservative nature and reliability of economic forecasts and conditions that underlie budget planning; formation of budgets taking into consideration the long-term forecast of the basic parameters for a budget system based on realistic assessments; limiting a budget deficit, a public debt, and recovery, as the stabilization of global economic situation would allow, of the rules restricting the use of volatile, such that depend on internal and external conditions, revenues to financially support budget's obligations; the stability and predictability of tax policy; completeness of the accounting and forecasting of financial and other resources that could be used to achieve the goals of state policy; planning budget allocations, based on the necessity of strict implementation of existing spending commitments; accepting new expenditure commitments in the presence of a clear assessment of budget allocations required for their implementation over the entire period of their execution; adoption of new spending commitments, taking into consideration the terms and mechanisms of their implementation; compliance with the established budget constraints when accepting new expenditure commitments, including the conditions and limits of restructuring, in particular the reduction of previously accepted commitments; a systematic analysis and evaluation of risks to the budgetary system, including those that arise as a result of the medium- and long-term demographical trends, changes in external economic conditions, obligations; creation and support of necessary financial reserves.

The key focus must be the implementation of measures to enhance the stability of the budget, to improve the program-target method of budgetary expenditure management, to improve efficiency of the public sector functioning, quality and affordability of public guaranteed services, to ensure transparency of the state finances.

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Budget efficiency is ensured within the framework of the effective budget policy, the areas of development of which should be: substantiation of the magnitude of expenditures per budget articles based on the criteria reflecting the efficiency of using budget funds and defined based on the priorities of socio-economic policy; improving the effectiveness of management system over state assets and liabilities that would make it possible to significantly improve the stability of a budget system, add flexibility to the budgetary policy that is carried out; improving a budgeting process, ensuring transparency of the budget and budgetary procedures at all levels of the budgetary system, improving the efficiency of control over using budget funds and revenue generation; ensuring a balanced state budget in the medium term.

3.2 Budget policy in the field of inter-budgetary relations

Development of public relations requires the creation of a fundamentally new model of inter-budgetary relations. Therefore, issues related to the organization of inter-budgetary relations are relevant both for the theoretical developments of economists and for the search for practical measures to enhance the stability of a budgetary system. Organization of inter-budgetary relations, based on the balanced division of expenditure and revenue responsibilities among authorities at different levels, is one of the fundamental issues for budget regulation. At the same time, it is important to note that each stage of the country's socio-economic development must be matched with a particular approach to the formation and organization of inter-budgetary relations. Hence, the field of inter-budgetary relations acts as a generator of the socio-economic development of administrative-territorial units.

The foundations of modern approaches to inter-budgetary relations were laid in works by J. Buchanan, who introduced the concept of fiscal equity, applying it both to individual economic actors and to administrative-territorial units. In terms of the theory of social choice, J. Buchanan proves that to balance the economic and political decisions, important role belongs to the contractual and constitutional bases, the fundamental rules of the political system. In this case, there are two conceptually different levels of social choice: the initial constitutional choice (prior to the constitution) and the post-constitutional level. Studying the first level implies the development of economic theory of the constitution, the second implies the development of the economic theory of political institutions. The difference between the two levels of choice could be identified as an analogy of choice on which fiscal justice depends. J. Buchanan proves that a deterrent in maximizing the revenues by a government is the fiscal decentralization. Therefore, the total size of the public sector must inversely vary dependent on decentralization.

Thus, the activity of a government in the interest of maximizing own revenues directly proportionally affect the horizontal and vertical competition between different levels of budgets management, which predetermines their size and therefore limits the total size of the budget of state sector. Preventing the specified is only possible through fiscal decentralization. The main goal of fiscal decentralization is to bring management closer to people, which requires the strengthening of local finance. Achieving a successful outcome in conducting a policy of fiscal decentralization depends on the necessary conditions (political autonomy, responsibility for expenditures, a considerable amount of revenue authority, budget autonomy, transparency) and the desired conditions (freedom from excessive control over expenditures by a central government, possibility to borrow, unconditional transfers).

At the same time, one distinguishes a «budget unitarianism» and a «fiscal federalism». The economic essence of budget unitarianism implies a system of organization of financial and economic relations among different levels of authorities, characterized by a high degree of influence from a central government. Based on the theory of budget unitarianism, the principles of inter-budgetary relations are defined exclusively by the bodies of state power while a government's policy is aimed at ensuring a certain level of rendering services of the public sector of the economy throughout the country. The economic essence of fiscal federalism implies financial and economic relationships that arise between the actors in the process of interaction and balancing the interests of all participants in the budgetary process on the formation, allocation and use of resources. Budget federalism is regarded as a set of principles and mechanisms of tax-budgetary relations among the bodies of state power and local self-government; as a form of the autonomous operation of budgets at the individual levels of power; as a principle of allocation of tax and spending powers among budgets at different levels; as an interaction between economic and political interests of bodies of state power and local self-government in terms of formation and use of public resources.

Currently, there are two main approaches to the essence of budget federalism: legal and economic. The legal approach is to determine the legislative budget-tax relations among budgets at all levels subject to the principle of relative equality of lower budgets relative to the higher ones. In this case, it is considered that the budget federalism could be applied only to countries with a federated system, while countries with a unitary system could only have a unitary budgetary system. The economic approach implies the understanding of budget federalism based on the principle of organization of the balance of economic interests of authorities at all levels of the budgetary system, in terms of generation and use of budget resources with the possibility of their autonomous operation. In this case, there is no a clear relationship between the principle of application of the fiscal federalism and the type of a state system. Budget federalism is applied in countries with both federated and unitary system.

Thus, fiscal federalism is the system to manage public finances, based on a differentiation of authority among different levels of power regarding the formation and use of budget resources given the combined interests of all participants in the budget process and society in general. The principles of fiscal federalism include: balance of interests of all levels of power; a combination of centralism and decentralism principles in terms of formation of a fiscal policy of the state, splitting budget-tax powers; high responsibility of the authorities at each level for a balanced budget, budgetary provision; participation of the bodies of state power and local self-government in the formation and implementation of the budget-tax policy.

According to the theory of fiscal federalism, originated by W. Oates, it is always more efficient for the local public benefits, consumed by a geographically localized subset of the entire population, and for which production costs at any level of production by the authorities of each administrative-territorial unit are identical and correspond to the expenditures of a central government, to provide them locally. Local authorities, by obtaining a more detailed and reliable information about the needs of people, have greater opportunities to ensure a balanced relationship between a tax burden and the provided social benefits.

Along with this, the disadvantages of fiscal decentralization, according to W. Oates, include: the imbalance between resources, available to local authorities, and their assigned expenditure authority; interregional differentiation of net fiscal benefits (the difference between the amount of benefits obtained from providing public benefits and the level of effected tax payments), which violates the principle of territorial justice, which assumes equal access of individuals and firms to public benefits outside a dependence on their geographic location; a high degree of decentralization is characterized by the presence of horizontal fiscal externalities associated primarily with the desire of local authorities to achieve their own goals at the expense of other territories.

R. Musgrave relates the theory of budget federalism to the existence of local financial communities. First, provision of public benefits is spatially limited. Accordingly, one could talk about public benefits with a different radius of rendering them. Second, expenditures of individual consumers of public benefits become lower the higher the effective demand on the part of other consumers, so one could talk about a desire for the spatial association of consumers that have certain needs. Consequently, every customer becomes a member of a certain financial community, the aim of which is to provide him with certain public benefits. Services of neighboring local communities could be duplicated, so the principle of optimum distribution of resources requires their interactions to prevent double expenditures. At the same time, the theory of budget federalism has the unresolved issues regarding the reasons for the distribution of economic agents among territories so that their benefits would be similar in one administrative-territorial formation, but different between the territories.

The theory that explains these phenomena was proposed by the American economist Ch. Tibu, who notes that economic agents choose the administrative-territorial unit, where they would be provided with the most optimal ratio between the provided social benefits and the level of the tax burden.

Thus, the level of power that is closest to the consumer of budget services can ensure the most effective expenditures of budget funds in order to meet local needs. That makes it possible to achieve the Pareto-efficient level of production that could not by provided by central authorities, provided: the cost of providing public services are the same for both central and local levels of power; the benefits produced at a certain territory are fully consumed by the population of this territory, that is, there are no external effects; advantages of the population from local communities vary greatly.

However, the criterion of V. Pareto is employed to compare efficiency of only those measures that differ only in terms of location of resources. Given this, N. Caldor and J. Hicks proposed a principle of compensation — a criterion according to which a transition from one state of economic system to another contributes to an increase in the general wellbeing if members of the community who benefit in this transition are able to compensate for the loss of those whose situation worsens. The specified criterion makes it possible to distinguish between changes in the levels of economic efficiency in the process of redistribution. The specified problem of resource usage efficiency is linked to the principle of «second best», proposed by R. Lipsey and K. Lancaster. According to the theory of second best, if one of the conditions for an optimum, according to V. Pareto, v. cannot be met, the second best optimum is achieved only through a deviation from all the other conditions for an optimum. As a result, the optimal policy is a «step-by-step policy of second best» according to which the state gradually defines and introduces optimal deviations from the Pareto-efficiency in those sectors of the economy where it is possible, in the case when is impossible to reach the level of the Pareto-efficiency in at least in one of the sectors.

In the 1990s, the concept of federalism, which maintains the market (market-divserving federalism), was developed, which proves that the decentralization of a budgetary system that meets certain criteria contributes to the development of institutions of a market economy and ensures, over a long-time period, the higher rates of economic growth. Proponents of this concept proceed from the fact that the budgetary structure should meet the following criteria: the presence of at least a two-level hierarchical system of authorities with a clearly defined powers; local authorities should be endowed with sufficient powers within their territory; central government must ensure the free movement of goods, services, and factors of production between the territories; the presence of strict budgetary constraints for all levels of authorities; the presence of institutional guarantees that the distribution of powers among the levels of power is steady and long-term in nature.

Thus, budget federalism as the principle of public finance management implies: at least two levels of management that execute power relative to the same territory and population; there are guarantees for the autonomy of each level of management in its own field; each level has at least one area of activity in which it is completely self-contained. Regardless of the type of a state system, almost every country is characterized by the budget federalism. In this case, it is important to solve the issue on the regulation of inter-budgetary relations, centralized and decentralized production of public benefits, determining the principles according to which revenue sources and expenditure powers should be transferred to the bodies of local authorities in order to ensure social wellbeing. In addition, note that under conditions of the undeveloped political and public institutions the decentralization may lead to macroeconomic destabilization and attempts by local authorities to hinder the restructuring of the economy.

Therefore, in order to ensure effective decentralization, it is necessary first of all to establish appropriate institutional conditions. Decentralization of power should not come down to the territorial decentralization and the formation of a local level, vice versa, the development of national legislation should provide for the formation at the local level of fully-fledged elected authorities that have their own budget-tax power and are responsible for the decisions made, especially to voters, rather than the higher levels of authorities. The above would make it possible to establish a close relationship between the benefits of people at a certain area and the decisions of respective authorities, as well as to maximize the benefit of decentralization. Strengthening the tax powers of local authorities at the same time means a certain limitation for the possibilities of a central government to tax, especially the private sector. At the same time, competition between territories would promote the discipline of local self-government authorities, forcing them to pursue a policy that would contribute to entrepreneurship and attracting investments, accelerating economic growth and stabilization of the budgetary system.

At the same time, international experience shows that the result of violation of conditions for the existence of «federalism that preserves market» could be a recession and a budgetary-financial crisis. A series of studies shows that the irrational system of fiscal relations between different levels of authorities, typical for the 1990s, disrupted the creation of incentives for local authorities to build up revenue base and promote the development of investment climate. In this case, creating incentives for local authorities, as numerous studies demonstrate, is a more significant factor to influence the development of inter-budgetary relations than the degree of decentralization.

Many foreign and domestic studies note that budget decentralization, which does not imply creating incentives for local governments to strengthen their revenue base, poses the risks of irresponsible behavior of local governments. The above relates to the fact that central authorities are generally

inclined to create soft budget constraints for local governments that form the expectations of additional, not provided earlier, funding.

Thus, the efficiency to manage local finances under conditions of fiscal decentralization requires searching for the optimum ratio between the budgetary autonomy, provided to local governments, to the established control over making budget solutions. In this case, it is important to enhance the interest of local self-government bodies in increasing their own revenues. For the most part, based on the political and economic efficiency, full control over the decisions of local authorities is impractical and it practically means giving up fiscal decentralization, which is why budget policy should come down to creating such institutional conditions that would prevent negative consequences of the irrational fiscal behavior, not only for the people at a certain administrative-territorial unit, but also for the entire country.

A primary task at present is to develop a well-functioning system of inter-budgetary relations, which would not only ensure the leading role of local governments, but also would make it possible to use the advantages of «federalism that supports a market», contributing to the creation of incentives and increasing the interest of local self-government bodies to enlarge their own revenue base. For this purpose, it is necessary above all to provide a wider budget-tax autonomy, enhancing the responsibility of local self-government bodies, as well as the intensification of efforts to eliminate obstacles to the movement of factors of production between the administrative-territorial units. At the current stage of development of inter-budgetary relations, the relationship between the provision of financial resources and the expected results from its implementation could be defined as the level of budgetary provision, provided in accordance with norms, in order to render services to citizens according to the minimum social standards and guarantees. Such an understanding matches the principle of subsidiarity considering the criteria for completeness of service rendition and bringing it closer to the direct consumer.

The main goal of inter-budgetary regulation is to balance local budgets and to ensure relatively equal, in terms of spending per capita, volume of expenditures throughout the entire country. Improvement of inter-budgetary regulation is the main objective of fiscal policy, reaching which implies coordination of the interests of central government bodies and local self-government bodies in the distribution of powers and consolidation of financial resources to effect public expenditures.

Inter-budgetary relations are an integral part of the wider process, which is the budget policy, and they are the primary ones with respect to other areas; inter-budgetary relations are both state-forming and budget-forming; inter-budgetary relations are the relations not only between the authorities of different levels, but, above all, between the subjects of the state and its administrative-territorial units. Thus, the specified concept represents both vertical and horizontal relationships. Inter-budgetary relations

are the relations between state authorities and local self-government bodies related to the budget structure, the implementation of budget federalism, including the allocation and redistribution of revenues and expenditures among budgets. However, the specified definition of inter-budgetary relations significantly limits the competence of the subjects of inter-budgetary relations that does not meet the legislatively established authority.

It should be noted that the subject structure of inter-budgetary relations remains controversial and is treated differently in the scientific literature. Thus, some authors consider that the inter-budgetary relations cover all participants in the budgetary process related to budgeting, their revenues and expenditures, consideration and approval of budgets at all levels, participants engaged in state and municipal fiscal control, etc.; inter-budget relations differ from the entire totality of budgetary relations by a narrower range of subjects — inter-budgetary relations involve only territorial entities of the budget law; the legislation assigns the right to the state or local budget to socio-territorial formations, rather than the state authorities or local self-government bodies; inter-budgetary relations are the systematically organized cash flows and relationships between the subjects of inter-budgetary relations in terms of formation, distribution, and use of budget funds and grants. In this case, the system of subjects of inter-budgetary relations includes the recipients of grants; of importance is the issue on the financial turnover of budget funds; the budget potential allocated via a system of inter-budgetary relations is a relevant issue. Authorities at all levels act as mediators between the state and society members in terms of budget support in order to provide public benefits in accordance with the established norms and the state's capabilities.

In addition, inter-budgetary relations are a system of relations between the state and local governments regarding the allocation of powers to the bodies of state power and the local self-government bodies, expenditure commitments and revenue sources among the budgets of different levels. Inter-budgetary relations are, first and foremost, the distribution of functional responsibilities for solving public tasks and, only afterwards, the distribution of expenditures and revenues among the budgets of different levels.

From the standpoint of solving a task on the choice of a model to organize the inter-budgetary relations, it is important to create mechanisms to align conditions of living, which implies determining the objects, measure, magnitudes, and the influence of alignment. Such a choice is a political compromise between applying the two theoretical principles to provide local budgets with financial resources — the principle of fiscal justice and the principle of alignment of financial opportunities. Financial alignment is the process to eliminate horizontal and vertical imbalances. The purpose of financial alignment is the redistribution of financial resources for the benefit of those power levels, which have the vertical and horizontal imbalances with the aim of eliminating them. The tools of financial alignment include

equilibrium funds, general and special transfers, contributions from territories, distributed and transferred taxes.

Delimitation and redistribution of revenues in the process of budgetary regulation is carried out taking into consideration the socio-economic, demographic, environmental, natural state of the respective administrative territories in order to overcome disparities between them. The process of redistribution of financial resources aligns the fiscal potential of administrative-territorial units so they effect respective expenditures.

Thus, inter-budgetary relations are the economic-legal relations arising between state and municipal authorities in the budgetary process regarding the delimitation on a permanent or a long-term basis of expenditure authority, revenues that are received by the state's budgetary system, defining the standards of assigning, on a permanent and a long-term basis, state and local taxes, redistribution of funds from budgets at higher levels to the local ones in line with budget regulation, reimbursement of expenses, associated with the transfer of expenditure authority or decision — making that caused additional expenditures or losses of revenues in other budgets, the transfer of funds in the form of subsidies, subventions, grants, a temporary financial aid for a repayable fee, as well as the combination of funds to finance expenditures in the interests of the different levels of state power and different territories at the same level of state power. Inter-budgetary relations are a dynamic system that evolves depending on the social and economic needs of society. Financial alignment is an integral part of the system of inter-budgetary relations, functional purpose of financial alignment is a product of the evolutionary processes of the development of functions of bodies of state power and local self-government bodies, depending on the financial-budgetary capacity and socio-economic development of administrative-territorial units, the methods and tools must be adjusted related to the financial alignment with the aim of overcoming the socio-economic disparities in regional development.

The main principles of organization of inter-budgetary relations at present include: the principle of subsidiarity, which determines the basis for the distribution of powers and implies bringing social services closer to their direct consumer; the principle of matching the expenditures against tasks, which implies an alignment between the tasks assigned to a certain level of authorities and their expenditure power; the principle of predominance of expenditures over revenues, which implies identifying the sources of funding and their allocation to resolve tasks only after determining and distribution of expenditures. Subject to the above-mentioned principles, the bodies of state power and local self-government fulfill their tasks in full, which affects the socio-economic development of administrative-territorial units and the country in general. In this case, a system of financial alignment is important, which could effectively influence the socio-economic processes by creating conditions for the development of administrative-territorial units, balanced budgets.

In order to achieve strategic directions in the development of society, of importance are the theoretical-methodological principles of the formation and implementation of fiscal policy in the field of inter-budgetary relations, which are based on a systematic approach and deepening the theoretical achievements of foreign and domestic scientific schools. From this position, the system of inter-budgetary relations should be built based on the scientifically-substantiated concept of its development, aimed at financial regulation of social-economic processes with the goal of harmonious development of administrative-territorial units. In the theoretical aspect, inter-budgetary relations form the methodological principles, forms and methods of regulation and improvement of the budgetary system.

Effective budget-tax policy, the transition to an investment and innovation model of development of the economy depends in many respects on adequate reforms in the system of inter-budgetary relations. The transformation of goals and objectives of budget regulation is predetermined by the necessity to decentralize the state power. Using a system of inter-budgetary relations, the state has a possibility to influence the reproduction process, solve complex internal-economic problems, ensure the alignment of socio-economic conditions in the development of administrative-territorial units. In this case, key role is given to a balanced functioning of all parts of the budgetary system, to using effective methods and tools of financial alignment.

Underlying the inter-budgetary relations as an important means of state regulation of the budgetary process is the strategic directions of budget policy that define the size and proportions of the redistribution of expenditure and revenue power among the authorities of different levels. In this case, it is important to analyze economic reasons and to strengthen the effectiveness of the state control over inter-budgetary relations.

Under current conditions, a budget system is configured in the space of global financial flows, which increases demands to the system of state regulation and activates the need for systematic regulatory activities of state institutions. Finding a balance between market-riven methods of regulation and the state influence on the socio-economic development is the basic task of state regulation in general and the regulation of inter-budgetary relations in particular. Crisis processes increase the tension in the budget-tax system. The result is the reduction of budgetary revenues and, at the same time, a high level of government spending. In this regard, it is critically important to improve state control over inter-budgetary relations.

The task on maintaining optimal proportions among the budgets of different levels refers to the complex macro-economic objectives in both industrial and transformation economies. A significant level of imbalances that developed in the economic development of local administrative-territorial units exerts a significant impact on the structure and efficiency of the economy, the strategy and tactics of institutional transformations.

The most significant scientific research on the role of the state as a regulator of socio-economic development was undertaken by J. Keynes. The tasks of the state, according to J. Keynes, include the regulation of revenue allocation of the entire society, concentrating in its hands the monetary and other resources with the aim to actively influence market processes. The post Keynes theory implies state regulation of inter-territorial differences based on the stimulation of investment and the flow of private capital to the weakly-developed territories. The main market instruments of regional policy in this theory is the subsidies, credit, and tax leverage. According to the theory of unbalanced development, market without state regulation increases territorial differences based on the periodicity and self-organization of the market mechanism that enhances the level of development of some areas while reducing that in others. Application of purely market-based instruments to regulate the inter-regional inequalities with a minimum intervention of the state is supported by the neoclassical theory. According to it, in a free, unregulated market, over time, inequalities between territories are naturally eliminated and, hence, there is no need to limit the spontaneous action of market factors. However, practice has shown that aligning the inter-regional inequalities could not be achieved only at the expense of purely market methods of regulation.

Given the above, the concept of «the third way» has gained traction; it introduced the paradigm of regional self-development. According to this paradigm, the target-setting base for development is the need for optimal allocation of resources in compliance with the interests of the territories, including the public sector.

Therefore, state control over inter-budgetary relations is a prerequisite for compliance with a market requirement for the optimal resource allocation. The explanation of this standpoint is associated with the concept of external effects: any negative or positive phenomenon at the local level would cause a corresponding reaction at the state and local levels. In this case, all that the state does, first, should focus on the interests of citizens and, second, should be carried out using the minimum amount of resources.

Studies by B. Vaynhast substantiated that the optimal decentralization of a budgetary system could serve as an effective mechanism for the formation of a market economy and to ensure economic growth. On the other hand, works by O. Tanzi highlight positions related to the danger of implementing a budget decentralization, particularly in countries with the transitional economies. However, the effectiveness of budget decentralization depends on three interrelated parameters: stability, balance, and social orientation.

Stability relates to the socio-economic type of organization of budget decentralization, the importance to achieve both short-term and long-term objectives. Balance implies a correspondence between the expenditure and revenue powers, as well as the scientific substantiation of their proportions

among the budgets at different levels. Social orientation stems from the need for general socialization of the budgetary system since comprehensive human development and meeting his needs is the purpose of state regulation.

The specified parameters are interdependent, their presence makes it possible to characterize a system of inter-budgetary relations as an evolving system. Compliance in the process of inter-budgetary relations with the reproduction proportions would provide a socially oriented development of the budgetary system. In this case, it is necessary to have not only the legislative consolidation of proportionality between revenue and expenditure authority, but also a deep economic foundation in the form of appropriate budgetary mechanisms.

In a market economy, the mechanism that control inter-budgetary relations acts as a regulator of the development of socio-economic processes at administrative-territorial units. At the same time, the mechanism that regulates the inter-budgetary relations must be organically incorporated into a single system of budget regulation. Budgetary regulation is associated with the regulation of means of budget policy of distributary relations between the state and legal entities related to the generation and use of budget resources, it acts as a set of mechanisms that coordinate financial relationships.

Therefore, only a direct or an indirect state control over the inter-budgetary relations makes it possible to ensure the socio-economic development of administrative-territorial units and the same level of quality and the same services rendered at the territory of the entire country. The effectively functioning system of state control over inter-budgetary relations is the key to the solution of strategic tasks of economic development.

Development and implementation of the process of budget decentralization implies close coordination of activities of bodies of state power and local self-government. From an economic point of view, of the greatest interest is the distribution of financial responsibilities among the levels of authorities, which is reflected in the distribution of fiscal functions.

Fiscal functions were first distinguished by R. Musgrave: allocating, distributing, stabilizing. It is due to these functions, in his opinion, that the state power solves problems associated with the placement, allocation of financial resources and the stabilization of inter-budgetary relations. Allocating function is to provide the residents of the state with public goods. Using the allocating function, a government approves of decisions on the proportion of the distribution of resources into the private and public and selects public benefits. Distributing function is to regulate the distribution of national income and wealth. Stabilizing function is defined by the influence of public finance on the macroeconomic equilibrium. Effective distribution of these functions among different levels of management implies taking into consideration a possibility to achieve the Pareto-efficiency, which, in turn, depends on the following factors: the availability of funds and information resources to address a specific problem; an opportunity to achieve economy

of scale; a probability of internalizing positive external effects; a capability to adequately state tasks and functions.

Based on the criteria of scale of the jurisdiction, classic works note that the stabilizing and distributing functions must to a greater extent be assigned to the central level of power. At the same time, the allocating function, associated with the allocation of resources and meeting the needs in public benefits, as well as the organization of production of these benefits, could be executed both at the central and decentralized levels. The above relates to that the allocating function is most suitable for decentralized execution to the extent that it concerns the resources necessary to meet the needs in local public benefits.

The decentralized execution of the stabilizing function is inefficient, because: a regional economy is more open compared to national economies; borders of markets do not coincide with administrative-territorial division; in the consumption of residents at each administrative-territorial unit, important role belongs to imported goods; the higher the level of marginal propensity to import, the less the factor of costs; the effect of change in the level of public spending in a particular region is not concentrated inside the region, and is distributed in all other regions, which supply products to it.

Thus, the isolated execution of regional macroeconomic policy generates additional externalities. At the same time, effectiveness of the stabilizing policy of a region is significantly lower on the scale of the entire national economy. The distributing function is to a certain degree executed at the regional level. However, this field is also dominated by the nationwide aspect. Ensuring an equitable allocation implies rendering uniform services, and their quality, throughout the entire country.

A specific aspect of decentralization, in particular, the right of local self-government bodies to a certain degree of autonomy, is defined in the European Charter of local self-government. Specifically, according to Article 9, it is stated: local self-government bodies have the right, in the framework of the national economic policy, for their own adequate financial resources, which they could freely allocate within their powers; the amount of financial resources for the local self-government bodies correspond to functions provided by the constitution or law; at least part of the financial resources of local self-government bodies is formed via local taxes and fees, whose size can be determined by authorities within the limits of law; financial systems that constitute the basis of resources for local self-government bodies are diversified and upward in character and should make it possible to bring existing resources, as far as is applicable, in accordance with the actual growth of the cost of tasks executed by them; protection of the financially weaker local self-government bodies implies the introduction of procedures for budget alignment or similar measures in order to overcome the consequences of the uneven distribution of potential sources of financing and the financial burden they have to bear; local self-government bodies

are informed accordingly on the procedure to allocate the redistributed resources to them; whenever possible, grants to local self-government bodies are given not for funding specific projects; for the purposes of borrowing investment capital, local self-government bodies have access to the national capital market within the limits of law.

One of the main problems in the theory and practice of control over inter-budgetary relations is to determine the degree of decentralization when different levels of authorities fulfill their respective tasks and functions. According to the criterion of the degree of fiscal decentralization, there are budgetary deconcentration and budgetary devolution. The essence of budget deconcentration is that powers and responsibilities are transferred from central government to local self-government bodies, while maintaining the hierarchy of local authorities to the central government and its ministries that undergo decentralization. Budgetary devolution is the most complete form of decentralization, at which independent local self-government bodies, having economic independence due to the received tax and non-tax revenues, are responsible for the organization and financing the production of public benefits. Deconcentration makes it possible to better adapt a decision-making process to the system of local priorities that could be non-aligned to a certain degree, it is especially intensified under conditions of regional asymmetry: at significant differences on climatic conditions, the level of living, provision of social benefits, the size of revenues, etc. Devolution makes it possible to improve democratic control over the adoption of administrative decisions, as transparency of the decision-making process improves with the reduced risk of inefficient use of resources.

It is important to note that there were different views in different times on the level of the optimal degree of budget decentralization. Specifically, studying world experience allows us to distinguish multiple theories of budget federalism: the theory of decentralized federalism, the states rights theory, the theory of dualistic federalism, the theory of cooperative federalism, the theory of ideal federalism, the theory of internal federalism.

Underlying the decentralized federalism is a system of interrelations, which implies considerable independence of subjects of a federation related to forming own revenue base, its improvement and identifying areas to use budgetary resources. Each subject within a federation has an opportunity to compete with others, based on their own preferences. Under this model of the organization of inter-budgetary relations, a federal government almost does not pursue the policy of horizontal and vertical alignment of fiscal imbalances, financial alignment.

The states rights theory is substantiated by D. Kelhoun and T. Jefferson; it implies the sovereignty of states and the right to exit the established union. The basic postulate of the theory is to provide a complete autonomy to states. In contrast to the states rights theory, the theory of dualistic federalism, substantiated by A. Hamilton, M. Medison, D. Jem, treats the state as a complex

whole, based on a two-level structure of the federal state and non-interference in the scope of the powers of the center and subjects of the federation. The bodies of central power have the minimum authority necessary for regulation, everything else is in the competence of the federation subjects.

Dualistic federalism, as a result of its evolution, gradually transformed into the theory of cooperative federalism. Cooperative federalism is based on the use of common approaches to the allocation of financial resources and of the uniformity of public services throughout the country. The state's constitution recognizes the subjects of states within the framework of federalism, which have general competence, except for a narrow range of issues that are exclusively within the competence of the federal regulation. Cooperative federalism is aimed at leveling the socio-economic development of subjects of the federation, as well as on the implementation of the state policy regarding the provision of a single standard of service throughout the country. Significant role in this case belongs to the system of financial equalization. The main area of the federal level is to ensure coordination and harmonization.

H. Siebert identified cooperative federalism as the negotiation on the distribution of revenue sources and expenditure commitments. In his opinion, a significant disadvantage of cooperative federalism is that compromise in negotiations between the center and regions is always achieved by restricting the interests of future generations that do not participate in these negotiations.

At the same time, at present, the European countries that apply the theory of cooperative federalism neutralize its shortcomings through a clear distribution of budgetary powers between all levels of authorities, providing substantial financial independence to territories by determining the proportion in state taxes, using effective mechanisms to regulate vertical and horizontal imbalances of budgets.

A feature of the theory of ideal federalism is a clear division of power between the two independent and equal levels of power — a federation and its subjects. On the other hand, each level of power has the sufficient level of own revenues required to perform assigned duties. The theory of internal federalism is characterized by the division of competencies between levels of authorities based on their type, not on political spheres and state tasks. Thus, all the legislation is in the exclusive competence of the center, while the implementation of these laws is in the exclusive competence of the subjects of the federation.

The considered theories of federalism were further developed by the concepts of competitive federalism, technocratic federalism, federal society, new federalism.

According to the concept of competitive federalism, one of the most important advantages of a federation is its competitive start. The concept of technocratic federalism considers the task on supporting the federal elite with higher representatives of the subjects of the federation within a single agency

that aims to create closed corporate relationships. The basic postulate of supporters of the concept of technocratic federalism is the need to return to traditional two-level relations, strengthening control over federal authorities. The concept of federated society is based on the idea of primacy of the society and secondary importance of its institutions: federated society is considered to be a multi-composed society with compactly located individual segments.

The concept of the new federalism, introduced by R. Nixon, predicted quite a radical transformation of the American political system. The main idea of the concept of the new federalism is the need to return those powers to the subjects of the federation that, according to supporters of this concept, were captured by the federal center.

Thus, study into the development of theories of federalism allows us to argue about the dynamics of the system of state regulation of inter-budgetary relations that adapts to the constantly changing socio-political conditions, as well as the cyclical nature of processes of its development. Based on the theories of federalism, one could distinguish several models of state regulation over inter-budgetary relations: the Soviet, Chinese, American, German and Canadian. The Soviet model: lower budgets were fully subject to and approved of by the higher authorities; expenditures were allocated from top to bottom; each budget was assigned with certain revenues that covered the approved needs; norms for deductions from taxes to the budgets of territories were individual; in case of insufficient funding, higher budget allocated an individual grant; social justice was not ensured. The Chinese model: taxes were collected by the regional authority; the volume of fixed, given funds was determined by the central authorities mainly by arrangement; the low level of intervention and control over the activities of provinces; the lack of incentives for the rational use of budgetary funds; social justice was not provided. The American model: the federation, states and municipalities have their own taxes and independent tax agents; deductions from federal taxes to the budgets of the states are absent; the presence of powers of the authorities at various levels related to implementing taxes and determining their rates; provision of financial assistance in the form of targeted subventions on formula-based calculations; tasks are defined based on national priorities; a certain level of social justice is provided. The German model: a budgetary system is based on «common» taxes, proceeds from which are distributed among all its levels; in the process of redistribution of resources, they use the differentiation of the rate of deductions for the purpose of financial equalization; direct financial assistance from higher budgets is relatively small, however, there are numerous programs for regional development; expenditure powers are distributed according to the principles of «classic» fiscal federalism; social justice is provided. The Canadian model: taxes are partly «disjointed», but there are also common taxes; when dividing tax revenues, they widely apply the method of «adding» the rates (provinces and municipalities have the right to add their rates to the basic federal rate); various schemes

of alignment of budgeted provision; a significant level of interrelation between economic efficiency and social justice.

As world experience shows, any country could not create a perfect model of state regulation over inter-budgetary relations. In general, the effective functioning of any model of regulation of inter-budgetary relations assumes: a clear distribution of powers among all levels of authorities; giving financial resources to appropriate levels of authorities sufficient to implement these powers; smoothing of vertical and horizontal imbalances by means of a system of budgetary transfers to ensure a certain standard of public services throughout the country.

The special features of the organization of the process of state regulation of inter-budgetary relations, based on international experience, include: the variability both in setting goal and objectives of development, ranking them, and in choosing the ways and terms of achievement of the set objectives, methods, and tools of state regulation of inter-budgetary relations; program approach to addressing socio-economic issues, which aims to apply a comprehensive approach to solving inter-budgetary problems, to ensure their balance, purposeful solution of tasks and optimal use of budget resources; uniformity of the qualitative and quantitative approaches to evaluating and selecting variants for the distribution of revenues and expenditures, arising from the extraordinary complexity of its predictions, comprehensive correlation between the object of prediction and available information and existing methods and models; systemic development of certain issues and problems. State regulation of inter-budgetary relations is realized in the formation of revenue sources to all levels of the budgetary system at all stages of budgeting process and when pursuing a fiscal policy focused on ensuring macroeconomic stability and ensuring social reproduction. Financial resources, accumulated in the budgetary system, are distributed by means of taxes and duties according to the state's financial policy both in the field of material production that has a priority significance for the country's economy and in the area of intangible production.

Thus, the main factors that predetermine the state regulation of inter-budgetary relations include:

1. Inalienability of the function to regulate inter-budgetary relations in the system of state regulation. Regulation of inter-budgetary relations is an integral part of the system of state regulation in all countries. The need for the implementation of inter-budgetary regulation is predetermined by that the inter-budgetary regulation is carried out with the purpose of bringing guaranteed services maximally close to their direct consumer.

2. Building an effective mechanism of state regulation implies that state regulation should be carried out by means of specially developed mechanisms and policies. By using the mechanism of inter-budgetary relations, authorities at all levels implement their powers in order to ensure the execution of functions and tasks assigned to them.

3. The need for the redistribution of public benefits to ensure the Pareto-efficiency. A necessary condition for ensuring the most effective use of financial resources for rendering state and local budget services is to create a stable system of allocation and redistribution of financial resources. Certain tasks to achieve the set goal could be expressed as follows: ensuring the minimally required volume and quality of budget services within the powers of local self-government bodies; providing stability, predictability, and transparency of the system of allocation of financial resources among the levels of the budgetary system; creation and support of incentives for local self-government bodies to enhance the effectiveness of regulation of local finances, reducing irrational costs, strengthening economic development, introduction of advanced methods to manage public finances.

In this case, mainly in the developed countries, both the horizontal and vertical alignment of the budget is performed. The vertical budgetary alignment means bringing the revenue opportunities and expenditure needs in total conformity at appropriate budget levels, while the horizontal budgetary alignment implies bringing the revenue and expenditure needs of individual regions and municipalities in total conformity. At the same time, it should be noted that not a single country implies achieving a one hundred per cent medium level of alignment of revenue and expenditure authorities, because the presence of inter-regional differences has in certain limits a positive effect and forces to find ways to improve competitive advantages. In Germany, level of revenue opportunities is levelled up to 95 % of the average level; in the Netherlands — up to 70 %, on Denmark — up to 45 % for municipalities and 80 % for regions. Each of these countries also aligns in a varying degree the difference in expenditure needs of local budgets.

Based on international practice, it should be noted that the higher the level of a country's development the lower the limit for the level of inter-regional disparities acceptable to society. The disadvantaged are those regions in which indicators of per capita income, GDP, as well as unemployment, is $10-15$ % less than average. The economic heterogeneity of market space requires strengthening the economic role of the state in the processes of inter-budgetary redistribution of resources using the mechanisms of budget-tax relations. The main task is to create such a system of inter-budgetary relations that would contribute to the progressive development of the national economy in general and administrative-territorial units. The tools to regulate inter-budgetary relations must be regarded as the means to form an institutional environment that promotes consistent changes in the legislative framework, improving the legal framework within which the economy functions.

Thus, determining an optimal volume of provision of inter-budgetary transfers from the state budget to local budgets is a compromise between the desire to achieve a certain level and quality of budgetary services

throughout the entire country and each administrative-territorial unit and preserving the dependence between activity and the level of development of the economy and the amount of the received budgetary services. The above is one of the main tasks of state regulation whose implementation is the aim of the system to regulate inter-budgetary relations, the features of which depend on the specific conditions, objectives, and stages of development of a particular country.

An important factor in the development of the welfare state is the transformation of social policy into active one, which eliminates the consequences of social imbalances and implies a balanced redistribution of public benefits. Such social policy contributes to the transformation of the entire social field in the direction of growth and stabilization of the quality of life of citizens, the establishment of a balanced social-class structure with numerous middle class, the formation of a stable and effective system of social protection and social security.

Thus, the state regulation of inter-budgetary relations could be represented as a set of measures of political, legal, financial, economic, and social character, aimed at ensuring conformity between the expenditure and revenue powers in order to create incentives for the development of territories, activation, and financial support to the social mobility of people.

A combination of the interests of the state's integrity and the opportunities for development of administrative-territorial units is the main objective of the budgetary policy. Under conditions of growth the decentralized budgetary system is more efficient. In case of crisis processes, the role of the state as a regulator of economic life objectively grows. The effectiveness of state regulation of the inter-budgetary relations is determined by the presence and interdependence of theory, methodology, legislative framework, institutional foundations, and financial resources. Among the specified components, under conditions of a market economy, the latter is the main one, because effectiveness of state regulation of the inter-budgetary relations may be minimal if the necessary resources for its implementation are missing.When developing a system of inter-budgetary relations, it is advisable to take into consideration: the need for a clear division of tasks and powers of authorities at different levels; local self-government bodies, being responsible for the implementation of specific programs, should have their own financial sources for their implementation; mutual responsibility of authorities of different levels should be minimized to avoid its rearrangement; it is needed to separate political and administrative relations, to establish clear borders between administrative powers and financial competency; tax policy should provide authorities of different levels with a possibility to receive a certain share of revenues from the economic development of territories. In this case, local self-government bodies should have the right to introduce taxes and fees and to determine their rates within their jurisdiction.

3.3 Budget deficit in the system of financial-economic relations

Modern economic theory stresses that in order to enhance the effectiveness of fiscal policy, civil society should form expectations about pursuing such a policy in the future, and the results that must be achieved. Similarly, state institutions have to approve of long- and medium-term plan in the budgetary sector to provide a comprehensive response to people regarding the hierarchy of goals and objectives, prospects for growth/reduction of a budget deficit and a public debt. The specified indicators are essential in the context of the regulation of the level of tax burden and creating conditions for economic growth. For Ukraine, this issue is extremely acute, because over the last decade the share of public debt in GDP grew exponentially, from 12.3 % in 2007, to 71.8 % in 2017. Based on the time required to implement the fiscal policy measures relative to the time when state institutes announce a specific plan, one should distinguish between the following categories:

a) not-planned (spontaneous) measures implemented at the time of their announcement;

b) measures that are implemented with a time lag, planned in past budget periods, specifying the terms of their staged implementation;

c) measures that are planned for practical implementation in the future.

Theoretical provisions and empirical experience suggest the different degree of the effectiveness of the specified measures. Planned character and consistency of budgetary policy is an important precondition for its effectiveness, but the accuracy of the macroeconomic projections is an obstacle in this case. In addition to the responsibility of public institutions for the development and implementation of measures of economic policy, there are the force majeure situations, such as «Black Swans», which are hardly predictable while being essential for further development.

Robert Rubin, Peter Orszag, Allen Sinai note that studies into the regulation of a budget deficit failed to pay enough attention to the following aspects:

a) a characteristic uncertainty in the development of a macroeconomic situation;

b) asymmetry of measures in the budget-tax policy (to increase taxes — to reducing budgetary expenditures, to reduce a tax burden — expenditure grow);

c) reduced maneuverability and flexibility in fiscal policy over the next budgetary periods when increasing the expenditure part of the budget or introducing tax breaks and lowered tax rates[37].

Inflating the values for the predicted economic and budgetary indicators leads to a growth of the deficit, an understatement — to conducting fiscal restrictions and excessive consolidation that could also inhibit economic development. It was empirically confirmed that reducing the size

of a deficit is a powerful economic challenge, while its increase does not represent any difficulties. Thus, it is necessary to have a careful and substantiated approach to the issues affecting the regulation of tax rates, taxation base, benefits, as well as decisions that determine budgetary expenditures, in order not to create obstacles to the implementation of the balanced budgetary policy in the medium term.

An analysis of the main directions of the Ukraine's budget policy has revealed the lack of a unified approach to the formation of this document as a basis for the development of a budget for next year or a medium term. We have considered two basic indicators — the limit level of the budget deficit and specific weight of the redistribution of the gross domestic product via the budgetary system. At various times the government used different indicators to measure these indicators, for example, in 2001—2003, when determining the maximum possible size of the deficit, the necessary budgetary balance was stated, which, in the opinion of developers, is a category identical to deficit-free. In the subsequent budget periods, we found the wording of the «economically safe level», although no institutional certainty was given on the range of this level for that phase of the business cycle [38]. O. S. Vlasyuk stresses that the safest one is the deficit-free or the surplus budget; in the developed countries, the economically safe level of the budget deficit is in the range of 3—4 % to GDP[38]. Starting from 2009, the government every year determined specific limits for budget deficit relative to GDP, taking into consideration the macroeconomic dynamics. Regarding the redistribution of GDP via the consolidated budget, it should be noted that the adopted basis was the revenue part of the budget, and the reference used, in addition to numeric values, is quite often the wording: not below or above the threshold level of revenue part in GDP over past year. By systemizing the above, we suggest carrying out an analysis of deviations from the actual and the boundary values for the deficit of the state budget over 2001—2017 (Fig. 3.1), as well as the respective values for specific weight of revenue part of the consolidated budget in GDP in the specified time range.

It should be noted that the deviation of actual values for the share of the state budget deficit in GDP from the indicative indicators, planned in 2009—2010, could be explained by the unpredictable consequences of economic recession, although this statement raises some doubts, and, provided a higher level of institutional development, the planned indicators for deficit should have been different. However, the gap between the actual and declared, in the main directions of budgetary policy, values for the budget deficit in 2012—2014 is a consequence of the low level of implementation of the measures of fiscal consolidation and the excessive build-up of expenditure part of the budget. The level of redistribution of GDP via the revenue part of the budget is close to the planned values, included in the document.
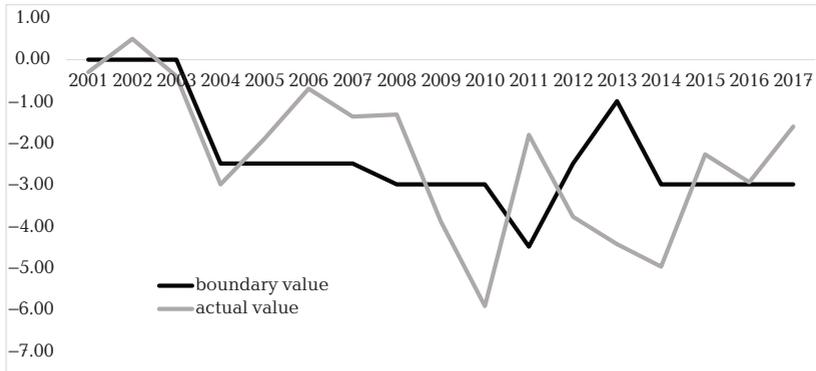
Fig. 3.1 Actual and declared boundary values for a budget deficit, % of GDP

It is relevant and necessary to further develop the system to manage a budget deficit and a public debt. Lack of substantiated decisions and measures of the budgetary policy in the field of regulation of a budget deficit leads to deterioration of the economic situation and undermines financial stability. Important issues are to define the «optimal» corridor for weight indicators of deficit and the optionality to regulation its size depending on the stage of a business cycle and the trend of economic development.

One of the ten principles, stipulated in the Budget code, that underly the budgetary system is the principle of balance that implies the correspondence of authority to effect budgetary expenditures to the volume of its revenues over respective budget period[39]. Given that a budgetary period at present is a single year, we can state that the priority of national policy is given to the concept of balancing the budget on an annual basis. This concept serves as a mechanism to somewhat deter the intensions of public institutions to build up fiscal spending even in a situation of permanently pursuing the procyclic type of budget policy, which is typical for the developing countries. The limiting level of the budget deficit is determined by the Law on the State budget, taking into consideration the availability of substantiated sources for financing the budget and arrangements with the IMF and other international institutions. Under current conditions, the deficit of the state budget should not exceed 2.5 % of GDP. A certain drawback is the use of the indicator for the deficit of the state budget, because, according to international standards, the indicators for the deficit of the public finance system are estimated, as well as the primary budget deficit, a cyclically-adjusted budget deficit. Institutional constraints in the development of these indicators act both on an annual basis and in the medium term, in the case of force majeure situations exceeding the reference values for a deficit. For state institutions, it is important to

ensure manageability of the process to limit the deficit and to finance it using available sources.

The fiscal theory of price level declares that budget policy has a significant impact on the level of prices; in order to achieve a price stability, the budget should be balanced within a cycle. Thomas Sargent and Neill Wallace stress that the pricing dynamics depends on the quality of the level of coordination of the budget-tax and monetary policy[40]. The Nobel Prize laureate Christopher Sims[41] concluded that inflation is first and foremost the fundamental fiscal phenomenon, and then — the monetary. In his opinion, the value of money depends on the expectations of society regarding the implementation of the budgetary policy under conditions of uncertainty. The institutional model for coordination of the budgetary-tax and monetary policy in the field of ensuring price stability implies that a central bank has a wide toolset and is responsible for targeting the inflation, while a government guarantees the debt stability and balance of public finances. Implementation of the decisions related to monetary policy affects public sector. In order to reduce the level of inflation, an interest rate increase measure is used, and this in turn is reflected in the domestic debt market. First, a nominal yield of domestic government loan bonds (hereafter, DGLB) increases, and, second, an increase in the level of profitability leads to the activation of speculative demand for them by non-residents. Ukraine experienced it at the end of January 2018 when non-residents actively sold the currency to purchase 6-month DGLB, and then received payments and converted the money into currency, which led to a certain devaluation of the national monetary unit.

In the case of debt financing of a budget deficit, its effect on inflation is carried out through the channel of interest rates, which increase with the increased volume of DGLB release, which is shown in Fig. 3.2.

Under the specified conditions, there is an increase in the expenditures on servicing the debt and, as noted, there is the inflow of financial capital from non-residents. The latter are interested in purchasing short-term government debt securities with the purpose of profit. Under a stable situation in emerging markets, and favorable economic conditions, overseas financial institutions are showing keen interest in DGLB of these countries. Currency conversion in UAH at the interbank currency market leads to an increase of money in circulation, which, under certain circumstances, is a factor in an increase in the consumer price indicator. An increase in the cost of servicing a public debt is an indicator of the growing need of state authorities in attracting debt financial resources to execute the immanent powers and solve the assigned tasks. The above is reflected in the increasing expectations of economic agents that adapt and optimize their activities to new conditions with the use of their own predictions of the level of inflation, using the available array of information. Rising inflationary expectations hold back business activity in the economy, they represent the public distrust of the monetary regime of inflation targeting, which reduces the effectiveness of its application.

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        │ of government   │                   │
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        │ Increase in     │                   │
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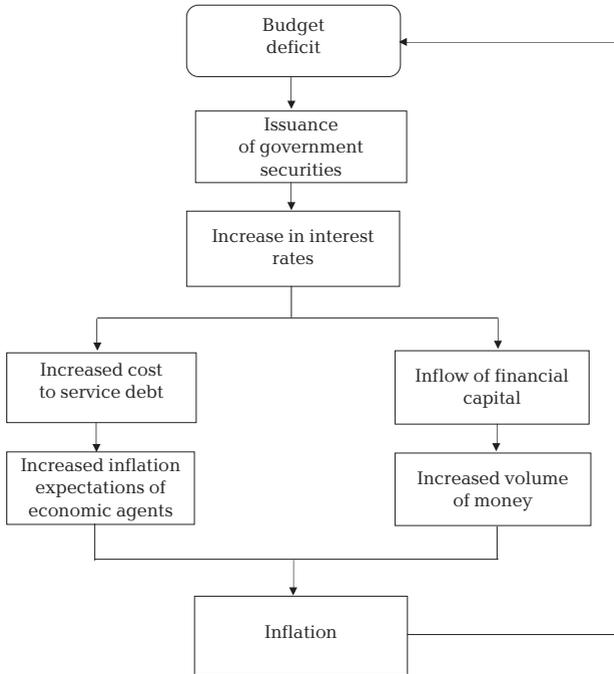
Fig. 3.2 Mechanism of the influence of budget deficit on inflation

Data from Table 3.1 show that the unambiguous indicator of consumer price index over 1996−2018 was recorded only in 2001− 2005, is 7.26 %, at the lowest value for specific weight of the state budget deficit of in GDP, 1.02 %. One should note that in 1996 the funding of the budget was partly due to money issue, which was in general the only source to cover the budget deficit in 1992−1994. There was no strong relationship between the weight indicator of the budget deficit and the index of consumer prices, but the direction of change in the values for the specified indicators coincide; an increase in the ratio of the deficit to GDP leads to an increase in the country's inflation. Certainly, there is a large number of factors that impact a change in the dynamics of a consumer price index, and budget deficit is only one among them. At the same time, for a country with the emergent economy it is important to develop and implement a budget with a deficit, which is smaller in relative terms than that in the developed countries due to the low liquidity of government debt securities.

Risks of the unbalanced fiscal policy and permanent two-digit inflation, which could sometimes move on to running rates, are urgent for countries that are included in the category of developing countries. Under conditions

of financial disruption and high inflation, state institutions are forced to switch to a policy of budget consolidation. At the same time, when a macroeconomic balance and relative price stability are achieved, there are strengthened intentions to pursue the stimulating budgetary-tax policy[42]. But the fact is that the effectiveness of such measures is extremely low, and the focus is on the issue of increasing budget expenditures, the lion's share of which is unproductive and does not have a positive impact on the growth of real GDP. Usually, there is a dominating opinion on that improving social guarantees to the least protected layers of people would lead to an increase in domestic demand and the intensification of economic activity of economic agents. In practice, the effectiveness of such activities is significantly lower than expectations, and is often accompanied by additional interest points to the consumer price index and by certain problems with the fulfillment of accepted obligations in next budget periods. A pessimistic scenario leads to the unpredicted destructive consequences for the economy and the social sphere, provoking resort to the monetization of the budget deficit.

Table 3.1 Budget deficit and certain macroeconomic indicators

Period	Share of the state budget deficit in GDP, %	Consumer price index	M1 to GDP, %	Foreign direct investments, % GDP
1996 — 2000	−3.16	22.96	12.53	1.47
2001 — 2005	−1.02	7.26	18.82	1.93
2006 — 2010	−2.64	14.38	24.79	4.89
2011 — 2015	−3.46	14.62	24.96	3.13
2016 — 2018	−2.28	13.05	21.19	3.20

Source: calculated by author based on data from the State treasury service of Ukraine, State service of statistics of Ukraine, the National Bank of Ukraine

Given the above, it seems appropriate to introduce fiscal rules, as noted in other chapters of our study, which would imply the effective instruments of control over the degree of budgetary balance. Their introduction and prediction of procedures for the mechanisms of compliance acts as a means to increasing the quality level of the institutional principles of budget-tax policy. Determining the boundary values for indicators of a budget deficit and a public debt is a classic measure, which acts as a deterrent in the process of forming a fiscal policy. Strengthening the fiscal discipline by imposing institutional constraints requires achieving a social consensus in matters of the degree of redistribution of GDP via the budgetary system, the level of fiscal decentralization, and the compositional structure of expenditures. Given the functional significance of the redistributing function of the budget, one must state that budget expenditures are financed by the mobilized revenues, whose base are taxes. Implementation of assignations

for maintaining, sometimes excessive, number of civil servants, underdeveloped social sphere, which does not render services of suitable quality, compared to public requests, unjustified transfers, and social assistance to certain categories of people, emphasizes the relevance of modernizing the budget architectonics.

The high ratio of budget expenditures to GDP is observed for countries with the well-developed institutional matrix of economy (Scandinavian countries), or with the plan-centralized management model, where the role of the state in the organization of social existence is dominant. Instead, for Ukraine, the urgent issue is not to increase weight indicators for revenues and expenditures, but a gradual reduction of their values. Given the declared magnitude of the boundary volume of revenues part of the consolidated budget, stated in the main directions of fiscal policy since the early 2000s to be 30.0 % of GDP and maintaining the value for a budget deficit in the range of 1.5—2.0 % of GDP, it is appropriate and reasonable in the medium term to reduce the share of expenditures in GDP by 3.0—4.0 percentage points. That would require structural changes in the model of financing the social sector, social protection programs, modernization of the mechanism of public management. Serious challenges along the way to implement a given task are substantial amounts of spending to service the state debt, increased expenditures on national defense and security — at level not lower than 5.0 % of GDP (under conditions of the military-political conflict and the need to reform the defense-military complex), with a significant amount of transfers from the state budget of PFU for pension payments.

The state should introduce constraints on a cyclically adjusted (structural) primary budget deficit. If the specific share of spending on debt service exceeds 2 % of GDP, the budget should be approved with a primary surplus, when a value for the specified indicator is less than 2 % of GDP, the budget should be balanced, or with a substantiated position with a structural deficit that does not exceed 0.5 % of GDP. In addition, it is necessary to institutionalize basic provisions for the implementation of the fiscal policy for the case of exceeding the reference values for the budget deficit. The growth of the deficit could be caused by systemic miscalculations and shortcomings in the state economic and social policy, as well as by exogenous factors of influence, which predetermines the expediency of improving the instruments of control over the balance of the budget. In our opinion, the central body of the executive power, CMU, must present a detailed action plan for reducing the budget deficit within the limits of the approved schedule. One should refer to international experience, which has repeatedly demonstrated that a drastic reduction of spending or raise in taxes, aimed at reducing the deficit, has a negative impact on the country's economic development. We stress one more time the need to develop and adopt a state financial strategy, which would include indicators for a budgetary system relative to GDP.

By taking into consideration the provisions of the strategy, the state must form a budget for the planned period, as well as for the next two budget periods, with the establishment of limits for indicators of the public debt, budget deficit, and expenditure part of the budget. Reducing the GDP redistribution via a budgetary system should be a priority for Ukraine, it is obvious that measures of fiscal consolidation, which are aimed to reach the objective, should be implemented under the condition of economic growth. First, it will not essentially impact a decrease in the level of financing the budget programs, including social, and, second, it will make it possible to prepare in advance for further possible challenges of economic recession. At the same time, there has to remain a certain reserve of fiscal maneuverability in the short-term period. Reducing a tax burden, given the existing toolset, should be carried out not through the implementation of targeted compensatory measures, but by optimizing expenditure part of the budget. This process is lengthy and requires active participation of the society, call for a meaningful dialogue with the state using a broad methodological platform at all levels and stages to substantiate a constructive position, to present its potential outcome. It is necessary to adapt to the new conditions of management, to focus on the quality of public services, rather than their formal rendering to recipients.

It is advisable to analyze the ratio of a budget deficit to the component of the category of productive expenditures — capital investments. We share the opinion that the funds that are used to cover a budget deficit should create preconditions for the further economic growth. Investments in transportation and social infrastructure, provided their proper level of effectiveness that requires permanent assessment of the quality of the executed works, serve as a tool to revitalize business activity in a number of industries, which creates an additional added value. The latter, in turn, provides the increased level of employment, improves domestic demand, which provides impulses for the country's socio-economic development. At the same time, it is necessary to note that even at sufficiently high indicators for the efficiency of using budget funds, the approval and execution of the budget with a lower deficit indicator could better affect the dynamics of the main macroeconomic indicators given the effect of crowding out investments. Insufficient development of institutions, a procyclic type of the budget policy, a significant degree of influence of the political cycle, predetermine the appropriateness of limiting a budget deficit for the country with a transitional economy.

Fig. 3.3 shows the dynamics of weight indicators for the Ukraine's consolidated budget deficit, as well as capital expenditures effected at the expense of the state and local budgets in the GDP. We identified 7 years over 2001—2017 in which the volume of a budget deficit exceeded capital investments (2009—2010, 2012—2016).
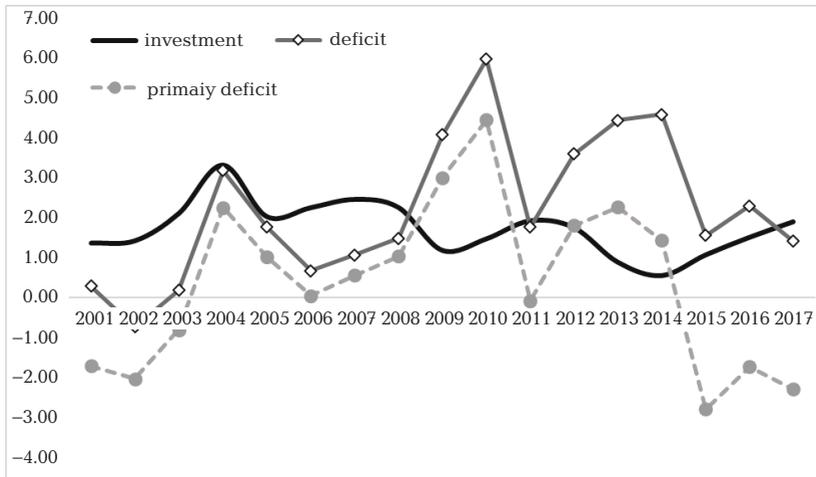
Fig. 3.3 Deficit of the Ukraine's consolidated budget, and capital investments made at the expense of budget funds, % GDP

However, a possible variant to channel the borrowed resources, in-volved to cover the deficit, is the financing of expenditures to service the public debt. Theoretically, should the country have no any debt, the need to form a budget with a deficit would be less. Thus, the relevant task of present research is to conduct a comparative analysis of values for the pri-mary budget deficit and capital investments made at the expense of budget funds. The deficit exceeded the capital investments in 2009 − 2010 and 2012 − 2014. The specified fact testifies to that the resources, attracted to cover the deficit, were used to finance current expenditures from the budget. The great Recession and its implications for the domestic economy required the strengthening of the role of the state to support the finan-cial-banking sector and to ensure financial stability; however, the increase in minimum social guarantees over that period due to new loans, as well as disruption of the macroeconomic equilibrium, is a controversial measure in the budgetary policy. The second half of 2012 saw the first signs of a second wave of recession, caused primarily by external factors and the weakness of the domestic market and demand, including for commodities, which are dominant in the structure of production. It is appropriate to adapt fiscal policy to the economic situation, taking into consideration the retrospective experience of countries with the emergent economies in relation to the ma-nagement of the budget deficit. A priority for state institutions should be a decrease in the share of budget expenditures in GDP and a decomposition of their structure. Budget optimization has greater benefits of socio-eco-nomic character than the stimulating measures of budgetary regulation.

The situation of steady budget deficit activates efforts of respective institutions to reduce the level of a debt burden on the budget. The favorable economic conditions contribute to the placement of government debt securities in the external market, however, subsequent budget periods face the need for attracting external financial resources for refinancing the debt. Otherwise, there is a reduction of international reserves of the country and weakening of the national currency, with a force majeure variant being the country's default. The country's problems related to obligations to service and repay the debt exert an influence on a decrease in credit ratings, the loss of trust by borrowers and investors. These circumstances act as the destimulating factors of economic development in the long term. Balancing the budget has a strong relationship to the balance of account of current operations (hereafter, ACO); at stable and significant values for a budget deficit, there is a great probability for the deficit of ACO, which also acts as an indicator for making decisions by foreign investors and creditors. Phillip Lane and M. G. M. Milesi-Ferretti concluded, based on the results of their study, that improving a fiscal balance by 4 percentage points leads to the improvement of payment balance by 1 percentage point[43]. Under condition for a balanced budget, the deficit of ACO in the neoclassical paradigm does not act as a determinant for an economic threat; at the same time, international experience indicates that a significant deficit of ACO points to the systemic problems of the respective economy. Such a situation should eventually result in a noticeable correction of macroeconomic indicators, including the currency exchange rate. A risk zone corresponds to the ACO deficit within 5 — 10 % of GDP; for a certain period, such a deficit could be compensated for by the inflow of external loans and portfolio investments. The negative effect would be felt by countries with a high degree of dollarization of the economy and a fixed currency exchange rate (or conditionally controlled regime of a floating exchange rate), which was confirmed by the substantial devaluation, which had a destructive impact on the overall economic situation in 2008 — 2009, 2014 — quarter I, 2015. One of the possible scenarios for the case of a confidence crisis by investors and lenders is the termination of the inflow of external financing to cover a budget deficit. Portfolio investors at once start to move their capital from developing countries to the highly developed countries to minimize the risks, thereby further destabilizing the situation in the emergent economies.

Participants of the domestic state loans market react to the worsening expectations of foreign counterparts, which leads to a decrease in interest in DGLB and rising interest rates, accordingly. Existing holders of debt securities can, after the term of repayment, convert funds in currencies or other assets in order to minimize risks. In response to such actions, monetary regulator has to raise the discount rate to increase the profitability of hryvnia bonds, and a government, given the urgent need to attract currency,

has to issue foreign currency DGLB with the higher interest rate than the average yield of currency deposits in the market. It is obvious that raising a basic interest rate affects the growth in the value of loans to entrepreneurs and people, which acts as a deterrent to economic development. The above predetermines the decline of trust by economic agents regarding the pursued state financial policy and prolongs the transitive period of their expectations regarding the possible recovery of business and investment activities.

Stanley Fischer notes that the main indicators for the evaluation of a macroeconomic policy is inflation, a deficit/surplus of the budget, existence of a black market for currency exchange[44]. When the inflation rate and the budget deficit exceed the permissible threshold values (for developing countries, consumer price index exceeds $8-10$ %, deficit $-$ $2.5-3.0$ % of GDP), and the shadow segment of the currency market is significant, the essential measures are the macroeconomic stabilization, currency liberalization, demonopolization of markets of natural monopolies and a transition to the market-based pricing principles. The only controversial issue in such a situation is the time range for the implementation of structural reforms $-$ in stages with the approved timetable, or at a fast pace and at the same time, which is called in the scientific literature a «shock therapy». International financial institutions, including IMF, from which countries seek financial support and lending, increasingly insist on the second variant. The reason for this is the low institutional capacity of government bodies, responsible for the elaboration of a budgetary-fiscal and monetary policy, to comply with the adopted obligations over the entire duration of the approved program.

The latter are forced to look for a kind of balance between electoral wishes inside the country and to ensure macroeconomic stability, which is sometimes impossible without external funding. The result is the IMF suspended funding, which in many cases is accompanied by disruption of financial stability and the country's reduced credit rating that closes the access to attracting borrowed funds in foreign financial markets.

One should note that from 1995 (in which this state for the first time received a loan from the fund) to 2018 Ukraine signed 9 credit agreements with the IMF, in particular, 7 are short-term, up to two years (Stand-by Arrangement) and 2 medium-term for $3-4$ years (Extended fund Facility). At the same time, only one program, the Stand-by Arrangement, was fully funded: it lasted during from May 10, 1996, to February 23, 1997; the rest were funded only partially.

The reason for early termination of programs was the failure to fulfill the framework tasks by the state, related to the implementation of a series of institutional reforms in the financial sector and the system of state administration, to conducting the declared activities of budgetary consolidation.

3.4 A public debt management system

Public debt is an important economic category, which reflects the totality of economic relations in the field of attraction of leveraged financial resources in order to finance the deficit of the national economy on the basis of return, payment, and timeliness. Under the present stage of socio-economic development, there is enhanced attention to improving the effectiveness of public debt management in order to optimize the structure of debt obligations of the state. It is important to enhance the effectiveness of the methods for public debt management based on the formation of the priorities of state policy in the medium and long term. It is necessary to implement a balanced and systematic approach regarding the formation of the state policy in the field of attraction, distribution, use, and return of borrowed financial resources, thereby ensuring the macroeconomic stabilization. Special attention must be paid to studying the issue of external public debt management given the significant reduction in the volume of the country's foreign-exchange reserves, the devaluation of the national currency, and the need to service and repay the existing debt to international lenders. It is expedient to improve the institutional foundations of state debt policy, enhancing the level of its coordination with other components of financial policy.

A public debt management system is understood as the totality of measures by the state to determine the necessity, conditions for attracting, servicing and repayment of government loans to ensure public interests, but without compromising the country's economic security. A given system includes such subsystems as forecasting and planning of volumes of the repayment and servicing an external public debt, assessment and selection of methods to manage a public debt, monitoring and control, institutional support to the process of debt management. The state institutions that carry out a public debt management include agencies, organizations, institutions, which are assigned, according to acting legislation, the duty of public debt management. The Cabinet of Ministers of Ukraine is the representative of the state's interests in placement of state borrowings and the provision of state guarantees for loans. A special role in the area of public debt management belongs to the Ukraine's Ministry of finance, in which there is a public debt management department. It includes structural divisions whose activities are related to the planning and preparation of credit projects, analysis, accounting, servicing the public debt.

Managing and servicing a public debt is one of the priority tasks of the state's financial policy, an important condition for the stability of its financial system. Effective debt management at all stages would make it possible to avoid debt crisis situations and peak loads on the budget related to the servicing of the public debt, would help ensure the stabilization of socio-economic situation and development of economy. Preconditions

for ensuring an effective public debt management are to determine the priorities and objectives of public debt management, to identify risks and benefits when making borrowings, to distribute responsibilities between the state authority that carries out monetary and credit regulation and the Ministry of finance, which places obligations, ensures the implementation of a reasonable policy of debt refinancing, the formation of an effective institutional structure for the system of public debt management to reduce operating risks.

Public debt management is carried out by applying the following methods: refinancing a public debt — repayment of the main body of the debt and interest from funds received from placing new state debt obligations in domestic and external financial markets; novation — implies conclusion of the agreement between the borrower and lender to replace certain debt obligations by others; unification — decision by the state on the combination of several previously issued loans, as well as the exchange of previously issued bonds and bond certificates to certificates for new loans; conversion — a change in the original terms of government loans and a change in their level of profitability; consolidation — implies changing the conditions of borrowing related to increasing the terms of debt obligations; deferment of repayment of loans — application of the method of consolidation with the simultaneous failure of the state to pay revenue on these debt liabilities; the cancellation of the public debt, which implies a waiver of the state from the previously assumed debt obligations; restructuring — reconsideration of conditions to service the debt, including loan's interest, the amount, the time of return; writing off a debt; securitization — an exchange of debt to bonds; an exchange of bonds based on regression ratio when several previously issued bonds are equivalent to the new one; early repayment, which implies savings in budget funds if they are required to service them in future.

These methods are applied individually to debt obligations that make up the national debt; they have their own specificity. In addition, some of them could be individual for a specific type of the debt obligation (for example, exclusively for government securities). Public debt management methods could be divided into administrative and market-based. The first group includes: conversion, consolidation, harmonization, deferment of repayment, debt cancellation. The second group includes restructuring, novation, securitization, exchange, early repayment, etc. Underlying this division is such an attribute as making a decision on using a method of debt management. Administrative methods are characterized by the unilateral adoption of the decision on their application by the state without obtaining a prior consent from the lender, while market-based, in turn, imply conciliation, that is, making a decision is preceded by a negotiation process between the lender and borrower, and the creditors have the right to decide whether to agree to the proposed terms or abandon them.

In order to improve the effectiveness of management, a debt management system must be based on the following principles: the unconditional fulfilment by the state of all obligations to investors and creditors; unity — accounting in the management of the public debt of all types of obligations, issued both by the state and received under a government guarantee; reduction of risks; optimal structure — maintaining the optimal structure of debt obligations by the state under the terms of circulation and repayment, to mitigate the «peaks» of payments; maintaining financial independence — the optimization of the structure of debt obligations by the state among investors-residents and investors-nonresidents, a gradual replacement of external borrowings with internal; reducing the cost of servicing a public debt — through the early redemption of debt obligations of the state; transparency — compliance with the full transparency of borrowings, ranging from consideration of their appropriateness to complete redemption, providing access of the international credit rating agencies to authentic information about the economic situation in the country-borrower.

The issue of macroeconomic stability, which is one of the priorities in the development and implementation of measures of the country's financial policy is closely connected to the management of a public debt. An increase in the ratio of government debt to GDP immediately calls for the search for solutions on the stabilization of this indicator and its subsequent decrease. At the same time, even when there is a decrease in the values for specific weight of the debt in GDP, there is a controversial issue to assess the degree of influence of factors on the achieved result: as a result of carrying out a purposeful policy or whether this decrease is caused by a trend of economic development and favorable economic situation. It is a fair question about what happens to the level of the public debt in the future in the case of a slowdown in the growth of real GDP, or a transition to economic recession caused by exogenous factors. A public debt management policy is the reflection of decisions by the authorized state institutions on the choice of a combination of methods, tools, means of attraction of loan resources in order to refinance the existing debt and to cover the deficit of public finance taking into consideration variable scenarios of risk related to such engagement. The main stages in the process of such management are the forecasting and planning of volumes of attraction, redemption, and servicing a public debt, an institutional constraint to the limit level of public debt, combinatorial application of methods of public debt management, monitoring and control over the effectiveness of measures related to management, permanent monitoring and control over debt risks. Factors that affect the nature and the time range of the manifestation of risks is the currency of issue of government securities; the term of their circulation; the rate of yield and its fixation; the liquidity of government debt securities, etc.

It is advisable to pay attention to the fact that a national debt in practical terms is not the sum of the deficits of previous periods as is often

proclaimed in the theoretical positions of financial science. There are certain differences and adjustments, which in the western terminology is treated as the stock-flow adjustment or the deficit-debt adjustments. The size of specific weight of the public debt in GDP depends, in addition to the weight indicator for the budget deficit, on such indicators as a GDP indicator-deflator, the pace of economic development, the structure of government debt in terms of internal and external and the dynamics of currency exchange rate, a real return on government securities. Values for the deficit-debt adjustments for Ukraine are given in Table 3.2.

Table 3.2 Public debt on the deficit of the Ukraine's state budget, % of GDP

Period	Public debt at the beginning of period (1)	Public debt at the end of period (2)	Sums of deficits over period (3)	dda (2)−(1)−(3)
1996 − 2000	34.71	37.76	14.45	−11.40
2001 − 2005	37.76	14.30	5.10	−28.56
2006 − 2010	14.30	29.88	13.21	2.37
2011 − 2015	29.88	67.10	17.29	19.93
2016 − 2018	67.10	61.51	4.56*	−10.15
1996 − 2018	34.71	61.51	54.61	−27.81

Source: calculated based on data from the State treasury service of Ukraine and the State service of statistics of Ukraine

It should be noted that the indicator for public debt in the Table includes exclusively a direct government debt. Over 1996 − 2018 the cumulative indicator for a budget deficit was higher than the debt difference by 27.81 % of GDP, however, based on five − year periods, there are opposing trends in the relationship between the specified indicators. Thus, in 1996 − 2000, 2001 − 2005, 2016 − 2018, values for the deficit-debt adjustments are negative, whereas in 2006 − 2015 − positive.

Decomposition of an increase or decrease in the ratio of a public debt to GDP should be carried out into the following interrelated components:

a) the nominal yield of government debt securities;

b) inflation;

c) an increase in real GDP);

d) an exchange rate for the external public debt and part of the internal debt denominated in foreign currency;

e) primary budget deficits. Note that more than 60 % of the total public debt were issued with a fixed interest rate, and about 7 % with the rate, which is indexed to the rate of inflation, the remaining debt obligations are tied to the IMF and LIBOR rates.

Given a rather high indicator for specific weight of securities issued with fixed yields and a certain shortage of statistical data, we would not consider

The absence of price stability, a two-digit inflation, characteristic of the domestic economy, which over certain periods moved to a running state, was the main deterrent for the growth in an indicator for a public debt to GDP. In contrast, in the developed countries, the focus for development a management strategy for a public debt is to reduce the cost of its service and to achieve a balanced composition of the public debt structure, taking into consideration the term of their turnover, yield, varieties of rates, currency to repay, debt repayment risk management and a decrease in the level of their destructive impact on economic growth. A significant proportion of debt, denominated in foreign currency, and the devaluation of the national currency predetermined an increase in the ratio of government debt to GDP by 52.37 percentage points, expenditures for its maintenance — by 21.21 percentage points, the primary deficit of the state budget — 8.95 percentage points.

To be considered is the level of public debt in 2001—2005; over the specified period, against a background of sustained economic development and a stable national currency, the budget was formed and fulfilled with a moderate deficit, which made it possible to significantly reduce the ratio of debt to GDP. Over five years, the total state budget was executed with a surplus of 0.89 % of GDP. The balanced budgetary policy and the performed restructuring of the public debt made it possible to considerably reduce the cost of its maintenance in 2001—2005 and 2006—2010. In turn, over the period of 2006—2015, a growth in the weight indicator of debt was significantly higher compared with the cumulative indicator for a budget deficit. On average, an annual decrease in the real GDP in the specified time span was 0.38 %, in part due to the significant economic decline in 2009, 2014—2015, so the positive impact of the factor of economic development on the debt dynamics was neutralized. The national currency was devalued by 326.26 % against USD (based on the official average exchange rate), which resulted in an increase in the external public debt in the general structure and a rapid growth in the ratio of public debt to GDP. The policy of a fixed exchange rate resulted, in addition to reducing the international reserves of the country, to sharp fluctuations in the debt dynamics and enhanced economic turbulence. It is good to note that that the effectiveness of measures in the area of public debt management depends on the quality of coordination of fiscal and monetary policy. First, the establishment of a regime for the exchange rate and the respective targets is in the competence of the national bank. Second, there are different variations in the interaction between the specified policies with respect to the impact on inflation. Subject to the implementation of an active monetary policy and a restrained fiscal policy, the implementation of tools for inflation targeting makes it possible to remove or minimize the gap between the declared and the actual value for a consumer price index that absorbs the negative effect of the unexpected surge in inflation on the state of a debt market and confidence in the state policy in general.

Given the need to assess the transformation of anxieties about the high weight indicator for a public debt in GDP into purposeful decisions of the authorized institutions that are responsible for the formation of a debt policy, the issue of debt repayment is crucial. The currency (national or foreign), in which the debt securities were nominated, are a significant factor in the capability of the state to guarantee full repayment of the debt in the set term. The size of the debt, through the issue of DGLB in the national currency, has a strong relationship to the consumer price index and basic interest rate, and according to the terms of the issue of DGLB in foreign currency or bonds of foreign government loan, the debt level depends on the exchange rate.

It is important to study the structure of the state and state-guaranteed debt based on the currency of repayment in order to assess the risk of devaluation of the national currency. In addition, the distributive impact of inflation depends on the allocation of public borrowings among foreign and domestic creditors. Over 2001 — 2018, the average value for a share of the debt that was nominated in the national currency was 24.76 % in the general structure of the debt, and in the foreign currency — 75.24 %. It should be noted that the share of the internal state and state-guaranteed debt over the analyzed period is 30.25 %, external, respectively, 69.75 %, testifying to the issue of DGLB denominated in foreign currency, specifically in USD.

These data demonstrate the high dependence of the state on external funding and point to the lack of development of the domestic debt market, which requires the extension of cooperation with international financial organizations, as well as systemic changes in the financial sector. In the case of imbalance of public finances and growing volumes of deficit, there are heightened risks of growth in the basic interest rate, which leads to an increase in the cost of debt service and calls for effective decisions regarding debt management. It is necessary to remember that the internal debt is mostly (except for non-residents) the result of the redistribution of financial resources within the country. Economic agents, by making a decision to direct their funds for the redemption of DGLB, gave the right to the state to spend them temporarily, by decreasing the potential of free capital in the form of savings to transform into investments to the real and financial sector of economy. Even in the case the state directs loan resources to finance investment projects, the level of their effectiveness is lower in comparison with the private sector, especially for countries with an inadequate level of the development of institutions and the weak system of state governance.

Numerous recommendations for the full use of potential of the domestic debt market and increasing the share of domestic debt in its general structure[45,46], the implementation of the gradual substitution of external with the internal debt[47,48,49] are, to some extent, justified, however, one should realize that this issue lies in the wider plane than a public debt management policy. In order to repay an external public debt, without

compromising the existing international reserves, one should resort to the external lending or issue DGLB denominated in foreign currency. A fundamental prerequisite for the implementation of this measure is the elimination of the deficit of foreign currency in the country, and increasing the confidence of economic agents to this type of debt instruments. The specified issues belong to the general conditions for the functioning of the national economy. After all, the main influx of foreign currency into the country is through exports of goods and services, foreign investments, loans and transfers from citizens employed abroad. In order to eliminate the weight indicator for an external debt in the total structure, it is necessary to intensify the process of attracting foreign investments and to expand the country's export potential. The implementation of institutional reforms, such as increasing the level of protection of property rights of investors, confidence in the law enforcement system, bringing the economy out of shadow, creation of favorable conditions for entrepreneurial activities, the engagement of financial mechanisms to support and stimulate the sectors of economy with a high coefficient of creation of the gross added value, must become key objectives for state policy in the specified direction.

We stress that the possibilities to timely service and repay the country's external debt significantly affect the overall level of financial stability. A priority for the policy of public debt management is an increase in the terms of circulation of external borrowing, which could not be achieved without increasing the credit ratings of the issuer country. Implementation of the specified measures implies a set of activities to reduce the number of risks of economic and socio-political character. The latter type of risks is evident in the orientation and activities of state institutions in terms of attracting a credit resource to perform the set tasks without a proper coordination of the timing to repay the debt securities. The above leads to peak loads on the budget and requires significant amounts of loan resources to repay past debts. Such a situation generates a chain reaction because it enhances the risks of uninterrupted external refinancing. Limited access to international financial markets of capital as a result of the high degree of risk leads to a significant increase in the profitability of borrowing, reducing the terms of their circulation, increasing pressure on international reserves.

In addition, Ukraine has repeatedly faced a liquidity risk with a situation when there are no possibilities to place government bonds in foreign markets and there are critically low volumes of international reserves; a dangerous case was registered at the end of 2014 — beginning of 2015. Specifically, in February 2015 (as of the end of the month), the size of official reserve assets was USD 5625.31 million, which was identical to the value of 1.4-month imports of goods and services, although the economically safe indicator should not be less than 3 months. Considering that international reserves include the monetary gold, special rights of borrowing and the reserve position in the IMF, reserves in foreign currencies, including foreign currency in the

form of bank notes and coins or cash in the accounts overseas, securities that are paid for in foreign currency, other internationally accepted reserve assets, under condition of ensuring their reliability and liquidity, it is necessary to ensure their optimal structure. Given the low level of reserves and almost the absence of foreign currency in their composition at the beginning of 2015, further administrative measures in the field of management of the external debt were under a serious doubt, and, due exclusively to cooperation with the IMF and a significant tranche in March 2015, the state managed to keep the situation under control and to avoid a default that could have undermined the country's macroeconomic stability and would have strengthened reputational risks of the state as a borrower for a long period.

The term of circulation of the state debt securities acts as an important element of the policy of its administration; in order to avoid excessive (peak) loads associated with the repayment of the debt, it is relevant and important to form a balanced portfolio of debt instruments based on this criterion. Joshua Aizenman and Nancy Marion[50] in their study into the USA debt policy concluded that under condition of a significant share of foreign debt holders, there are amplified intentions on an increase in inflation for the so-called «debt erosion». However, the decreasing dynamics in the index of maturity of debt obligations acts as a deterrent of inflationary processes. Price stability in the period of economic globalization is a priority objective of the state financial policy; its absence predetermines the fixation of uncertainty for economic agents whether to carry out investment activity. Finding an optimal balance between the structural components of debt (based on circulation) is driven by the desire to reduce the risk of liquidity. The short-term government borrowings are such whose maturity does not exceed 12 months; however, the issue on the division of borrowings into medium- and long-term is still debated. The long-term ones, according to some authors, include the 3-year DGLB, in the foreign literature this term is typically extended to 5 years, while in the United States it is considered that the long-term debt securities include those whose term of circulation exceeds 10 years. In our study, we refer to the long-term borrowing whose maturity exceeds 5 years.

The structure of a government debt in the context of repayment plays a significant role in determining the effectiveness of debt management policy, the variability of its scenarios makes it possible, in a certain way, to neutralize the effect of change in the interest rate on the cost of debt service. Table 3.4 gives the profitability of short-, medium-, and long-term DGLB, denominated in the national currency, the funds from their placement were used to cover the deficit of the state budget.

The weighted average yield of all types of DGLB based in periods amounted to: 2001—2005 — 10.96 %, 2006—2010 — 12.71 %, 2011—2015 — 13.54 %, 2016—2017 — 15.54 %. One could verify that the level of returns on bonds was stable, and slowly rises, even with a decline in the consumer price index. Over 2001—2017, the weighted average yield on short-term DGLB

amounted to 13.14 %, medium-term — 12.95 %, long-term — 11.98 %. An almost unrecognizable differentiation in the values for profitability based on the criterion of debt securities circulation term indicates the presence of significant inflation expectations of economic agents, caused, in particular, by their mistrust to the ongoing measures of the country's monetary and budget-tax policy, as well as the inadequate level of their cooperation and coordination. In addition, investors show no interest in purchasing the long-term DGLB because of the high level of the consumer price index and the discount rate. Two-digit inflation, a significant fluctuation of its values, pose greater threats than benefits for the effectiveness of public debt management activities, we primarily mean the reputational risks in the market of borrowing. The lack of price stability has a significant impact on the reduction of the average weighted circulation term of the internal loan bonds.

The analysis conducted reveals that over 2001—2005 the average value for the indicator of specific weight of short-term borrowing in their general structure was 39.29 %. Over this period, we registered a clear trend to a decrease in the values of this indicator from 100 % in 2001 to 0 % in 2005.

Accordingly, the average share of the medium-term DGLB amounted to 56.61 %, it should be noted that there is a rising dynamics in the specified indicator from 0 % in 2001 to 100 % in 2005. The long-term DGLB were placed in the assigned time range in 2002 and 2004, the average proportion of the share of such debt securities was only 4.10 %. Over 2006—2010, the average value for specific weight of short-term DGLB in the general structure was 27.01 %, medium-term — 71.89 %, long-term — 1.10 %. With the advent of the Great Recession in the second half of 2008, the compositional structure of placing the government debt securities significantly changed; in 2006—2007, the short-term DGLB were not issued, while in 2009 two-thirds of the bonds have a term of circulation, which did not exceed one year. The average value for the indicator of proportion of short-term DGLB in the total structure of placement in 2011—2015 was 36.92 %, medium-term — 49.47 %, long-term — 13.61 %. At the same time, in 2011—2014, the medium- and long-term borrowing prevailed, while in 2015 more than 99.5 % of the placed DGLB in the primary market accounted for borrowings of the short-term character. During 2016—2017 the average value for the proportion of short-term DGLB, placed in the primary market, amounted to 24.65 %, medium-term — 63.58 %, long-term — 11.77 %. Changing a return on the short-term DGLB automatically affects the cost of servicing the public debt in the current budget period, prolonging the term of circulation of borrowing increases the accuracy of the forecast and the public debt management plan.

In the presence of a substantial proportion of the short-term debt denominated in foreign currency, countries with the transitional economies face an increased level of liquidity risk due to potential threats to its maintenance and the lack of intentions by borrowers to refinance the debt. Part of the lenders does not intend to assume high risks affecting the issues

of timely and full repayment of the principal amount of the debt, taking into consideration the potential announcement of a default.

Table 3.4 Funds involved in the budget by placing DGLB (denominated in UAH) in the primary market in 2001 − 2017

Years	Short term loans (to 1 year)			Medium term loans (1 − 5 years)			Long term loans (exceeding 5 years)		
	UAH million	share, %	Weighted average yield, %	UAH million	share, %	Weighted average yield, %	UAH million	share, %	Weighted average yield, %
2001	1190.1	100.0	15.68	—	—	—	—	—	—
2002	1358.5	47.69	11.56	1070.8	37.59	10.48	419.3	14.72	9.60
2003	556.4	47.91	9.92	604.9	52.09	9.73	—	—	—
2004	18.5	0.84	10.89	2037.4	93.36	11.25	126.7	5.80	10.74
2005	—	—	—	7153.2	100.00	7.25	—	—	—
2006	—	—	—	1597.8	100.00	9.26	—	—	—
2007	—	—	—	3623.1	100.00	6.74	—	—	—
2008	1187.6	12.15	14.32	8584.2	87.85	14.91	—	—	—
2009	12470.2	66.19	19.76	5333.3	28.30	21.65	1037.8	5.51	15.60
2010	22921.5	56.70	11.39	17502.9	43.30	14.39	—	—	—
2011	9726.2	33.65	7.93	17472.1	60.44	9.44	1707.6	5.91	9.50
2012	8791.2	24.46	13.55	18531.6	51.55	13.26	8625.1	23.99	14.22
2013	8194.5	16.22	7.02	29171.2	57.74	14.08	13155.3	26.04	14.19
2014	7180.0	10.70	13.11	51830.7	77.22	15.49	8109.6	12.08	15.50
2015	9935.5	99.58	17.00	42.8	0.42	16.66	—	—	—
2016	5487.4	14.82	16.64	22827.2	61.65	17.63	8710.7	23.53	6.50
2017	11224.0	34.48	15.23	21440.5	65.52	14.91	—	—	—

Source: calculated based on data from the National Bank of Ukraine

An important criterion for the effectiveness of public debt management policy is not only the term of circulation of respective securities, but also the stability of the structure of borrowing based on this attribute. The priority goal of the strategy of government bond issue is to minimize the cost of servicing a public debt. The category of stability of the structure could be considered exclusively in the context of compliance with the appropriate indicators for the yield on borrowings by conducting a comparative analysis of their values for countries with the same level of economic development. A permanent change in the portfolio of a public debt leads to the considerable volatility of budget-tax policy. Increasing the proportion of short-term DGLB predetermines an increase in their level of profitability and, accordingly, in the debt service expenditures. In turn, this requires searching for the compensators of budget revenues, specifically tax revenues, in order

to maintain the indicator for a deficit at the level that does not exceed the maximally declared. In the case of reduction of costs for debt service, a possible variant is to amend the law on the State budget for respective year regarding an increase in other spending. A wide range of maneuverability concerning the adjustment of a tax burden for a country with the emergent economy contradicts the declared principle of stability of tax legislation, and, in the context of the regulation of budget expenditures, poses risks for the implementation of the pro-cyclic fiscal policy. Current decisions of the authorized institutions in the field of public debt management exert a significant impact on the behavior of economic agents in future, exercising direct influence on the yield and liquidity of potential borrowing. Thus, the relative stability of the portfolio of debt securities based on the criterion of the length of their circulation acts as a specific institutional constraint when forming a fiscal policy.

It is good to carry out an analysis of the structure of DGLB holders, especially to investigate what proportion of domestic public debt is owned by the National Bank of Ukraine (hereafter, NBU). It was determined that the proportion of such borrowing increased dramatically from 0 % in 2006 to 59.69 % in 2009, then dropped to 46.50 % in 2010, then again there was an increase in the values for the specified indicator, to 77.19 % in 2015 (representing 26 % of the total volume of direct and state-guaranteed debt), afterwards we could observe a gradual decrease to the level of 48.06 % in 2017. At the end of 2017, the weight indicator for a public debt in GDP, whose holder is NBU, is 12.09 %. In terms of periods, the average value for a specific weight of DGLB, owned by NBU, in the general structure is: $2006-2010$ — 30.95 %, $2011-2015$ — 63.11 %, $2016-2017$ — 52.64 %. The lion's share of debt securities, owned by the monetary regulator, poses risks of monetizing the debt and the increased rate of inflation, which does not contribute to the achievement of the price and financial stability. Under conditions of the economic crisis and deep turmoil, a possible temporary measure is to increase the share of DGLB, which is owned by the monetary regulator. Such a forced measure, ultimately, poses a less destructive impact on the country's economy than, say, the announcement of a sovereign default. However, in the long-term period, it is relevant and expedient to lower the values for this indicator in order to achieve a macroeconomic balance.

The category of debt security and defining its clear criteria has attracted the attention by foreign and domestic scholars, state institutions, international financial organizations. In passing, we note that in many cases the criteria and thresholds for the identical indicators of debt security differ, which to some extent is explained by the different approaches to its estimation, a different quality level of institutional environment in certain countries, the degree of impact of budgetary instruments on economic dynamics, etc. The determinants of impact on the state of economic security (in general) and debt security (in particular) are the main components of the state financial

policy, namely the budgetary-tax and monetary policy, the effectiveness of their coordination and interaction. The aim of monitoring the state of a debt security is to identify weaknesses and potential risks for disrupting macroeconomic stability, determination and evaluation of the degree of influence of exogenous and endogenous factors on the dynamics and structure of public debt, development of variable scenarios for a public debt management policy.

According to O. I. Baranovsky, debt security is determined by the following factors — the total volume, structure, and dynamics of public debt; proportions and a list of possible debt instruments; growth rate of real GDP and the official currency rate; the system of public debt management and the adequacy of debt management tools to current conditions; the country's political stability[51]. O. S. Vlasyuk indicates that the level of debt security depends on the totality of factors, specifically a) regulatory framework for a public debt management; b) the volume and the structure of debt obligations; c) stability of parameters for the monetary policy and the dynamics of economic growth; d) stability of the political course[52]. As regards the last aspect, one should note that a political course in field of formation and implementation of debt policy should be limited through the imposition of institutional constraints. Permanent significant influence of populistic political course does not promote the strengthening of country's security for countries with the developing economies. Even under condition of its stability and a relatively high development of institutions, society could face serious economic challenges, related to a sharp increase in the ratio of public debt to GDP. In Latvia, in 2007 (at the end of the year), a value for this indicator was 8.0 %, in 2010 — 46.8 %; an increase over the three-year period amounted to 38.8 percentage points; in Slovenia, in 2012, the share of public debt in GDP amounted to 46.6 %, in 2014 — 80.3 %, an increase was 33.7 percentage points. Given the above, an important task for a policy of public debt management is to ensure the safe values for debt indicators and to maintain the anticipated and forecasted amounts of government borrowing.

The most significant indicators of debt security include: the ratio of the state and the state-guaranteed debt to GDP, the ratio of the external and internal public debt to GDP, the ratio of the total external debt to GDP, the ratio of the gross external and public debt to the volume of exports of goods and services, the ratio of the external debt to international reserves, the ratio of debt service expenditures to the revenues of the state budget. Debt indicators relating to external borrowing were paid special attention to in the context of the open model of the national economy, limited capacity of the domestic financial market, considering the peculiarities of economy of the emergent type. It is relevant to improve the effectiveness of the prudential control over debt risks. In our study, we propose to calculate the cumulative indicator for a debt security based on determining the level of debt risks whose assessment is made by comparative analysis into actual and limiting values for the respective indicators of debt security (Table 3.5).

Table 3.5 Indicators of Ukraine's debt security

	$t-3$	t	$t+3$	Threshold values	Estimation of risk level based on a 10-point scale		
					$t-3$	t	$t+3$
State and guaranteed debt, % of GDP	37.67	74.83	73.51	50,0	6	10	10
Gross external debt, % of GDP	77.15	112.52	108.41	60,0	10	10	10
External public debt, % of GDP	21.84	45.86	46.43	25,0	8	10	10
Internal state debt, % of GDP	15.83	28.97	26.42	25,0	5	10	10
State debt, denominated in foreign currency, % of GDP	23.56	41.41	48.70	30,0	7	10	10
Gross external debt/export, %	160.13	220.55	220.59	200,0	6	10	10
External state debt/export, %	45.20	89.92	95.12	75,0	5	10	10
External state debt/reserves, %	153.31	526.22	279.37	170,0	8	10	10
Debt service costs/revenues of the state budget, %	8.08	14.98	13.59	15,0	5	10	9
Cumulative indicator for debt security					6.7	10	10

Source: compiled and calculated by author based on data from the Ministry of finance of Ukraine, the National Bank of Ukraine, and the State service of statistics of Ukraine

Calculations were carried out for the following time periods: t includes two crisis years $2014-2015$; $t-3$ spans three pre-crisis years ($2011-2013$), accordingly, $t+3$ includes three post-crisis years of recovery ($2016-2018$). One could see that even over the pre-crisis period the values for the integral indicator of the country's debt security pointed to the high level of debt risk, primarily associated with a significant weight indicator for the gross and public external debt. This situation is predetermined by a significant rise in the level of state debt during Great Recession, as well as the unstable dynamics of further economic recovery.

Over periods t and $t+3$, values for the indicators of debt security reached the threshold or exceeded the limit values that is reflected by the highest level of debt risks based on a 10-point scale. The process of reducing the state debt, easing a debt burden on the budget, restructuring the external debts of the private sector, a build-up of international reserves, is quite a long process that requires consistent and balanced measures in the state economic policy. The initial step was to restore cooperation with the IMF and to ensure the receipt of credit funds for the timely service and repayment of external public debt and to ensure macroeconomic stabilization. Next, the necessary measure was the talks with private foreign holders of bonds of foreign loans for the restructuring and extension of the terms to repay the public debt, which effectively resulted in signing the agreement

between the Ministry of Finance of Ukraine and the Special Committee of creditors on 27 September 2015. This agreement on certain terms restructured the debt worth about USD 22.6 billion, which made it possible to temporarily ease the debt burden. The key is to avoid a significant current account deficit and to support sustainable economic development. The state must demonstrate the ongoing transition to the new quality level of economic architectonics, which is aimed at ensuring the intensive growth of the national economy. Otherwise, debt risks will strengthen and the country will face new, more powerful and longer-lasting, fundamental factors of disturbance of macroeconomic equilibrium and financial stability. The Ukraine's Ministry of finance identified key risks of public debt in the medium term, which include the risk of refinancing, liquidity, currency and interest risk, the risk of additional commitments. The latter risk is associated primarily with the high percentage of the state in the country's banking sector.

Risk identification is the first step in the algorithm of debt risk management system, it is important to conduct their grouping and segmentation, to rank risks according to the probability of occurrence and impact on the dynamics of selected indicators that measure a public debt. Responsible institutions must improve the institutional mechanisms to assess the degree of impact of risks on the potential dynamics of weight indicators for a public debt in terms of its structural components, the costs of servicing and repayment. Management measures must be elaborated in the logical sequence based on a time criterion: strategic, medium-term, short-term, and operational. The long-term goal of management is to minimize fiscal risks, which are the fundamental cause of the debt crisis, and in the short term efforts of the executive authorities must be aimed at minimizing the cost of debt service. Construction of a hierarchical structure of management objectives and determining the time periods and tools for their achievement would increase the effectiveness of management and provide a clear verbal signal to economic agents in order to reduce the strategic uncertainty in the debt capital markets. The fixed points of reference regarding the level of public borrowing must be fixed in the state's financial strategy and adjusted taking into consideration the phases in a business cycle, economic situation, institutional obstacles to the sustainable development of the national economy.

Chapter 4
The budget strategy of social development

4.1 Long-term budget forecasting and planning in the system of economic growth

A leading role in the formation and development of the socio-economic structure of modern society belongs to a system of budget forecasting and planning, which integrates all areas of public finance: rendering of budgetary services, a public debt management, management of public procurement, planning of budget investments, etc. That provides consistency in terms of time, forms, and volumes of financial resources within the budgetary system.

At the strategic level, the state plans the overall tax burden, the volume and structure of social services rendered by the public sector of the economy. According to the strategic priorities, the state defines the medium-term objectives of the country's socio-economic development, which are transformed into tasks for rendering social services. The country's strategic goals of socio-economic development, as well as its administrative-territorial units, are represented in the form of medium-term goals and priorities, stated in the government's programs, state target programs, highlighted in the budgetary plan.

Budget planning acts as one of the elements in the system for managing public finances, providing financial resource potential to consumers of budgetary funds in the necessary and economically expedient manner, which corresponds to the capabilities of their involvement in accordance with law and aims to stimulate the socio-economic development of administrative-territorial units, and the country in general, while maintaining conditions for the financial stability and balance of budgets of different levels, rationality and efficiency of using budget funds.

At the same time, budget planning of revenues acts as the necessary component of the scientifically-substantiated budgetary process and its object is only part of financial resources as a totality of potential tax and non-tax revenues, accumulated in the budgetary system. Its main task is to achieve the maximum possible level of budget autonomy in terms of own

tax revenues. Budgetary planning of expenditures is a set of methods aimed at determining the volume of budget funds according to expenditure commitments defined by the priorities of fiscal policy under the socio-economic conditions. The main tasks of budget planning of expenditures include: determining the directions to use budgetary funds; identifying the reserves of growth in budgetary resources; financial support to obligations by the bodies of state power and local self-government authorities.

In the process of prospective budgetary planning, the state creates conditions for solving the most important tasks of the state influence on economic development. Prospective budget planning is one of the basic tools to regulate the country's social, regional, economic, scientific, and other fields of activities.

A system of prospective budget planning, as one of the main components in the system of state regulation of the economy, is the totality of functional financial-budgetary and economic elements, particularly a revenue part of the budget, an expenditure part of the budget, a deficit (surplus) of the budget, a public debt, tax regulation, inter-budgetary relations, the country's economic processes, the external economic environment, and relationships among them.

The basic principles underlying the state economic forecasting and prospective planning are: the principle of integrity, which is ensured by the development of concerted forecasting and program documents for the medium term; the principle of objectivity, which implies that prospective and program documents are developed based on reliable data from state statistics and other bodies of state administration; the principle of scientific approach, which is ensured by the development of predictive and program documents on a scientific basis, continuous improvement of methodology and application of international experience in the field of forecasting; the principle of transparency, which means that prospective and program documents of the economic and social development of Ukraine are available to the public; the principle of compliance with national interests, which implies that prospective and program documents of the economic and social development are developed taking into consideration the need to ensure the implementation of the country's national socio-economic policy and economic security.

The budget planning employs the following methods: a method of coefficients, which is based on the use of appropriate coefficients to the results over a certain period of time; a standard method that is based on norms and standards, it accounts for features in the sectors of production and non-production, as well as changes over a preceding period; a balance method, which implies matching and balancing the needs in financial resources to the sources of their generation; methods of economic-mathematical modeling, which make it possible to estimate the relationship between financial-budgetary and socio-economic indicators and to predict the specified indicators.

A forecast of the volume and structure of budget revenues and expenses, a public debt, for the next three years is compiled based on key predictive macro indicators for economic and social development of Ukraine over this period.

Based on the forecast for a budget, the state indentifies the problems that may arise in the medium term and develops proposals to solve these problems; based on this, the state develops measures for adjusting a debt policy, a policy in the field of budgetary revenues and expenditures over a three-year period. A necessary step is also to determine the prospective indicators for the state budget expenditures in terms of the main allocators of budgetary funds. The main allocators of funds from the state budget should be informed of the prospective indicators in the form of limit volumes of expenditures and forms of budget requests over a three-year period.

The medium-term budget planning is based on analysis of trends in the planned and actual budgetary indicators over preceding periods, identifying the mutual impact of budgetary and macroeconomic indicators, external factors, which should be considered in the calculation of budget indicators. The result is the developed variants of formation and use of budget resources, whose analysis creates a basis for determining the main preliminary indicators when developing a budget.

Forecasting the budgetary indicators should be based on the general aggregated indicators for economic and social development. The process of budget forecasting should account for the indicators that characterize the dynamics and proportions in the development of economy and social sphere, specifically GDP, production volumes, inflation, exchange rate of the national currency, export and import, investments, etc., and their changes over a respective period.

In this case, an important role belongs to the economic-mathematical methods of research, which make it possible to forecast budgetary indicators in the dynamics, in interrelation with the indicators for socio-economic development and taking into consideration the impact of external factors; to determine the mutual influence of financial-budgetary and socio-economic indicators. Scientific substantiation of the financial-budgetary forecasts and plans through the use of economic-mathematical modeling increases the level of their adequacy to economic processes, provides a possibility to optimize distribution and to evaluate the effectiveness of using budgetary resources in the short and medium term in order to address the issues of providing limited budgetary resources for the priority directions in the development of economy and social sphere.

The main tasks of prospective budget planning are: to determine the sources and amounts of budgetary resources and to optimize their allocation, and to use them effectively in the medium term; to identify relationships between budget indicators and the main macroeconomic indicators; to determine the impact of factors that characterize the dynamics of economic

development on key performance indicators for the budget; to establish an optimal structure of a revenue part of the budget; to determine an optimum allocation and efficient use of budgetary resources to provide financial resources for the priority directions in the development of economy and social sphere; the scientific substantiation of financial-budgetary forecasts and plans through the use of economic-mathematical modeling, which increases the level of their correspondence to actual economic processes.

The strategic budget planning is carried out both at national and at the sectoral and regional levels, based on a possible state of the economy and social sphere in the medium term, as well as the defined routes and time to achieve the parameters for economic and social development. Prospective budget planning could be defined as the system of certain measures and specific solutions by the legislative and executive authorities, local self-government, aimed at effectively solving the tasks in the country's socio-economic development.

Conducting a targeted financial-fiscal policy requires improvement of the system of strategic budget planning. Medium-term budget planning makes it possible, of course, to improve the manageability of a budgetary process that would have a positive impact on the quality of development and implementation of the budget policy.

Prospective budget planning is an important element of state regulation of economic and social processes, because it defines the objectives and priorities in the economic and social development in the medium term. Therefore, setting the long- and medium-term goals and objectives for a financial-budgetary policy, the quantitative and qualitative criteria for their implementation, defining on this basis the volume of budgetary resources for the future is a necessary condition for improving the quality of the process of budget planning and for strengthening the impact of fiscal policy on the country's socio-economic development. Strengthening the effectiveness of the mechanism of budgetary regulation in countries with the developed and transitional economies gains importance under conditions of institutional changes in the development of financial processes, increasing the degree of globalization of economic transformation. Given the above, it is expedient to further improve the system of budget forecasting and planning, particularly in predicting the volume of tax revenues, are aimed at enhancing the manageability and predictability of the development of the national economy. After World War II, many economists from the United States of America and other countries tried to make predictions for economic development associated with the transition from a wartime to peace. Over two decades after the war, they created econometric models for forecasting, whose initial predictions turned out to be more accurate than expected. However, the interest of economists in forecasting models gradually decreased. According to Klein, that happened as a result of increased demand for the accuracy of prediction, which many existing models could

not meet. Dibold argued that the dissatisfaction with forecasts was caused by two factors: disappointment in the Keynesian theoretical substantiation of forecasting models and the inability of these models to predict important macroeconomic phenomena.

The first adaptive econometric model was proposed by C. Holt in 1957. It was based on the idea of exponential smoothing, according to which levels of the basic time series are weighted using a system of weights, increasing exponentially as they approach the forecast period. This corresponds to the hypothesis on that the more recent data on the predicted variable are more informative in terms of the formation of projections. A large number of adaptive econometric models were subsequently developed, including regressive adaptive models, which analyzed the dependence of one magnitude on another. However, the theory and practice of econometric forecasting employ only a few of them. These include first of all the models of exponential smoothing by Brown, Holt-Winters, as well as the Box-Jenkins model.

At the same time, the lack of accuracy in forecasting became a stimulus to the improvement of quality in prediction in many directions. An important direction was the development of a non-structural approach, which was not directly based on economic theory. It should be noted that the breakthrough in the field of economic modelling and forecasting occurred prior to developing the Keynesian structural models: in 1920s, Slutsky and Yul showed that the stochastic differential equations could be used as a powerful tool in economic and fiscal forecasting. A relevant paper on macroeconomic modeling in 1970s was titled «Simulation of economic cycles without claims for too many a priori theory».

The main contribution to the non- structural method, based more on statistical methodology rather than economic theory, was made by the following studies: by Box and Jenkins, dealing with a stochastic trend and the ARIMA models; by Sargent and Sims and Heveke, addressing the modelling of dynamic factors; by Sims, tackling the vector autoregressions (VAR). Simulation of the dynamic factor implies that some dynamic indicators (challenges, shocks) are common for different sectors, while others are idiosyncratic (unique). Thus, the large lists of variables could, to a greater extent, depend only on some common basic factors of change. Within the framework of a non-structural method the economists of different countries test various statistical methods and processes for the choice of indicators in order to develop practical methods to forecast key macroeconomic variables (for instance, the United States Treasury). There is a barrier towards the practical application of classical autoregression models, which represent the equations that describe the relationship between a value for the forecasted variable over current period and its values over preceding periods. It is the complexity related to solving a task on the choice of the order of an autoregression model — the number of past periods that are taken into consideration in the construction of such a model. As regards the model

by Box-Jenkins, the attempts to adapt it to the needs of economic forecasting were in advance doomed to failure because the application of this model is appropriate when predicting stochastic processes.

An important contribution to the development of non-structural forecasting methods was the method of constructing the index of coincident and leading economic indicators by Stock-Watson. The Council of the Conference of the United States uses a system of ten leading, four matching, and seven lagging indicators, to determine the highest and lowest levels of economic activity of business cycles. Based on these groups of indicators, they create two groups of indicators, which are used as the auxiliary ones in determining a business cycle. Leading, matching, and lagging consolidated indices are the weighted average values for corresponding indicators. Leading, matching, and lagging diffuse indices are only part of the number of indicators whose values changed in a favorable direction over a period in the total number of leading, matching, and lagging indicators, respectively. The consolidated indices are designed to aggregate and smooth changes in individual indicators, while diffuse indices are designed to reflect the improvement or deterioration in economic activity. Various research made attempts to create a system of leading indicators for countries with the transitional economies. A comprehensive attempt to create a system of leading indicators for Russia, similar to the one used by the Council of the Conference of the United States, was made by Smirnov, who considered a monthly seasonal smoothed industrial production as a variable that characterizes the economic activity in Russia, for which he selected the leading indicators. Based on the seven selected leading indicators, the scientist created a consolidated leading indicator, using a procedure similar to the method of the Council of the Conference of the United States. By analyzing the turning points of industrial production and the consolidated leading indicator, he concluded that first indicators actually lagged behind the latter. Sometimes the lag was short — only one or two months. In addition to the consolidated indicator, he evaluated a diffuse index and concluded that it was positively interconnected with the percentage changes in the consolidated indicator.

One of the advantages of the methodology, used by Smirnov, compared to the method of the Council of the Conference of the United States, is that the first accounts for the influence of the broader list of indicators. While focusing on determining the turning points, the United States Conference Council's method does not imply that the indices should be built in such a way to enhance the predicting capability of primary indicators. The coefficients of R-square regressions for the indicators of business activity in the consolidated leading and diffuse indices are relatively low; they do not exceed 20 %. At the same time, Klein noted that the method by the Council of the Conference of the United States paid much attention to the prediction of the direction of movement than its quantifiable indicator. The Council of the Conference of the United States (Council) uses, when predicting,

a series of monthly indicators. For example, the indicator of industrial production is applied by the Council as one of the four matching indicators. The amount of money in circulation is the main indicator applied by the Council. The main components, derived from the monthly indicators, are used in the study with and without lags. Thus, some independent variables work in predicting as matching, some as leading, and some as both matching and leading at the same time.

The indices of matching and leading economic indicators represent the average weighted magnitudes of the two respective lists of indicators. The matched index is the weighted average magnitude of the four leading indicators, while the leading index is the weighted average magnitude of the seven leading indicators. The shares with which the matching and leading economic indicators are introduced to the matching and leading indices in the model by Stock-Watson, are evaluated using an econometric method. Thus, the indicated method is an attempt to provide an econometric basis to studying any economic cycle. The method assumes that there is one, not watched variable, which describes the state of the economy, and each matching indicator includes a component that relates to this single unobserved variable. The matching index is an evaluation of the single unobserved variable, while the leading index is the assessment of growth in the single unobserved variable within the next six months. At the first stage, one evaluates parameters for the model, which link the matching parameters to the single unobserved variable. At the second stage, one estimates those parameters (VAR), which bind the leading indicators, derived at the first stage, with the single unobserved variable. However, the Stock-Watson method has one very serious downside, specifically it strictly limits the forecasting ability. For example, some assumptions are equivalent to statements on that the sources of economic fluctuations influence in proportion the matching indicators, which is a serious prediction for a given method. However, by using this method, it was difficult to predict the recession of 1990 in the United States even several months after its start.

In order to improve the quality of forecasting, a significant effort was made by Lawrence Klein and his colleagues: by using the method of main components (MMC) within the non-structural high-frequency models. It is proposed to consider the model called the high-frequency model. The basic methodological approach that is used in the construction of this model is the above-specified method of main components. A key element of this method is to create and use the full list of indicators that simultaneously reflect the key aspects of economy. This method assumes that at any point in time the proposal, on the one hand, the demand, on the other hand, and other indicators for a market equilibrium, third, achieve balance and interaction among them. That is, a system is created that could choose the specific causes of the major changes in economy. For use in Ukraine, one can take the following parameters: as the proposal — indicators for industrial activity

based on the types of economic activity; as the demand — the volume of wage, debts in wages, the amount of money supply, budget revenues and expenditures; as the indicators for a market equilibrium — exchange rates, interest rates and prices for essential commodities, exports and imports. Using the actual indicators is consistent with the neoclassic theory of a real economic cycle, according to which in the long term the actual magnitudes only would have an impact on the issue growth, employment, and tax revenues. On the other hand, the inclusion in the model of forecasting of the monetary and price variables corresponds to the postulates of the Keynesian and post-Keynesian theory, which considers them to be important factors of economic development not only in the short term, but also in the long term. Although the applied method for building a model of forecasting is not based specifically on the theoretical macroeconomic approach, it is entirely consistent with the macroeconomic theory, which assumes that tax revenues directly depend on the key macroeconomic magnitudes, and not only on their actual revenues in the past. The list of indicators from which main components are derived duly reflects the endogenous and exogenous economic variables. This method has two main advantages. First, it implies reducing the number of independent variables, which stores the most valuable information about initial parameters. Second, since the main components are not intercorrelated, then there is no a problem related to multicollinearity, that is, a situation at which two or more independent variables, included in the regression equation, are hardly correlated. MMC implies the use of only relatively important information and discards extra information.

Summarizing the research into international experience of forecasting, one could identify the best international methods of prediction, assessments of the influence of methods for modelling economic policy.

The method of main components (MMC). Models for short-term high-frequency forecasting, built based on MMC, were developed by Lawrence Klein, holder of the Nobel Prize in economics, and his partners, and were used for prediction in the economically developed countries such as the United States, Japan, France, Hong Kong, Mexico, China, India, Germany, Mexico, Turkey, South Korea, Brazil, and several other countries. The company Global Insight under the direction of Lawrence Klein developed similar models for countries with the transitional economies, including Armenia, Georgia, the Czech Republic, Romania, and Russia. Building a macroeconomic model is a cyclical process that implies a series of steps.

The use of various information in the method of main components could be particularly important when developers of the forecast are not sure about which variables would play an important role in predicting. After all, ignoring a potentially important variable could lead to errors in predicting, similar to those that were made by some researchers in the early 1970s, when the role of energy indicators for determining the economic growth in

the United States was underestimated. Klein also argues that predictions of economic development after the crisis of 1973−1974, which were based on models using a number of different variables, turned out to be better than the forecasts obtained using the models that employed a small number of variables, such as the ratio of energy used and oil prices. The benefit of a great variety of variables is evident not only when the temporal series are very short [197]. The method of simple linear regressions. This approach to forecasting the quarterly GDP in the United States that uses a simple linear regression with monthly indicators as independent variables could be found in the work by Ingenito and Trakhan. First, various combinations of 34 indicators were tested in this work to forecast a GDP in a multifactorial regression, then they concluded that the best predictions beyond the sample were made using a regression that included employment of population and end consumption (that is, a two-factor regression was applied). Second, especially when some of the values for indicators were not available for the entire quarter, that is, during calculation of the forecast, then these two indicators were projected through other variables. For countries with the transitional economies, there were many attempts to use one-factor and two-factor regressions (such as the forecast of GDP in Russia). The result of research conducted by the International Monetary fund is a conclusion on that industrial production turned out to be the best indicator for matching the GDP of Russia, while a real increase in the value of ruble had a negative impact on GDP and industrial production with a delay of one quarter. It also turned out that the price of oil is an important positive factor that affects the GDP of Russia without a lag. At the same time, it was suggested that the study should include other important factors of growth, which are very hard to estimate, for example, technological advances and other structural variables. One of the most comprehensive models of Russia's economy was developed by the Center for Macroeconomic analysis and short-term forecasting (CMASF) in Moscow, other research centers, and Global Insight for the ministries of economic development and trade in Russia. A public description of this model was given by K. Mikhailenko; this model includes variables that relate to the most key macroeconomic aspects, including GDP, production, profits, population's savings, foreign trade, balance of payments, prices, currency exchange rate and the money in circulation. The model includes revenues to the state budget. Exogenous variables include external variables (such as international prices), variables of government policy (in particular, regulated prices), variable trends in business activity (in particular, the ratio of wages to labor productivity). The model was developed to form projections for the medium term, that is, for 3−4 years. The Philippine Institute for development studies developed an econometric model to forecast tax revenues by testing several forecasting methodologies to determine the one that yields the best result. Testing is done using the coefficient of determinacy and t-statistics to determine the statistical

significance of coefficients for the independent variables. Using this model, the best predictive equations were derived:

— Income tax on individuals = Function (Gross domestic product; 3 fictitious variables that represent changes in taxation).

— Income tax on enterprises = Function (Accumulated reserve capital of private and state corporations; 5 fictitious variables that represent changes in taxation).

Micro modeling. An important method to forecast tax revenues, which is used by many government agencies — this is a method of micro modeling. For example, to predict the amount of tax that must be paid by individuals to the government, Congressional Budget Office of the United States (CBO) applies a micro modeling model; the calculation is performed in the following sequence. First, they take a sample of filled tax declarations and align them with demographic changes and a revenue forecast obtained using the macroeconomic forecasts by CBO. Next, they calculate the share of each type of revenue, in order to forecast the taxation base. In other words, the share of aggregate wages, interest, dividends, and income from rent, is calculated for those who submit a tax declaration separately, jointly, and as the head of a household. These data are also split by age, gender, and income of payers of the tax declaration. At this point, an important factor is the «aging» of the information, which reflects changes in demographic characteristics and income of the population. Using demographic projections from the Social security administration for age, gender, family status, as well as forecasts for macroeconomic indicators relating to employment, CBO changes specific weights in order to reflect the expected demographic changes and changes in the number of citizens — tax declaration submitters for every year. An important aspect of methodology is taking into consideration the fact that citizens in the United States after reaching the age of 50 receive less income from wages, but more from social insurance funds. Because these sources of income are taxed at different rates, forecasting a tax revenue depends very much on demographic changes. At the second stage, they calculate a growth of income for each declaration based on the results of the first stage of demographic aging. Result of the calculations is the forecast in which the sum of income based on the tax declaration grows in proportion to the speed of the macroeconomic forecast for salary.

The accuracy of the method of main components. A multilateral selection process of factors for one- and two-factor equations usually improves the quality of the forecast. The problem with such equations is that the selected independent variables, which could be extremely important in determining the dependent variables, might not give opportunities for other important variables to exert their influence. This problem is solved using the method of the main components. Economists from the company Global Insight conducted a comprehensive testing of the accuracy of predictions

when using a method of the main components, including in comparison with regressions, which include one or two factors. For example: typically, it is believed that the trajectory of growth of the Russia's economy is defined by the global price of oil and the exchange rate. At the same time, it was shown that the multifactor high-frequency models based on main components provide more accurate predictions and are more suitable for short-term forecasting than the simple single-factorial models, even in the case when individual factors such as the global oil price and the exchange rate could be extremely important. A given research was not conducted to prove or disapprove the assumption that the world oil price or an exchange rate (possibly, another unified indicator) are the main factors of Russia' economic growth. At the same time, that study showed that the accuracy of any forecast improves if a model includes a large number of indicators. It is possible that the price of oil plays an important role in determining (with or without lags) most of the metrics that are used in the created models of main components, however, not depending on whether the indicators are defined by oil prices or not, these factors contain valuable information that may be lost for prediction if a model is constructed based on a single variable only. A similar analysis of accuracy, which compares the accuracy achieved using the single-factor regressions, with the precision, reached when using main components, was conducted for many other countries, including Armenia and the Czech Republic.

Modeling the influence of factors. The method of main components makes it possible to perform calculations completely independent on the influence of independent variable on the dependent variable within the same equation. The regression coefficients of main components have no economic sense by themselves. At the same time, the main component model implies the calculation of a single derivative from the variable depending on the behavior of the dependent variable using the assessed factors for main components. Such a property could be used for modeling a policy when the forecast includes the macroeconomic policy variables such as the amount of money in circulation (monetary policy), government budget expenditures (budgetary policy) and external debt (affected by government plans for external and internal borrowings).

The system of prediction in real time by the Treasury of the United States (RTFS). The method of main components was designed to combine the information from a wide range of variables in the same regression. There are other methods that imply the use of information from a large number of variables to predicting revenues at the macro level. An example is the system of prediction in real time by the Treasury of the United States (RTFS), developed mainly for forecasting the current quarter GDP growth, which in turn is used for forecasting tax revenues. Underlying RTFS is a list of s30 monthly indicators that greatly affect the GDP, including employment indicators, finance, manufacturing, trade, as well as indicators

of sample surveys. For each indicator, the system has three equations of GDP that include this indicator with and without a lag, and the GDP itself, lagged. 90 single-factor regressions are applied. For each indicator, RTFS selects one of the three equations depending on for how many months within a quarter such information is available for this indicator at a given moment, and evaluates the GDP. The ultimate assessment of GDP is calculated as the weighted sum of the individual evaluations of equations derived via 30 regressions. Specific weight using which GDP estimate, which is formed from a single-factor regression and is included in the final GDP estimation formula, is the ratio of coefficient for the *R*-square of this regression to the sum of all coefficients for the *R*-squared group of regressions. Thus, specific weight reflects the estimated capability inside the sample for a given indicator. Kitchen and Monaco argued that the methodology of RTFS is similar to the method of main components by Klein. Similarity mainly refers to the fact that both approaches make use of a large number of indicators. At the same time, there are significant differences between them. One of the main drawbacks of RTFS is that it ignores the fact to what extent monthly indicators are interconnected. And because all indicators are linked, they include information that partially coincides.

Traditional procedure of prediction, based on the model of direct payments, was commonly applied in the prediction of budget revenues in Estonia, where the income tax revenue from private enterprises is forecasted using the average share in GDP over the past three years.

Focus on the model of direct payments could be traced when planning budget revenues in Russia. Thus, when planning revenues from income tax, the following algorithm is applied:

$$Pr = [R \cdot (Pr_1 - A) \cdot S + T_{tr} + IT] \cdot C_e + R_{ad} \cdot (P + H + R), \qquad (4.1)$$

where *Pr* is the profit to calculate tax; Pr_1 is the income taking into consideration adjustment for the purpose of taxation; *A* are the amounts excluded from income under the law; *S* is the tax rate in percentage; T_{tr} is the amount of tax on revenues in the transitional period; *IT* is the amount of income tax; C_e is the estimated level of collection; R_{ad} are the additional revenues; *P* are the revenues from the restructured debt; *H* are the revenues from repayment of arrears of past years; *R* are the recalculations.

When calculating a taxation base for the value added tax, until the end of current year, they account for industry-specific structural features of regions that affect the payment and accrual of taxes, as well as their quarterly (monthly) structure, characteristic of different regions. Along with this, they analyze the size of the rendered benefits, which significantly affects the volume of the taxation base. The algorithm of VAT calculation for goods produced in the territory of the Russian federation within a year takes the form:

$$T_{vat} = (GDP \cdot T_w - GDP/D_w) \cdot K_1 - Tr_{ef} + R_{ad} \cdot (P + Rr + K), \tag{4.2}$$

where T_{vat} is the total amount of tax subject to enrolment to the budget; GDP is the gross domestic product; T_w is the share of accrued tax in GDP; D_w is the share of tax deductions in GDP; K_1 is the coefficient of collection; T_{ref} is the refund of tax at tax rate 0 %; R_{ad} are the additional revenues; P are the revenues from the restructured debt; Rr are the revenues from repayment of arrears for past years; K are the revenues due to control.

The calculation of VAT refund from the budget at a tax rate employs such indicators as the volume of exports, the exchange rate, the cost of expenses to produce exported products, etc.

The algorithm for calculating indicator Exp:

$$Exp = V_e \cdot (V_1 \cdot Er) \cdot S_w \cdot S, \tag{4.3}$$

where Exp is the export in the national currency equivalent; V_1 is the export in dollar terms; Er is the average USD exchange rate to national currency; S_w is the specific weight of material costs; S is the tax rate.

The calculation of the total sum of revenues from excise taxes, such as the excise duty on natural gas, is carried out by the algebraic summation of indicators that form it. Algorithm of the calculation takes the following form:

$$E_{ng} = V_0 \cdot (V_2 - V_1) \cdot Pr \cdot S \cdot K_1 + R_{ad} \cdot (P + R_{rep}), \tag{4.4}$$

where Eng are the revenues of the excise duty on natural gas; V_0 is the taxable amount of supply, or the amount of sale of natural gas; V_2 is the total sale of natural gas; V_1 is the non-taxable amount of natural gas sales; Pr is the selling price of natural gas; S is the rate of the excise duty; K_1 is the coefficient of collection; R_{ad} are the additional revenues; P are the revenues from the restructured debt; R_{rep} are the revenues from repayment of arrears for past years. Calculation of the excise duty is carried out for each excisable good separately.

The algorithm to calculation the excise taxes on petroleum products is:

$$A = T_b \cdot S \cdot K_1, \tag{4.5}$$

where A is the forecast of the excise duty on oil products; T_b is the taxation base; S is the tax rate; K_1 is the coefficient of collection.

Disadvantages of the most popular econometric models predetermined the fact that the theory and practice of economic forecasting, including forecasting of budgetary revenues, turned its attention to innovations in the field of methodology for mathematical data processing. Specifically, Russian scientists attempted to apply the technology of neural networks to predict tax revenues. This approach has something in common with

a known method, proposed by the Ukrainian scientist O. G. Ivakhnenko — the method of group consideration of arguments (MGCA). Quite revealing is that the dissemination of the method MGCA coincided with that the Central economic-mathematical institute, which implied the implementation of basic arithmetic operations and did not have any mathematical base. The result of the existence of a wide range of means of forecasting, there is a possibility to ensure the improved accuracy of the latter based on the development of several variants of the forecast — partial projections, each of which has its own advantages, as well as a combination of them (synthesis).

Most often, specialists in the theory and practice of econometric forecasting of budget revenues turning to such classes of econometric models as: explicative (factor or cause and effect), trend, adaptive, autoregression.

The explicative models are a single equation or a system of equations, which are used to obtain a quantitative description and assessment of the interdependence between the predicted variable and the factors that form it. Financial science has recently drawn attention to the potential of explicative models in the form of systems of equations, such as the Brookings and the Wharton models and other, genetically related, macro models.

The Brookings model describes the national economy of the United States using more than 200 equations. Its construction employed more than 4 000 time series. Predicting in line with this model had to use its shortened version that included 216 endogenous variables, that is those variables that are described by the model.

The Wharton models are a series of models that are being developed and supplemented given the new economic realities. Estimation of the parameters for the model equations employs a least square method based on quarterly statistics.

The advantage of explicative models is that they make it possible to receive a multi-variant prediction, since in the case of application of these models there is a possibility to taking into consideration different hypotheses about factors that they include. For the most part, in practice, it turns out that this advantage is purely theoretical. First, there is often no possibility to consider in the model very important factors because they cannot be quantified, or due to the fact that their values were constant over a base period.

Second, parameters for the multifactorial explicative models do not, as a rule, adequately reflect the nature of their impact on the predicted variable. The latter is predetermined by two circumstances. One of them relates to that one almost never knows the form of relation between the predicted variable and the factors that form it. However, once it was considered that economic science was able to tell the form to construct an econometric model, but it was subsequently acknowledged that it could happen in rare cases.

In fact, there is an almost generally accepted idea on the possibility to confine, when constructing the multifactor models, to linear and linear-logarithmic regression equations. An example would be a linear-logarithmic

form of relation, accepted when predicting budget revenues, in particular value added tax, within the framework of an econometric model of the fiscal sector in the Slovak economy.

As a result of the presence of quite a wide range of means of forecasting, there is a possibility to ensure the improved accuracy of the latter based on the development of several variants of the forecast — partial projections, each of which has its advantages and disadvantages.

At the same time, the global crisis of 2008 proved to all the economists in the world that confidence in the macroeconomic forecasting based on theoretical models was partly lost. Paul Krugman, a Nobel Laureate in economics, provided a brief overview of the failures and problems in the prevailing theoretical methods of forecasting. Until the second half of 2008, the Western economists were dominated by the idea that the modern economic theory provided a strong basis for forecasting macroeconomic indicators. However, according to Krugman, the prevailing models included nothing that implied the possibility of the crisis that occurred in 2008. The main theoretical drawback was the «idealized vision of economy according to which everything interacted rationally in advanced markets». Such a belief into the rational behavior of investors and consumers was dominant among the main economic schools in the world. New Keynesian economists were more pragmatic than the neoclassical economists. They predicted that the market was imperfect, and claimed that only a government intervention could play a positive role (primarily by using a monetary policy). However, even the new Keynesians tried to deviate from the neoclassical orthodoxy. As a result, their models did not include any economic disturbances or collapse of the banking system.

One could not give a straight answer to the question whose predictions, by different scientists, from different countries, should be considered high-quality. Most frequently, a forecast depends on the quality of data, volatility (instability) of the dependent and independent variables, the nature of strategic decisions that a user must take based on these forecasts, as well as a series of other factors. However, independent of the factors on which predictions would depend, the global crisis in 2008 forced scientists around the world to undertake new research in the field of economics to improve the accuracy of forecasting.

To improve the quality of budget forecasting, there is an objective need to: implement effective automation means that would make it possible to improve existing processes to analyze and plan budget revenues, improve the level of communications between public authorities, local self-government bodies and legal entities; develop a mathematical model to forecast budget revenues, which would account for indicators of the country's socio-economic development, changes in the tax and budget legislation, trends and cyclical development of socio-economic processes, which would make it possible, on this basis, to perform a factor analysis of deviation of the actual level of implementation of budget revenues from the approved

indicators. In addition, in order to improve the mechanism of forecasting budget revenues, it is important to organize the accounting of obligations taken by payers, including payment of non-tax payments, which would provide the maximum level of revenues to the budget, enhance the effectiveness of financial control, which is an essential condition for the improvement of the medium-term budget planning.

The important tasks are to reduce the impact of subjective factors on the process of budgetary forecasting and planning; to define the principles and methods of forecasting, which would to a greater extent account for the features of economic transformations; to coordinate the goals and tasks related to components of fiscal policy; to coordinate the priorities in the fiscal policy with programs of the country's socio-economic development for the future.

Thus, in order to ensure development of society, the implementation of the long-term strategy, it is necessary to have a qualitatively new system of budgetary forecasting as a scientifically-substantiated process that is based on the knowledge and foresight of objective and subjective factors that affect budgetary parameters and their quantification. The consequence of the above is that its results are probabilistic in nature, despite accounting for the actual economic conditions and processes, while the basis of budgetary forecast is the comprehensive programs of the socio-economic development of administrative-territorial units and the country in general, which define the dynamics of change in basic macro indicators.

At present, the mechanism of domestic budgetary forecasting needs improvement, in particular through the use of economic and statistical analysis into trends, prevailing in the country, of socio-economic development of administrative-territorial units, which would make it possible, with a certain degree of probability, to determine the influence of various factors and conditions on the balance and stability of the budgetary system.

Prolonging a period of budget planning exerts a positive impact on the quality of public administration in general. The longer the period for which the aim, objectives, terms of their achievements and solutions, variants for the development of activities and, finally, mechanisms, algorithms, and tools to pursue a public policy, the more chances to achieve the best result.

Thus, development of the budgetary strategy promotes the adoption of unified approaches to solving the issues of ensuring the countries' socio-economic development. Along with this, a budgetary strategy is the basis for carrying out economic reforms aimed at accelerating the pace of economic growth as a precondition for raising standards of living and the wellbeing of citizens. The effectiveness of a budgetary strategy is ensured by application of the fiscal rules that make it possible to determine substantiated strategic directions for the development of countries, to improve the level of transparency of fiscal policy and trust of citizens to the bodies of public administration.

Development of the budgetary strategy makes it possible to align state functions. Specifically, political, in terms of defining the program objectives

for the bodies of state administration in the long term, as well as financial-economic, in terms of the substantiation of financial needs necessary to carry out the tasks assigned to the bodies of state administration, matching probable budget expenditures and the revenues, required to cover them, to the country's strategic objectives of socio-economic development.

Ensuring the necessary conditions for the implementation of effective strategic planning requires the development of institutional provisions for the formation of an appropriate system of planning the activities by the main allocators of budgetary funds for the medium-term period.

Such planning should be exercised in four stages. At the first stage, a budgetary institution should define:

— the main purpose of functioning of the institution;

— strategic goals, objectives, and effective performance indicators;

— detailed action plans for the fulfillment of assigned tasks and for achieving the set goals;

— indicators, which would apply to regulate the socially significant results of the implementation of the program.

At the second stage, it is necessary to adjust resource support to strategic objectives for the mid-term period.

At the third stage, the state budget is formed based on the program-target method, when it defines the relationship between the medium-term goals and budget resources, which is reflected in the approved budget programs.

The last stage is the execution, implying the implementation of planned activities and achievement of the established goals; the state evaluates and monitors effective indicators; defines major trends and directions of development.

In order to strengthen the relationship between directions of state policy and budgetary planning, we propose a methodology for the medium-term budget planning.

The main allocators of budget funds, in addition to budgetary requests for the medium-term period, should prepare proposals for strategic purposes (in accordance with the directions of the state policy) and submit them to the central authority responsible for the implementation of the state policy of economic and social development. Based on these goals, budget funds allocators determine in the budget requests the tasks, programs, indicators of the result, as well as the socio-economic impact. Along with this, main allocators of budget funds present a draft activity plan for the medium-term period based on the established limit amount of expenditures and the defined goals.

As noted, an essential part of the process of medium-term budget planning is forecasting. It is necessary to extend the time limits of the medium-term budgetary forecast to 5 years, which would make it possible to analyze key trends in the generation of budget resources and their use, to identify factors that need to be taken into consideration when calculating indicators for the budget in the long term. In order to improve the accuracy

of medium-term budgetary projections, it is necessary to introduce an annual presentation of parameters for the strategic budget under current and future conditions and to disclose reasons for failure to fulfill the adopted measures.

The medium-term forecasting of indicators for the state budget is based on the calculation of the amount of resources taking into consideration predictive macro indicators for economic and social development, based on analysis of trends in the volume of the gross domestic product, a consumer price index, unemployment rate, and social guarantees.

In terms of the medium-term budget planning and forecasting the budget indicators, of particular significance is the identification of budgetary risks and how to manage them. In general, risk assessment is designed to show the extent of probable worsening of conditions for the balance of the state budget. The expediency to use, in order to assess risks, not a probable change (primarily shrinking) in budget revenues, but other indicators as well (spending, debt burden, financial reserves available), is predetermined by the that these parameters affect the overall result of a forecasting-planning work: balance of the budget, the sufficiency of available financial resources to fulfill debt obligations, etc.

A probabilistic assessment of a particular element in the overall result of the evaluation of a budget risk serves as a unifying methodological approach and could significantly improve the accuracy of prospective summary. In this case, the mechanisms of application of the probability of the occurrence of respective budgetary risks may vary within certain limits (from using the magnitude of risk in proportion to the probability indicator to forming full-fledged alternative scenarios-forecasts, each of which would vary for a given parameter). A defined period over which the budgetary risks are estimated is determined by the peculiarities of this approach, as well as practical tasks: on increasing the reliability and repayment of medium- and long-term commitments, on achievement strategic goals. In addition, the medium-term period lasting three to five years makes it possible to take into consideration not only the one-time effects of the occurrence of a particular event, but also provide an assessment of its impact on other projected parameters and magnitudes, thereby neutralizing the factor of chance.

Therefore, each budget risk would have the following characteristics:
— a source of origin;
— manageability;
— probability of occurrence; value assessment;
— expiration date (indicating the intensity per year);
— an indicator (or a system of metrics) for the budget that (which) it affects.

The source of risk is a particular factor, an indicator that has significant, deterministic and measured impact on the basic characteristics of the state budget. Manageability of risk characterizes the degree of influence of respective power institutions on the probability, extent, and terms of risk

implementation. For the most part, there are managed and unmanaged risks. The latter are also called external; their high unpredictability is accounted for. The probability of the occurrence of risk is determined by the unique characteristics of an object, in relation to which the prediction is made, and is determined based on a retrospective analysis. The essence of value assessment is that any factor, taken into consideration in the system of risk assessment, must be measured and compared with the results of similar assessment of other risk factors. The validity and the respective budget parameters are determined based on the specificity in forecasting and planning activities.

The main features of practical use of quantitative and qualitative evaluation of budgetary risks may be considered, based on the features of their application:

— current implementation of the budget: the probability of insufficient revenue inflow relative to parameters approved by the law on the budget for the respective period, additional (not included in the budget) debt, deteriorating conditions of engagement, maintenance and debt repayment;

— medium-term budget planning, including compiling a draft budget for the next period and at least two subsequent budget periods, in particular, in terms of basic parameters, threshold size of the deficit and the public debt;

— compiling government programs with the mandatory determination of limit volume of their financial support for the entire period, development of the national strategy for socio-economic development;

— development of a budget forecast for a long-term period, including the definition of basic principles, approaches and constraints (from the perspective of the tax, fiscal, and debt policy).

Evaluation of budgetary risks must be combined with other planning and predicting activities. Specifically, during medium-term budget planning and forecasting, it is advisable to define the following:

— a composition of the indicators whose actual values' deviation from those planned is critical and is used as a reason to change or refine the forecast;

— specific scope of deviations for each of the specified indicators (percent, including reduced to comparable values, not only in absolute magnitudes);

— terms, frequency, and a procedure for assessment of the correspondence between the actual and forecasted indicators.

For the purpose of efficient medium-budget forecasting, the state could use the following basic variants (scenarios, approaches) for predicting the socio-economic situation for a respective period:

1) basic or realistic — it implies the most likely development of events in the medium term, under conditions for moderate estimates of rates of economic growth over a forecasting period;

2) pessimistic or conservative — it takes into consideration the most adverse effects of external externalities (in particular, conditions for the inter-budgetary regulation), the deterioration of financial and economic state of the main taxpayers, increasing the need for additional resources, critical growth of the debt burden and a budget imbalance, etc.;

3) optimistic or targeted — it is based on the relatively favorable vision for socio-economic development and implementation of respective opportunities via efficient and effective use of available financial resources.

In general, the number of such variants and scenarios of projections, as well as their detailed content, could vary based on the applied needs in prognostic-planned activities (while maintaining general theoretical and methodological approaches to their development and interpretation).

4.2 Budget policy as a tool to ensure the country's socio-economic development

Budget policy plays a significant role in the processes of ensuring macroeconomic stability. The proper level of substantiation, consistency, and common-sense management decisions in the field of budgetary regulation, promotes a growth in the level of employment, increased business activity, and improves the quality level of human capital. Effectiveness of these measures enhances in the case of the implementation of structural reforms in the economy and social sphere. It is relevant and important to carry out a balanced budgetary policy that requires coordination of social dominants in the development of society with the possibilities for their financial support. The lingering recession and the slowdown in the growth of real gross domestic product predetermined the need to implement a set of measures for fiscal consolidation aimed at decreasing the deficit and debt burden indicators on the budget. The possibilities of using short-term budgetary incentives are limited at present, which enhances the requests of society regarding the implementation of institutional changes in the system of financial and budget control. Of special importance are issues related to the structural optimization of budget expenditures, improving the level of their effectiveness and the quality of public services, which are rendered at the expense of the budget.

Regulation of financial flows among sectors of national economy, formation of the state fund of monetary resources and providing solutions to socio-economic tasks related to rendering collective and individual benefits in the form of goods and services through budgetary resources is executed through a budgetary policy.

Budgetary policy is a complex financial and economic category, which reflects and represents proportions of the budgetary system, interrelations between flows of state revenues and the needs of public funding, which

ensures the effective implementation of the tasks and functions of the bodies of state power and local self-government, a system of imperative relationships that result in the allocated financial resources to further use them to ensure socio-economic development of administrative-territorial units and the country in general. It is also the result and criterion of the effectiveness of interaction among components of the system of public finance.

An important goal of budgetary policy is to regulate economic processes in order to smooth their fluctuations and redistribution of financial resources, which makes it possible to achieve certain goals and objectives in the country's socio-economic development, to provide stability and balance to the budget system, the adaptivity of financial-budgetary institutions to the cyclic nature of social processes.

As a component of social and economic relations, budgetary policy implies a totality of relevant forms of interdependences and the mutual influence of economic, legal, political, institutional components in the budgetary space and the institutional environment of society in the process of budgeting and using budget funds to achieve strategic objectives and main tasks in the development of society.

I. Y. Chugunov notes that budgetary policy is formed in the course of the budgetary process, it implies defining goals and objectives in the field of finance, the development of a mechanism to mobilize funds to the budget, the choice of directions to use monetary tools, financial management in the public sector, organization, using the financial-budgetary instruments, of control over economic and social processes. Foreign scientists consider a budgetary policy to be a set of measures adopted and implemented by authorities, related to determining the main directions in the development of budgetary relations and developing specific ways to use them in the interests of citizens, society and the state.

Budgetary policy is used as a tool to stimulate the country's economic growth, social development, regulation, innovation and investment activities, financial support to the development of priority sectors of the national economy. Improving the effectiveness and efficiency of budgetary policy is the basis for the effective performance of functions of the state and an important condition to overcome negative tendencies in the development of the national economy.

Budgetary policy is an important component of state financial regulation and an effective instrument for the implementation of the country's economic policy to ensure macroeconomic equilibrium under conditions of institutional transformations. The purpose of the budgetary regulation is the establishment of a social environment favorable for sustainable economic growth and the development of effective institutional relations regarding the prioritization of fiscal and tax policy, improvement of methodological principles for financial and budget planning and forecasting, allocation and redistribution of available financial resources, effective control over their

use, the implementation of basic tasks and strategic goals of social development. Also important is to adapt a budgetary policy to trends in the cyclic economic development, which implies the formation of modern financial institutions, balancing the fiscal burden, maintaining indicative values for a budget deficit and a public debt while promoting innovative restructuring of the economy.

Budgetary policy is an effective tool to ensure macroeconomic stability and to further intensify processes of economic development. The task of the budgetary regulation regarding the formation of the effective allocation of financial resources must be coordinated with strategic objectives for sustainable growth of the country's economy and raising the living standards of people. It is important to ensure the macroeconomic stability, to establish optimal structural proportions in the economy, to improve social policy, to form modern financial institutions. Based on the goal and objectives within the strategy of integration of economic development, related to increasing the level of efficiency of its endogenous component, it is necessary to develop institutional principles of the budgetary policy. Budgetary regulation defines the volumes of primary distribution of the gross domestic product, affects the structure of savings and debt dynamics, acts as an effective means to solve the main tasks of social development and must become an instrument to implement the inner potential of economic growth.

Thus, the economic essence of the budgetary policy of development as a tool of the state financial regulation of public relations implies the interaction between institutional, economic components of the budget system and financial architectonics, which, in the process of development of main directions to generate and use budget funds, creates conditions to achieve the country's tactical and strategic goals. The system of budgetary regulation includes revenue and expenditure part of the budget, a budget deficit, direct and state-guaranteed public debt, a system of inter-budgetary relations, tax and customs policy, exogenous and endogenous factors of the economic environment and relationships between them.

Budgetary mechanism as a tool for the implementation of fiscal policy reflects specific focus of budgetary relations on solving socio-economic tasks. By using it, the state forms a centralized fund of financial resources and influences the formation of decentralized funds, making it possible to perform the tasks and functions assigned to the bodies of state power and local self-government. A budgetary mechanism is a tool to achieve economic stability; it performs the function of the embedded budgetary stabilizer. The above depends on the orientation of budget expenditures and the character of forming revenue part of the budget.

Depending on the economic content of budgetary relations, the structure of the budgetary mechanism includes the following parts: the mechanism that forms a revenue part of the budget; the mechanism to spend budget funds; the mechanism of differentiation between revenue and

expenditure authority, budgetary alignment, and the system of methods for providing financial assistance.

Each link contains certain elements. Thus, the elements that form a revenue part of the budget are specific types of tax and non-tax revenues; spending of budget funds — specific types of budgetary expenditures; division between revenue and spending powers, budget alignment and the system of methods for providing financial aid — forms of funds receival in the process of inter-budgetary allocation and redistribution of financial resources, the forms of implementation of powers of authorities at different levels. At the same time, in the structure of the budgetary mechanism one can distinguish individual elements due to the functional features in the management of budgetary relations.

When applying a functional-management approach to the budgetary mechanism, its composition includes: budget planning and forecasting, fiscal indicators, norms, rules, limits, reserves, incentives, sanctions, budget legislation and a budgetary process management system. In addition, one distinguishes an element of the organization of the unified system of control and audit over the execution of revenue and expenditure parts of budgets.

Each link in the budgetary mechanism is characterized by specific methods, tools and levers, which help solve tasks that occur at every stage of the budgetary process. Methods act as means to influence the budgetary process in order to generate optimal amount of budgetary resources and to use them rationally. Tools are the means used to perform the tasks stipulated by the budgetary policy. The levers operate within budget tools and are aimed at stimulating or limiting the impact on the process of generation and using budgetary resources.

Budgetary methods, tools, levers, and their architectonics determine the capabilities of quantitative and qualitative impact of the budget on the social and economic environment. In this case, the quantitative impact is characterized by the volume and proportions of the mobilized and redistributed budgetary funds. Depending on the volume and object from which the funds are received at the disposal of the state, the amount and direction of direct appropriations, the opportunities form to expand production, etc. The qualitative effect is associated with a possibility to influence through specific types of budget revenues and expenditures the economic interests of legal entities. The specified effect contributes to the transformation of budget revenues and expenditures into incentives for economic development, increasing its effectiveness. The purposeful use of parts, elements of the budget mechanism, and the budget architectonics, makes it possible to accelerate or slow down the socio-economic processes, to ensure the achievement of defined goals and objectives.

At the same time, structural links and elements in the budgetary mechanism function as a single unit, which ensures its coherent functioning in general.

It is important to note that by changing the level of budget expenditures and taxation the bodies of state power and local self-government, in order to smooth out fluctuations in economic conditions, can regulate the amount of consumer and investment spending. In this regard, one distinguishes the expansional and restricting budgetary policy. The expansional is to increase budget expenditures and to reduce the level of taxation, which makes it possible to smooth financial and economic crisis processes and to accelerate the pace of economic growth. The restricting implies the reduction of budgetary expenditures and the increased level of taxation that makes it possible to weaken inflationary processes and balance the economic situation. At the same time, ensuring the efficiency and effectiveness of the expansional and restricting fiscal policy implies its consistency with all components of the financial policy. Specifically, if the expansional budget policy is not accompanied by limitations on the volume of monetary issuance and credit, the above then strengthens the country's inflationary processes.

When using a functional approach, one distinguishes in the structure of the budgetary policy: a policy in the area of revenues, expenditures, public debt and inter-budgetary relations. Its composition also includes: a tax policy; a customs policy; budgetary and financial aspects of policy in the field of foreign economic activity; a policy to generate, replenish and spend budget funds and the budget reserve system; a policy of operating expenses; a policy in the field of financing non-production areas; a policy to manage the system of financial bodies, etc. It is important to separate the component of fiscal policy — a policy in the field of a deficit (surplus) of the budget because it reflects a comprehensive approach to the ratio of policies in the area of revenues, expenditures, national debt, aimed at balancing the budget.

It is worthwhile to note that there are several concepts of budgetary policy that express the ideas on the ways and time required to balance the budget: annual balancing (ricardianism). According to supporters of this concept, the annual balancing of the budget allows for a more responsible policy, not accumulating debts and not stimulating inflation. With revenues decline, it is considered justified to increase taxes or reduce expenditures. When revenues increase — tax cuts or increased spending. The concept denies the positive effects of stabilizing a fiscal policy — a growth of government spending does not lead to stimulating the aggregate demand as a result of the effect of crowding out investments; tax cuts do not lead to an increase in consumer spending, and leads to an increase in savings, because the subjects predict raising taxes in the future. At present, this concept is followed mainly by countries with the transitional economies; a cyclic balancing, which assumes that a budget must be balanced during an economic cycle, and not annually; the anticyclic influence and measures aimed at balancing the budget are performed simultaneously. A budget deficit during recession makes it possible to stimulate aggregate demand, while a surplus over a period of rise — to deter the «overheating» of the economy.

Such a policy makes it possible to reduce the amplitude of cycle fluctuations by about 30 %; the automatically stabilizing economic policy, which accepts balancing the budget within an economic cycle, taking into consideration the political factor. It is assumed that, from a political point of view, it is more efficient to increase government spending than to raise taxes. The consequences of the above are eliminated owing to the automatic budgetary stabilizers — taxes, insurance payments, transfers, etc. Specifically, during rise, the embedded mechanism of progressive taxation should provide for additional budget revenues; during crisis, insurance payments and transfer payments should smooth out the effects of crisis processes. Thus, the embedded stabilizers only limit the depth of cyclical fluctuations; functional finance. The problem of balancing the budget is seen as secondary, the main objective is to stabilize economic development. The priority is to support employment. It is assumed that a growth of the public debt would not lead to the threat of bankruptcy of the state under condition of the adjusted financial systems and a significant degree of confidence in state institutions; compensating budget. Solving the problem of balancing the budget is no longer the purpose of economic policy. In times of crisis, the state, at the expense of credits and loans, attracts a portion of the savings, invests them and, thus, contributes to the development of economy. In this case, it is important not to exceed the level of public debt, which would exert the limiting, rather than stimulating, impact on the economy.

The last four concepts underlie a budgetary policy focused on the formation of the budget deficit, which presupposes the existence of a clear program of financial-budgetary measures within the country's monetary potential, control over the size of the budget deficit, and the search for sources to fund it, the allocation of budget funds to measures that produce considerable economic effect. The significant level of a budget deficit leads to significant negative consequences even in the economically developed countries.

It is advisable to increase the degree of coordination between the components of a budgetary policy in order to ensure financial stability and economic growth. Activation of structural changes in the economy implies the application of a balanced approach to the functioning of the budgetary system. A budgetary policy should adaptively respond to the cyclical nature of economy given the need to retain indicative values for a budget deficit and a public debt. Improving the effectiveness of budget expenditures requires the coordination of objectives of budgetary programs with the priorities of the country's socio-economic development, the use of effective forms of the state financial support. Of particular importance are the issues of improvement of the system of the medium-term and strategic budget planning. It is expedient to carry out institutional changes in the financial provision of social protection, to deepen insurance principles of the pension system, to improve the effectiveness of control and auditing of the use of budget funds, which predetermines the need to further develop its methodological

principles, to improve the criteria for assessing the degree of achievement of the planned objectives and tasks by the main allocators of budget funds.

The importance of budgetary policy of economic development is represented by a structural-functional model, based on the totality of financial relationships and the institutional combination of components in the tax, customs, debt policy, and the system of inter-budgetary relations, using the tools of ensuring macroeconomic stability. The application of this model makes it possible to improve the efficiency of managing the country's financial resources and establish incentives for the long-term balance of the system of public finance. The objectives of budgetary regulation are to smooth cyclical fluctuations in the economy, to increase indicators for the real gross domestic product and national income, to moderate inflation and to ensure full employment.

Under conditions of recession and slower growth of the world economy, the measures of fiscal policy, implemented in countries with the developed and transitional economies, are aimed at stimulating domestic demand. Priority measures of the budgetary-tax policy are: to decrease indicators for the structural budget deficit and public debt, to optimize budget expenditures, to increase fiscal efficiency of the tax system, to enhance the effectiveness of the mechanism of budget planning and forecasting, to implement a system of measures to enhance the level of current liquidity of the financial system, to buy out distressed assets from financial institutions to improve their balance sheets and to increase opportunities for crediting the economy, to implement state investments in the capital of financial institutions. The possibilities of a budgetary policy to stimulate the economy are limited, so at the same time the structural changes in the system of public finance are introduced, and the effect of divergent factors on the economic processes is strengthened.

Fiscal consolidation in countries with the developed and transitional economies is conducted to enhance the sustainability of public finances and is a complex of measures implemented to increase budget revenues and optimize budget expenditures by implementing the structural adjustment of the budgetary-tax system. It is needed to improve the cyclically adjusted budget balance, which in the medium term would make it possible to ensure stable economic growth, to increase the level of employment. Measures on financial regulation of budgetary system are aimed at balancing the amounts of revenues and expenditures in the sector of general state governance, revenues to the budgetary system, to state target funds, at the optimization of volume and at the improvement of structure of budget expenditures, at increasing the efficiency of using financial resources, at the reduction of the load of direct and state-guaranteed debt on the country's budgetary system. Most countries in the world in recent years have followed the policy of strict limitations of budget expenditures, fiscal discipline, transparency of the budget, which helps reduce debt obligations and

a budget deficit. A number of countries apply effective mechanisms for the integration of short-, medium- and long-term budget planning.

Measures of fiscal consolidation in the European Union countries made it possible to reduce the budget deficit, which includes the borrowing of the consolidated public sector governance, from 4.18 % of the gross domestic product in 2007—2011 to 2.92 % in 2012—2016. In this case, the volume of the public debt grew by 14.74 % over 2012—2016. A significant role in this process belongs to adjusting the magnitude of a budget deficit and the volume of the country's public debt, which makes it possible to form a blaanced strategy for managing public finances.

The domestic budgetary policy is characterized by the structural improvement of the institutional system and the adaptation to internal and external trends of the economic environment. Important in this aspect is to use budget as an instrument of regulation of social development. The system of budget formation must be balanced in the medium- and long-term periods. It is advisable to improve the institutional environment and the financial toolset for planning and forecasting budgetary indicators. The current stage of development requires a rethinking of the essence of the system of budgeting in the process of regulation of economic processes taking into consideration domestic and foreign experience of forming a fiscal policy as an important tool to influence economic growth.

Over 1996—2016, part of revenues in the state budget in GDP amounted to 21.97 %, while the share of revenues of local budgets (excluding inter-budgetary transfers) was at the level of 7.90 %. It testifies to the significant importance of budget revenues in the process of forming the country's fiscal policy. Reduced tax revenues to the budget, predetermined by lower tax rates, increased tax benfits and slower economic activity requires the search for and use of additional financial resources. Under conditions of limited fiscal space and recovery of the national economy, of special relevance is the improvement of the system that generates the non-tax revenues of the state budget. The priority of financial regulation is to timely balance financial resources in accordance with the requirements and needs of social development; in this case, it is advisable to develop a substantiated set of measures aimed at improving the effectiveness of the redistributing function of the budgetary system.

A budgetary policy in the area of revenues should be based on approaches aimed at achieving financial and economic balance and effectiveness of economic transformations, which under conditions of increased globalization predetermines the transformation of the structure and amount of revenue part of the budget. The degree of optimal relationship between the components of a budgetary system affects the level of efficiency of budget regulation and its impact on the dynamics of the country's socio-economic development. The average value of revenues in the consolidated budget in the gross domestic product over 1996—2016 was 29.87 %, including

in 1996—2000 — 29.90 %, 2001—2005 — 27.88 %, 2006—2010 — 30.5 %, 2011—2016 — 31.2 %. The average indicator of tax revenues in the Ukraine's GDP in 2002—2016 totalled 23.12 %, in the general structure of consolidated budget revenues — 76.5 %, indicating the important role of the tax system in the budget regulation of economic development. It is important to improve the tax and customs policy, which implies the formation of a transparent and stable system of financial relations, which would provide the fulfillment of revenue part of the budget in the short- and medium-term periods.

There is a tendency towards an increase in the share of consolidated budget revenues in GDP, whose average value over 1996—2016 was 32.14 %, including in 1996—2000 —32.78, 2001—2005 — 28.72, 2006—2010 — 33.03, 2011—2016 — 34.03 %. In order to create conditions for sustainable economic growth, which would be based on the innovative-investment foundation, it is important to improve the system of medium- and long-term budget planning and forecasting, determining the rational volume and structure of budget expenditures, ensuring their effective impact on the country's socio-economic development. It is expedient to increase expenditure part of the budget during periods of economic downturn, taking into consideration the use of the substantiated indicator for a budget deficit. There is an increase in the average share of budget expenditures for public debt servicing in GDP, which over 2012—2016 was 3.22 %. The above reflects the need for a balanced budget policy in the system of regulation of budget expenditures, including streamlining the debt policy to balance the state budget, to develop a medium-term debt strategy taking into consideration the impact of financial and economic factors. Under conditions of economic transformations, it is important to use budget deficit as a tool to stimulate economic development taking into consideration economic cycles.

Implementation of systemic measures of fiscal policy related to revenue and expenditure parts of the budget, restructuring of debt obligations, made it possible to improve the dynamic budgetary balance. The amount of the deficit in the state budget in GDP in 2011—2016 was 2.83 %. A certain increase in the budget deficit under conditions of recovery of economic growth, a stimulating budgetary policy would make it possible to boost economic activity in the country.

At the present stage of development of the economic system, the mechanism of inter-budgetary relations undergoes the process of institutional transformations, predetermined by the need to address main issues to provide social and economic support to administrative-territorial units and the country in general, to reduce the degree of imbalances in the development of local communities through improving the efficiency of the system that regulates financial resources of local governments.

The average value for a share of revenue part of the local budgets, taking into consideration inter-budgetary transfers, in GDP over 1996—2016 was 13.9 %, including in 1996—2000 — 13.78, in 2001—2005 — 12.24,

in 2006−2010 − 14.58, in 2011−2016 − 15 %. In this case, the share of inter-budgetary transfers in the structure of their revenues over the respective period is 43.17 % and has a tendency to grow. Ensuring the principles of effective functioning of the budgetary system at the level of local self-government defines the need to increase the sources of revenue generation to local budgets and to execute their spending powers in accordance with the budget programs for economic development. Important is the intensification of the processes of fiscal decentralisation and the rational use of the system that aligns the revenue-generating capability of territories, which would make it possible to increase the financial independence of local budgets.

To implement the principles of effective functioning of the budgetary systems at the local level, it is necessary to ensure the proper financing of respective social needs, based on the basic socio-economic tasks of territories and the country based on an effective budget planning and effective use of budget funds. Creating the appropriate financial conditions to ensure the implementation by local governments of their own and delegated authority, forming a balanced system of their financial security, requires respective approaches to prioritizing a fiscal policy related to interrelations between the state and local budgets. An effective direction of development and improvement of the system of budget alignment is to use the indicators for revenue-generating capability of a territory. It is expedient to introduce appropriate standards of financial support to local governments, to achieve the optimal level of allocation of financial resources between the state and local budgets with the aim of increasing the level of financial capability, strengthening the tax potential of administrative-territorial units, improving the planning system of indicators for local budgets and their prediction over a medium term.

Achievement of the effectiveness of budget regulation requires the coordination of objectives, tasks, and tools of financial-economic planning and forecasting, improvement of quality of the mechanism for determining indicative values for effective indicators of budget programs of economic development. An important tool for ensuring the sustainability and stability of functioning of the country's economy is the budgetary strategy, which makes it possible to establish conditions for sustainable economic growth, modernization of the economy and the social sphere, to increase the level and quality of people's life, to ensure the achievement of strategic goals of the country's socio-economic development. Important is the need to form the country's budgetary strategy based on consideration of the effects of exogenous and endogenous factors of economic development.

The priority tasks in the public sector should be to enhance the effectiveness of fiscal policy, to introduce incentive measures in order to encourage economic activity. Implementation of the budgetary strategy under conditions of economic transformations implies the creation of preconditions for economic growth based on the development of the system

of financial-economic relations, effective management of public finances, ensuring the consistency of fiscal and economic policy, the country's social and economic development based on medium-term budget planning, transparency and realism in the formation of budgets at all levels, the effectiveness of control and audit of the efficient use of budget funds. In order to enhance the effectiveness of fiscal policy, it is important to implement approaches to ensuring the long-term balanced budget system, which are based on reducing the indicators for the structural budget deficit and debt burden on the budget, increasing the fiscal efficiency of the tax system, which, taking into consideration the rational policy in the formation of budget expenditures, would make it possible to form an effective toolset for the country's economic development.

Under conditions of limited financial resources, an important task of the budgetary strategy is to direct expenditures towards the priority areas of the country's socio-economic development, to substantiate the goals, tasks and principles of fiscal policy, to coordinate financial capability of the budget to implement them within the limits of budgetary periods. Dynamic transformation of the economic system defines the need to balance budgets at all levels taking into consideration the cyclical fluctuations of the real gross domestic product, consumer price index, public debt, currency exchange rate. It is advisable to form a budget policy based on the princoples of stability, predictability of tax regulation, constraints on a budget deficit and public debt, timely forecasting of key financial and economic indicators that underlie budget planning.

Regulation of budget deficit must be performed taking into consideration the dynamics of values for indicators of the country's financial and debt stability. It is important to form predictive indicators for a budget deficit based on the principles of macroeconomic stability, the substantiation of the volume and structure of sources to finance the budget deficit. Under conditions of economic transformations, it is advisable to use budget deficit as a tool to stimulate economic development. During a period of economic growth, it is important to reduce its level or to form a budget with a surplus. The level of a budget deficit affects an increase in the inflation indicator, the state of a financial market, the indicators for a public debt, so it is advisable to apply the mechanism of deficit financing, aiming to achieve the appropriate performance of the economy and the implementation of the long-term strategy for the country's socio-economic development.

It is important to establish a relation between the annual and medium-term budget planning, to develop a program-target method of budgeting taking into consideration the changes in a living wage, energy prices, and other indicators necessary to plan expenditures for the state-financed programs, whose term of fulfilment exceeds one year. Decisive in this direction is to increase the effectiveness of budget expenditures, which would take place based on their priority and the assessment of the degree

of achievement of expected results. An important direction to form budgets for the country's economic development is to support innovative and energy-saving investment projects, to increase the proportion of capital spending in the public and private sectors.

In order to ensure sustainable economic growth, it is expedient to define the main principles of forming a budget policy in the system of the country's economic development, which imply a combination of components in the adaptive institutional architectonics of the budgetary system and the tools of fiscal regulation, optimizing the structure of budget revenues and expenditures, the system of inter-budgetary relations and medium-term budget planning and forecasting based on establishing the relationship between trends in the financial globalization and priorities of the state financial policy.

Important are the issues related to systemic improvement of mechanisms of interaction between the budgetary, tax, customs, debt and monetary-credit policy. In order to achieve the synergetic effect in the development of financial institutions that carry out budget regulation, it is necessary to ensure the coordination of objectives and tasks of all participants in the budget process. Effective is to use a program-target method of budget planning, which would make it possible to determine the efficiency and effectiveness of using budget funds by carrying out monitoring and evaluation of the implementation of budgetary programs. Under conditions of economic transformations, it is expedient to use the tools of budget-tax regulation, which would make it possible to ensure macroeconomic stabilization and to generate a positive impact on economic growth. Important is to improve the regulatory potnetial of the tax mechanism in the process of stimulating domestic demand, investment climate, institutional reforms within a budgetary system. Maintaining the level of public debt within the limits, acceptable for sustainable economic development and ensuring the country's solvency implies the optimization of its volume, structure, sources to finance it. It is expedient to improve the mechanism of attraction and use of external financial resources, to develop a long-term debt management strategy.

The priority task of the state bodies and local self-government is to strengthen the financial and economic potential of territories, which requires the introduction of a system of effective budgetary control, the prioritization of budgetary policy in the field of inter-budgetary relations, the optimal combination of local and national interests. An important task of the budgetary mechanism is the transformation of budgetary resources into a factor of economic growth. Budget funds should be an important source of investments, which would contribute to the increase in the level of social development. Serious approaches to the institutional transformation of the system of budgetary regulation as part of the country's socio-economic development would contribute to the enhanced effectiveness of the functioning of state and local finances. A budget policy is one of the effective

instruments to influence the dynamics and quality level of the country's socio-economic development. The use of tools and levers of the budgetary mechanism should be performed taking into consideration the impact of the totality of the economic, institutional, and social factors.

Tasks of the fiscal policy define the future directions of the country's economic transformation, it is important to promote the achievement of sustainable economic growth in the country; efficient allocation and rational use of the budget resource; responsibility of subjects in the budgetary process for the fulfillment of obligations; balance the budgets at all levels. Solving the tasks for a fiscal policy depends on the choice and implementation of methods for budget regulation, so first of all, when forming a fiscal policy, it is necessary to clearly define its priorities, which should be achieved in its implementation. It is important to reveal the economic essence of the budgetary policy as a component of the system of financial regulation of the country's socio-economic development, as well its administrative-territorial units, which is to use a totality of institutional mechanisms in the budget space taking into consideration the degree of dynamic balance among financial, economic, and social relations of the societal environment.

A budgetary policy should be built based on the scientifically-substantiated concept of the development of budgetary relations as part of the financial policy, aimed at creating conditions for improving the quality of public services, socio-economic development of the country and its territories.

It is important to note that the establishment of financial relations takes place under conditions of economic transformation, which is a prerequisite and, at the same time, the object of their influence. Based on the economic development strategy, related to enhancing its endogenous component, appropriate institutional changes are required in the system of financial-budgetary regulation of the economy, that is formed in a particular institutional environment and is a set of such financial-budgetary and economic components as revenue part of the budget, expenditure part of the budget, a budget deficit, a public debt, tax regulation, inter-budgetary relations, the country's economic processes, external economic environment, and relationships between them. A transformation of the system of financial-budgetary regulation is largely connected to changes in the institutional environment of the society, the components of the financial policy improve with the development of the socio-economic sphere, economic strategy, and characterize the adaptation possibilities of the architectonics of financial system.

Budgetary regulation affects, both simultaneously and at time delays, the pace of socio-economic development, as well as stability and balance of the budgetary system. The main task of the financial, including budgetary, regulation is to provide fulfillment of tasks related to socio-economic development of the state and its administrative-territorial units, however, it is important to support, primarily, a reserve stability of the budget system.

In order to develop and implement a balanced financial and fiscal regulation over a certain period, a budgetary policy should be defined based on the cyclic nature of economic development, as well as the state of public finances and the state of a budgetary system stability, whose significant reduction could lead to complications in carrying out effective fiscal regulation regarding the positive impact on economic growth. The institutional approach implies consideration of the budgetary regulation as a dynamic system that is constantly being improved and adapted to the challenges of socio-economic development. Implementation of the institutional approach to studying a fiscal policy is important and includes defining the attributes for the institute of budget regulation, the institutional environment that provides its operation, transaction costs with the use of the theory of public choice.

The institutions in the budgetary system have a complex internal structure of norms, rules, the evolution of these institutions is closely linked to the development of institutions of state governance, macroeconomic regulation. Institutions could be represented as a result of the processes that took place in previous periods of time, and so they correspond, first of all, to the past environment. Important is to determine the degree of adequacy of these institutes to current circumstances, the time of start, stages, the speed of introducing the required institutional changes. This affects the efficiency of development of public finances, the national economy, and society as a whole.

Studying foreign experience is an important tool of fiscal regulation of countries' social-economic development. Importance of the country's fiscal policy and the method of its implementation in the formation and allocation of gross domestic product is represented by the state's implementation of social functions assigned to it. A base indicator that reflects the government's use of these factors that form the total national product is the size of the gross domestic product per capita considering a purchasing power parity.

At present, the main priorities of fiscal policy in the developed countries include: the introduction and improvement of quality of the medium-term budget planning; the creation and improvement of the system of planning and monitoring the socio-economic effectiveness of budget expenditures by using qualitative and quantitative indicators, relative to both the budgets at all levels and specific budgetary recipients; among the specified methods a special role belongs to the result-oriented budgeting, a medium-term planning of expenditures under conditions of budgetary constraints.

An important place in the implementation of the country's fiscal policy is occupied by its tax system. A value for the overall tax burden reflects the selected direction of development of economic relations in a country and the methods of state regulation. A ratio of the volume of tax revenues to the gross domestic product reflects the country's economic situation and defines main directions of the state financial policy. Foreign countries could be divided into three groups in terms of tax revenues in the gross domestic product: the first group includes countries in which the share of tax revenues

in the gross domestic product is less than 30 per cent (Canada — 26.7 %, the United States — 24.3, Poland — 20.1, China — 19.4, Japan — 18.0 %); the second group includes countries where the average share of tax revenues in the gross domestic product ranges from 30 to 40 % (Germany — 37.6 %, the Czech Republic — 35.5, France — 35.3, the United Kingdom — 35.2, Italy — 34.4 %); the third group includes countries with a high proportion of tax revenues in the gross domestic product — more than 40 % (Denmark — 48.0 %, Sweden — 44.3, Finland — 44.1, Norway — 42.2 %). A value for the total public sector in the economy could be defined as a ratio of the aggregate revenues and expenditures in the consolidated budget to the gross domestic product. In EU-28 the amount of budget revenues in 2015 amounted to 44.9 percent of the gross domestic product (compared to 45.2 percent in 2014), the volume of budget expenditures amounted to 47.3 percent of the gross domestic product (compared to 48.1 percent in 2014).

It is expedient to systematize the experience of implementation of the budget regulation measures in countries with the developed and transitional economies in order to identify possibilities of their practical application in the activities of domestic institutions. In order to counteract the global economic recession to stabilize the financial sector and support the level of economic activity of enterprises, the developed countries devised and implemented a set of measures of budget regulation that had a stimulating character.

In the European Union, respective measures were coordinated in the framework of the unified financial plan and implied additional capitalization of systemic financial institutions and giving state guarantees. In addition, they allocated significant amounts of financial support to the countries that experienced substantial deregulation of the system of public finance, including Greece, Ireland, Spain, Portugal, Cyprus. Basic conditions for such financing are to conduct comprehensive economic reforms and ensure a balanced budget. The implementation of the above implied compensatory measures of tax regulation — raising the tax rates on consumption, property taxes, and the tax on individuals' income. Specifically, the base rate of value added tax in the period of 2008 — 2015 increased in the specified countries on average by 3.6 percentage points, in general in the countries of the European Union by 2.1 percentage points; the maximum tax rate on individuals' income rose by 8.3 and 1.5 percentage points, respectively. Significant fiscal policy measures over a post-stabilization period included institutional changes to the pension system and public administration. In the study, it was found that the rising budget deficit reduces the possibilities for accelerated economic development in the medium term. In countries where the share of public expenditures exceeds 40 percent of the gross domestic product, a growth in the specified indicator by one percentage point leads to slowing down, by 0.4 percentage points, an increase in the real gross domestic product.

The nature of the impact of a budgetary system on the state of the country's economy, specifically the level of favorability of the budget policy

to economic growth, is largely defined by the redistribution of social product via a budgetary system, which is characterized by the magnitude and structure of revenue part of the state and consolidated budgets. The subject of research into the influence of revenue part of the budget on the country's economic activity is primarily the tax revenues.

Effective tax policy, stimulation of entrepreneurial activity in the country, improvement of tax legislation and the mechanism of control over targeted use of tax benefits, are the key to improving the quality of life and the degree of trust to power by people, which, in turn, would lead to an increase in revenue part of the budget. The process of budget expenditures generation plays a rather important role both in the management of the budgetary system and the management of the country's financial system. Using the budget expenditures helps achieve the required proportion in the allocation of the gross domestic product among the country's industries and territories, provide financial resources to the priority fields of economic activity, pursue a unified balanced budget policyAt present, it is necessary to solve tasks on strengthening the systematic character and consistency in the implementation of fiscal policy in the field of planning budget expenditures; improving the strategic planning of activities by the main allocators of budgetary funds; planning budget programs according to the tasks and functions of executive authorities; achieving respective results using the minimum amount of budgetary funds; searching for the optimal structure and content of budget programs, their correspondence to the country's socio-economic development; achieving the set goal in the process of implementing a budget program; directing budgetary funds only towards the goals and objectives defined in the plan of activity by the main allocator of budget funds.

It is necessary to further develop methodological approaches to the formation of budgetary and state target programs, so that they reflect the indicative indicators and indicators for the strategic documents of the country's socio-economic development, which should enhance the level of correlation between the programs and priorities of state policy. It is important to determine the boundary volumes for financing the long-term programs of economic direction at the expense of budget funds. In the preparation of the program, it is important to identify the indicators for effectiveness and quality of their execution. The feasibility of the implementation of a budgetary program should be based on the ultimate goals stipulated by the plans of activities by the main allocator of funds. Programs that are not funded in their entirety do not promote solving the assigned tasks and reduce the effectiveness of planning and execution of the budget based on a program-target method. The degree of effectiveness of planning budget allocations for the execution of state and local target programs depends on the timeliness of monitoring and evaluation of the effectiveness of these programs. A systematic approach to assessing the effectiveness of budget expenditures should imply defining the economic and social criteria at the

stages of forming and executing a program. Of importance are the issues related to the development of mechanisms of preliminary state financial audit, analysis, and control over the execution of budget programs to ensure the appropriate level of fiscal efficiency.

Perspective planning of budget expenditures is one of the essential tools of state regulation of the socio-economic state of the country and a prerequisite to improve the manageability of the budgetary process, the impact of spending on achieving the goals and objectives for the development of national economy. The effectiveness of a fiscal policy must be assessed from the standpoint of proper fulfilment of functions by the state. Fiscal efficiency reflects the degree of resolving budgetary tasks: accumulation of budget revenues, execution of budget obligations, management of a budget deficit and a debt. The results of the activities of executive power related to the implementation of the specified directions could be the base for the quantitative assessment of effectiveness. The emergence, under conditions of difficulties related to the implementation of budgets, of the deficit in funds for social benefits, as well as underfunding other expenditures, reduces the effectiveness of fiscal policy. Therefore, the formation of long-term factors for economic growth, while enhancing the effectiveness of using budget funds, is the strategic reference point in the field of public finance. There is a tendency towards a constant growth of all indicators during the examined period.

Medium-term budget planning and forecasting is the basis for a consistent, sound fiscal policy and the achievement of a sufficient level of effectiveness of budget expenditures, aimed at economic growth. It is important to conduct a functional evaluation of budgetary institutions' activities; to continue the implementation of measures related to economical and rational use of public funds and reviewing such measures based on the results of analysis of the effectiveness of their implementation and based on the current state of development of the economy; to introduce the state strategic planning as a prerequisite for a transition to the medium-term budget planning at the level of the main allocators of budget funds by providing the coordination of sequence and terms for developing the predictive and program documents for the economic and social development; to define strategic goals and indicators of results related to the activity of the main allocators of budget funds, including performance indicators for rendering government services, in accordance with the priorities of the state policy. Effective fiscal policy depends not only on the definition of tasks facing society but also on effective way to solve them, which would make it possible to improve the country's socio-economic development.

An important factor for an effective fiscal policy is the quality of the institutional environment, whose change takes place, among others, under the influence of the development of the innovation potential of the economy. The architectonics of budget policy must create institutional conditions for the functioning of a budgetary mechanism with the purpose of effective

influence on economic growth, comprehensive societal development, improvement of the well-being of people. The institutional structure of budget policy as an important component of state regulation is an effective tool of the country's socio-economic development. Because economic activity is carried out within the framework of the respective institutional model, which is a set of interrelated institutions, an effective model of fiscal policy must rely on the institutional environment of society as a system of key economic social, political, and legal provisions that are defined by the history, traditions, culture of the country. The establishment of appropriate institutional conditions for the formation and implementation of effective fiscal policy requires the use of the adaptive architectonics of the system of budgetary control, which would contribute to the achievement of the country's balanced and sustainable socio-economic development.

Under current conditions, it is considered appropriate to improve the mechanisms of cooperation between the state authorities, local authorities, and financial institutions. The main tasks are to balance the budgets of all levels, to prevent significant fluctuations in macroeconomic indicators. The institute of fiscal policy should play a leading role in initiating the changes to the system of financial regulation of social development. The formation of strategic directions of budget policy requires the consistency and balance of components in the system of budgetary regulation, taking into consideration the changes in the institutional environment that ensures the functioning of the specified system. Under conditions of structural economic reforms, strengthening the integration processes, there are the dynamic institutional changes to a financial-fiscal policy, which requires the activation of adaptive mechanisms in the development of financial relations.

It is expedient to strengthen the relationship between a budgetary regulation and the cyclic nature of economic development, to enhance the effectiveness of mechanisms to support competitiveness of the national economy. The processes of unification of taxation with the European Union countries, including in the field of administration and regulation of taxes on consumption, must proceed predictably to the state and taxpayers, which would enhance the manageability of the budget process and counteract the shadow economy. Given the fiscal importance of property taxation, it is necessary to increase the degree of progression in the taxation of real estate; in the future, to determine taxation base taking into consideration the value of the immovable property. Budget policy in subsequent budgetary periods must create favorable conditions for the development of human capital as an endogenous factor to ensure intensive economic growth. The amount of financing institutions of the social sphere should depend on the indicators for their activities, which should correspond to world standards. In addition, a further stage of development is needed by a policy of granting autonomy in the field of financial management to the institutions of education, science, and health protection. In the field of financial support to programs of social protection,

it is relevant and necessary to improve the toolset for targeting provision of social benefits via the categorization and verification of their recipients and to set the economically justified standards for consumption of gas, water and electricity. Given the number of households that receive housing subsidies, it is important to introduce an institute to evaluate the financial status of recipients of social assistance based on indirect attributes taking into consideration practice of the developed countries. The quality of planning budgetary indicators affects financial sustainability of the system of public finance.

It is expedient to activate a strategy for managing an internal and an external public debt, to form annual plans of measures related to its optimization on a quarterly basis in to reduce peak loads on the state budget. Growing needs to service the debt and fund the budget require the formation of a balanced portfolio of borrowings and the improvement of the liquidity of domestic government bonds. However, a sufficiently high proportion of the external public debt in its structure predetermines the need for appropriate cooperation with international financial organizations. The implementation of the above requires the improvement of the institutional model to manage the state sector of the economy, to increase the level of coordination in the system of government bodies in the field of macroeconomic regulation. Budgetary policy as a significant tool in the system of state regulation of the economy should rely on a long-term program of the country's economic and social development. Streamlining the regulatory goals of fiscal policy make it possible to achieve the proper balance of the process of redistribution of financial resources in society.

The architectonics of fiscal policy must create the appropriate institutional conditions for the functioning of a financial model in society that collectively should form a mechanism of influence on economic growth, to enhance the well-being of society. Conclusions. A budgetary policy is one of the effective tools to ensure macroeconomic stabilization and further activation of economic growth. The use of tools and levers of the budgetary policy to support systemic transformation of the financial component of social development should be carried out taking into consideration the impact of the totality of conomic, institutional, and social factors. The effectivenens of budget regulation depends on the level of the scientific substantiation of its role in the development of public relations, the model of the country's socio-economic development.

Under conditions of economic transformations, it is expedient to find an optimum ratio between the macroeconomic indicators and a share of the gross domestic product, distributed through the budget system, the degree of its decentralization and improvement of quality level of the development of budget institutions. In order to develop and implement a balanced budget regulation over a certain time interval, a budgetary strategy should be determined, on the one hand, by taking into consideration the cyclic nature of economic development, on the other hand, the state of public finances

and the reserve of stability in the budgetary system. Under conditions of the transformation of economy, a budgetary policy must implement the adaptive-regulatory potential to enter the trajectory of economic growth. One of the main tools of state regulation of social and economic development is propspective budget planning, whose essence implies the development of the main directions to form and use budgetary funds over the medium- and long-term period, given the need to solve the tasks that society faces at a certain stage of its development. The further development of the planning and budget execution system that is based on the principles of a program-target method requires improving a budgetary process in terms of the implementation of a medium-term planning, strengthening a budget planning towards ultimate results and improving the effectiveness of spending budget funds. One of the main tasks of budgetary regulation is streamlining the number of budget programs, drafting by the main allocators of budget funds a plan of activities over the following budgetary periods in accordance with the directions of development of the sector, improving the quality level of preparing passports and integrated assessment of budget programs fulfillment, preparing budgetary requests, monitoring budget performance.

A budgetary policy as a tool of state regulation of economic development implies the implementation of a number of financial measures in order to achieve appropriate goals in the country's socio-economic development, taking into consideration the need for the optimization of management of public finances, to reduce the level of a budget deficit and a public debt growth, to improve the efficiency of budget regulation, to develop plans and forecasts of basic budgetary indicators, to ensure the innovative channeling of available budget funds and to execute control over their use. It is important to improve the mechanism of budgetary regulation to stimulate employment, aggregate demand, improvement of the effectiveness of the system of state investments, carrying out appropriate social policies, based on the transformation of the economy.

Under conditions of structural economic transformations and strengthened integration processes, the institutional modernization of a fiscal policy implies the need to form the developed architectonics of financial relations. An important role in the model of the institutional architectonics of a budgetary process belongs to the adaptive tools that implement a budgetary regulation, which is a set of measures to coordinate the activities of state authorities and to define the priorities in their operation. The process of integration of budget models of social development defines the need for a comprehensive combination of tools for budget planning and forecasting, budgetary regulation, internal financial control, monitoring of the implementation of the budget. It is expedient to form the institutional principles for the transparency of a budgetary process, the criteria for the budget-tax transparency that would provide an adequate level of state financial control and audit of the effectiveness of budget expenditures.

A long-term balance of the budget characterizes indicators for implementing revenue and expenditure parts of the budget, the share of accounts receivable and payables in the consolidated, state, and local budgets in the total amount of expenditure part of the respective budget, the level of tax burden on the economic system, financing a budget deficit and a public debt. The level of the balance of budgetary regulation affects both simultaneously and with time lags the integrated indicator for the reserve stability of a budgetary system that reflects the possibility to timely fulfill financial commitments by the bodies of state management and the local governments. Important is to develop substantiated principles for the redistribution of gross domestic product through a budgetary system, to identify priority directions to use budget funds and to implement a series of measures related to achieving strategic goals in the country's socio-economic development.

4.3 State financial support for the development of human potential

Dynamic transformation of the country's economic model, especially under conditions of instability in the global economy, requires the use of a balanced approach to determining the rational methods to financially regulate the sectors of social production. The financial component of the development of human potential must ensure the gradual improvement of the quality of life, promote the improvement of the institutional structure of social sphere, increase the level of labor productivity, increase the share of output of science-intensive and highly technological products in GDP. The important factors are: the implementation of a systematic and balanced state policy in the field of financial support to the development of human potential using a set of budgetary, tax, credit, insurance instruments; adaptive improvement of institutional principles for the financial regulation of human potential, including related to education, science, health, the social sphere, the labor market; the use of integral architectonics of the financial regulation of economy, the further development of provisions related to the institutional mechanisms of financial support to the development of human potential, which is purposefully employed by state institutions. The proper level of substantiation of the priority directions in the state financial policy for the development of human potential would contribute to the effectiveness of structural changes in the economy and social sphere.

Starting from the mid-1950s, there has been an intensified attention to human development as a factor of economic growth. Along with labor, land, capital, the components of human development are introduced to macroeconomic models and calculations confirm the assumption by classic scientists about its importance in the socio-economic development of countries.

A representative of the conceptual direction in the study of human development was R. Solow[53], whose improved model, along with an increase in the number of employees and the level of investments, takes into consideration the factor of technological progress. The author understands it as not only a growth in the capital-labor ratio of labor but an increase in its effectiveness, which directly depends on the level of education, skills, and health of workers.

E. Denison[54] reports the results of analysis of the rate of economic growth in the United States and Western Europe (1929—1970). In his model, among more than twenty independent variables, one fifth related to the factor of labor, including the level of education of employees.

S. Kuznets[55] studied the costs of training workforce along with the cost of education in the models of economic growth as a variable quantity, which affects the volume of gross domestic product (GDP). Development of education and the expansion of network of secondary and higher educational establishments directly depend on the pace of economic growth.

Thus, along with such generally recognized factors of economic growth as savings, investments, leading scientists confirmed the significant value of the level of human development.

It is believed that the economic science conceptually, gradually came to the category of «human development» through the category of «human capital». Authors of the latter focused on studying the rates of return on investment in an individual, determining an economic effect of the improvement of qualitative characteristics of a single individual and the country's population in general.

The theory of «investment in a person» was the first in the system on the economic value of an individual, its supporters included L. Thurow[56] and other researchers who adopted Keynesian positions. The subject of research in the framework of this concept was both the inner structure of the «human capital» and special processes of its formation and development.

In general, up to the 1950s, the main goal of development that was used in the development of socio-economic policy of states, was economic growth. Until that period, economists focused on the components of human capital, which tend to support and develop, first of all, those human abilities that are used in a labor process and, consequently, promote the growth of macroeconomic indicators. In addition, it was also believed that achieving an economic growth automatically leads to the progress in human development and the entire society, while increasing the total volume of production reduces the scale of poverty and increases the level of social welfare. The mechanism of influence was implemented in the following way: production generates revenues, and higher revenues, in turn, raise the material and economic prosperity.

The realization of the fact that economic growth is not synonymous with human development came with the strengthening of socio-economic instability and the increased level of poverty of people in the world.

Moreover, practice of the developing countries proved that the standard of living of people may deteriorate even at active process of growing production volume. Such countries registered fast economic growth, but at the same time experienced underemployment, social inequality, and pervasive poverty. At the same time, some states were able to achieve positive changes even at relatively low incomes. It should be noted that this happened in those few countries whose governments purposefully implemented measures to reduce inequality, and actively applied programs in education and health.

The experience of the 1960s showed that it is impossible, without the implementation of wide-ranging social programs, to achieve a significant improvement in the quality of life, to solve socio-demographic problems, to create a productive employment system and to reduce the extent of poverty. Given these circumstances, as early as 1970s, the attention of scientists shifted towards interaction between the economic and human development, they focused on the problem of equitable distribution of income and wealth, strengthening the role of the public sector. «The concept of redistribution through growth» became the first scientifically-substantiated attempt by governments to provide wellbeing, especially vulnerable people, through the rapid build-up of labor-intensive production, thereby a growth of GDP, wage fees and income. All that was to take place against the background of massive state support for the social sphere, but without reducing the income and assets of the most well-to-do layers of population. The next step in governments' attempts to combine the economic and human development was the «concept of basic needs», in which the main role in providing the population with elementary means of existence, health services, education, was assigned to the state. In other words, the realization of the importance of human development and the need to stimulate its growth at the state level was gradually gaining traction. Unfortunately, neither the «concept of redistribution though growth», nor the «concept of basic needs» were not widely applied in the economic practice of countries. The correlation between economic growth and human development was not elucidated.

In the early 1980s, many countries experienced an economic slowdown and a structural crisis. As a result of restructuring, which began after the 1982 debt crisis, governments again put at the forefront of the development policy a reduction of the national debt, overcoming recession and reduction of primarily social expenditures. Stabilization policy ultimately resulted not only in the economic slowdown, but also to the economic downturn in general. The results of the restructuring primarily affected people with low income while inequality and poverty deepened. The policy of restructuring was emphasized by UN by publishing the breakthrough work «Development with a human face», whose authors, not dismissing the importance of structural reforms, urged the International Monetary fund and the World Bank to focus more attention to human development, the need to improve social standards and meet basic social needs at the state level.

The modern concept of human development was permanently established in the late 1980s. It is believed that its formation was significantly affected by theoretical study by A. Sen[57], who in 1989 published the work «Development as an extension of opportunities», which applied the so-called «approach in terms of capabilities». The author considered development primarily as empowering a person, not just as a process of accumulation of material or economic benefits. According to the scientist, the goal of social development is not a constant increase in production, but rather creating opportunities for the expansion of the choice of people. The main provision of the work was that an individual is not a means, but the main purpose of economic development. The human development itself was considered as the process of granting a person a greater choice.

The final concept of human development came in 1990, when UN first published the «Report on the state of human development in the world». The concept of human development as a special theoretical system and a methodology, focused on the practice of state governance, proceeds from the recognition of the inability to reduce social progress only to an increase in cash income or an increase in wealth. Its main principle implies that the economy exists for the development of people and not vice versa. At any, even the highest, rate of economic growth, progress in society is impossible if, first of all, the opportunities, important for an individual, are not implemented: living a long and healthy life, to acquire, update and deepen knowledge, to have access to the means of ensuring proper standards of living.

Generalization of theoretical material made it possible to conclude that the awareness of the role of an individual in the country's development came about in three stages: from assumptions about the existence of human potential, which could affect the country's socio-economic development (end XVII — end XIX centuries) and early awareness of the role and value of an individual in the social and economic development (early 1900s — 1990s), to the formation and establishment of the concept of human development as the main vector of internal and foreign policy both in the developed countries and countries with a low level of socio-economic development in the late 1990s-early 2000s.

In general, a problem of human development is the priority strategic objective of the state. Achieving it must be properly supported because the level of human development defines the degree of the country's development. As regards human development, it only partially is a set of qualities, inherited by an individual at birth, while to a larger extent being formed and developed in the process of life activities. This is important because the conditions under which an individual resides determine the level of human development. Therefore, a possible metric and a criterion to evaluate the country's socio-economic policy is a possibility to provide and implement conditions for human development.

Most often, a category of the potential covers the resources that a subject possesses, their optimal structure, and the ability to efficiently use them to achieve a specified goal. At the same time, human development in domestic scientific sources[58,59] is often considered as the heritage of every nation, since it (human development), rather than resources or technology or wealth, is the main driver of economic growth. The impact of human development on the process of economic growth is exerted through human resources (number of employees, qualifications, management and labor costs) and a resource of knowledge (a set of scientific, technical, and other information).

Neutralizing the effect of human development on economic growth might be possible due to unfavorable economic and social factors, as well as the lack of means to improve and implement human resources and knowledge resources.

The acting edition of the Strategy «Europe 2020» contains many chapters related to human development (Table 4.1).

Table 4.1 Goals of the strategy «Europe 2020», related to human development

(Smart Growth)		(Inclusive Growth)	
Innovations	Education	Employment and skills	Eliminating poverty
European key initiative «Innovation Union» to improve framework conditions and access to financing R&D, innovations to strengthen innovative chains and accelerate investment in the EU	European key initiative to improve the functioning of the systems of education and enhancing the international attractiveness of the European higher education	European key initiative «Agenda for the creation of new jobs and skills» to modernize labor markets by enhancing the mobility of labor resources and the development of skills that promote successful employment	European key initiative «European platform against poverty» for social and territorial unity, for people living in poverty or excluded from society, so that they live properly and are active members of the society

Source: European Commission

The concept of human development is key to achieving the EU-specified objective to create a knowledge economy, information society, to improve competitiveness in a globalized world. The formation of a modern efficient system of human development is a relevant task for all the most developed countries of the world. However, as noted by V. Mau[60], the search for an optimal model of human development must take into consideration the experience gained to a minimal extent, because there are no effective systems to meet modern challenges. Moreover, according to author, a country that would be able to form a modern efficient model of human development could get a significant advantage in the post-industrial world.

In modern developed countries the components of human development represent a zone of interaction of not only social, but also fiscal, investment and political factors. Human development must address the following issues: first, find an opportunity to allocate additional budget resources in support of the workers in the priority areas of economic activity and population groups; second, implement structural reforms in these sectors of economic activity. These two steps are inseparable from each other, because an increase in funding without structural reforms could create risks and lead to negative consequences. Under conditions of globalization and integration in the EU, when a transnational partnership of government and business is in demand, the regulation of human development remains a prerogative of the state, but the unified evaluation system of implementing the Strategy may not apply in all countries due to different levels of their socio-economic development.

As defined by the Organization for economic cooperation and development, human development is the knowledge, qualifications, skills, and other qualities that individuals possess and which are important for economic activity[62]. The World Bank considers human development as a set of knowledge, professional qualities, experience, which individuals possess and which make a person «economically productive»; human development could be accelerated through investment in education, protection of health, professional training[63]. It was noted above that the United Nations regards human development as a process of providing people with a wider choice. Fundamentally, such a choice could be infinite and change over time. However, the main aspects of human development are the ability to live a long and healthy life, to acquire knowledge, and to have access to the resources required for the proper level of living. In the absence of these three components an individual would not have access to other opportunities.

Public investments in human development reduce poverty and inequality, while overcoming disparities in access to basic social services, especially education, contributes to the reduction of poverty and to overcoming economic disparities. The countries, which, due to low income per person or for other reasons cannot afford to invest in human development, fall into the «vicious circle of poverty».

Human development is one of the assessment and predictive characteristics of a society or a country, the tool to assess its socio-economic situation. The presence of a certain level of human development in a country does mean to which degree it would be implemented, because not only the formation, but also human development, require conditions that could be both favorable and unfavorable. The respective conditions first and foremost imply financial resources that make it possible for an individual to operate effectively in the society.

A comparative study of the quality of life of people in Ukraine and the EU countries revealed that the value of GDP per capita defines both life expectancy and the education level of a person[64]. The low level of well-being

of Ukraine's citizens is an obstacle for achieving a medium level of indicators for the level of human development in the EU countries (in terms of education and life expectancy), as well the overall indicator for the Index of human development, demonstrated by the EU countries with high levels of socio-economic development.

Consider the financing of education, health, social protection, and social security, which are essential components of human development. The dynamics of funding the components of human development in Ukraine and the EU member states are given in Tables 4.2 − 4.4.

Table 4.2 Financing the health care in Ukraine
and the EU member states in 2008 − 2016, (consolidated budget expenditures, %)

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016
European Union (28 countries)	14.5	14.7	14.6	14.7	14.6	14.8	15.0	15.2	15.3
Ukraine	10.9	11.9	11.8	11.7	11.9	12.2	11	10.5	9.1
Belgium	14.2	14.3	14.4	14.0	14.2	14.3	14.6	14.2	13.9
Bulgaria	11.9	10.1	12.2	12.3	12.7	12.0	13.0	13.4	14.3
Czech Republic	17.0	17.6	17.9	17.9	17.4	17.9	18.0	18.1	18.9
Denmark	15.6	15.7	15.1	15.0	14.9	15.2	15.5	15.6	16.1
Germany	14.8	15.0	14.7	15.2	15.4	15.7	16.1	16.3	16.2
Estonia	13.0	12.0	13.1	13.2	12.7	13.0	13.4	13.7	13.1
Ireland	16.5	16.7	11.5	16.3	17.8	17.9	18.1	18.2	19.2
Greece	12.7	12.6	13.1	12.0	10.5	8.3	9.3	8.7	9.9
Spain	14.6	14.8	14.4	14.1	12.9	13.5	13.6	14.1	14.3
France	14.0	14.0	14.1	14.2	14.1	14.1	14.3	14.2	14.4
Croatia	13.7	13.0	12.9	12.8	15.0	13.6	13.8	13.4	13.9
Italy	14.7	14.6	14.9	14.5	14.1	14.1	14.1	14.0	14.1
Cyprus	7.0	7.0	7.1	7.3	7.1	7.3	5.5	6.3	6.8
Latvia	11.5	10.4	9.2	10.2	10.2	9.7	9.9	9.8	10.0
Lithuania	14.7	14.9	16.4	15.6	16.3	15.9	15.9	16.6	17.1
Luxembourg	11.1	11.2	11.0	11.0	11.0	12.0	11.8	11.3	11.3
Hungary	10.1	10.2	10.2	10.3	10.6	10.2	9.7	10.4	10.3
Malta	12.3	12.3	12.8	13.1	12.9	13.6	13.9	14.1	14.7
The Netherlands	15.6	16.1	16.3	16.9	17.7	17.7	17.6	18.1	17.7
Austria	15.1	14.5	14.9	15.0	15.0	15.1	15.0	15.6	15.8
Poland	11.2	11.1	10.9	10.6	10.8	10.9	11.0	11.2	11.3
Portugal	15.9	15.8	14.2	13.7	13.5	12.9	12.0	12.7	13.2
Romania	9.7	10.2	10.4	10.5	10.3	11.3	11.5	11.8	11.9
Slovenia	13.8	14.2	14.2	14.1	14.6	11.5	13.1	14.0	14.9
Slovakia	18.1	16.4	17.1	16.7	16.7	16.5	16.7	15.8	17.7
Finland	14.4	14.4	14.4	14.4	14.6	14.4	14.3	12.8	12.9
Sweden	13.2	13.4	13.3	13.6	13.5	13.4	13.7	13.9	13.9
United Kingdom	15.5	16.3	16.0	16.1	16.1	16.8	17.4	17.8	18.3

Source: *Calculated based on data from the International Monetary Fund*

An analysis of the volume of expenditures on health care in the Ukraine's consolidated budget and in the EU member states, taken for a comparative analysis, reveals that the share of expenditures in the Ukraine's consolidated budget in 2016 amounted to 9.3 %, which is one of the lowest indicators among the EU member states.

Table 4.3 Financing education in Ukraine
and the EU member states in 2008 — 2016, (consolidated budget expenditures, %)

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016
European Union (28 countries)	10.7	10.5	10.5	10.5	10.2	10.1	10.2	10.2	10.2
Ukraine	19.7	21.7	21.1	20.7	20.1	20.1	19.1	16.8	15.5
Belgium	11.3	11.1	11.2	11.3	11.2	11.4	11.5	11.9	12.0
Bulgaria	10.6	10.4	9.9	10.0	9.7	9.8	9.7	9.8	9.8
Czech Republic	11.5	11.4	11.6	11.8	11.3	12.0	12.1	11.8	11.3
Denmark	12.1	12.3	12.6	12.1	12.0	12.3	12.9	12.8	12.9
Germany	9.0	9.1	9.2	9.6	9.5	9.6	9.6	9.6	9.5
Estonia	16.8	15.7	16.3	16.6	16.0	15.6	14.8	15.1	14.6
Ireland	11.2	10.0	7.1	10.9	11.6	11.7	11.5	11.4	12.1
Greece	7.4	7.6	7.8	8.2	8.2	7.4	8.7	8.0	8.6
Spain	10.2	10.1	9.8	9.6	8.7	9.0	9.1	9.4	9.5
France	10.1	10.0	10.0	9.8	9.7	9.6	9.6	9.6	9.6
Croatia	10.6	10.5	11.6	10.1	10.3	10.6	10.1	10.1	10.2
Italy	9.1	9.0	8.8	8.3	8.0	8.0	7.9	7.9	7.9
Cyprus	16.4	16.0	16.4	15.9	15.1	16.2	12.4	14.8	15.6
Latvia	16.8	15.2	13.7	14.5	15.1	15.2	15.4	15.4	14.7
Lithuania	16.1	16.1	15.2	14.3	16.1	15.8	15.5	15.5	15.1
Luxembourg	12.2	12.2	13.0	13.1	13.1	11.8	11.8	11.8	11.5
Hungary	10.9	10.6	11.2	10.2	9.7	9.3	10.2	10.2	10.5
Malta	12.1	12.8	13.7	13.9	13.6	13.8	13.4	13.3	14.1
The Netherlands	12.1	11.7	11.7	11.8	11.7	11.7	11.7	11.8	12.2
Austria	9.7	9.4	9.7	9.8	9.8	9.7	9.4	9.6	9.8
Poland	12.7	12.0	12.1	12.4	12.5	12.4	12.4	12.7	12.1
Portugal	14.1	13.9	13.7	13.2	12.0	11.8	11.0	10.5	10.8
Romania	11.4	9.7	8.3	10.4	8.0	7.9	8.6	8.6	10.8
Slovenia	13.8	13.6	13.2	12.9	13.3	10.9	12.1	11.6	12.4
Slovakia	9.5	9.5	9.9	10.1	10.0	9.5	9.8	9.3	9.3
Finland	12.1	11.9	12.0	11.9	11.5	11.1	11.0	10.9	10.8
Sweden	12.9	12.9	12.8	12.8	12.7	12.6	12.9	13.1	13.4
United Kingdom	13.4	13.6	13.6	12.9	12.3	11.5	11.7	11.5	11.2

Source: *Calculated based on data from the International Monetary Fund*

An analysis of the volume of expenditures on education in the Ukraine's consolidated budget and in the EU member states, taken for a comparative analysis, reveals that the share of expenditures in the Ukraine's

consolidated budget in 2016 amounted to 15.5 %, which is one of the highest indicators among the EU member states.

Table 4.4 Financing the social security in Ukraine
and the EU member states in 2008 — 2016, (consolidated budget expenditures, %)

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016
European Union (28 countries)	37.8	38.8	38.8	39.2	39.6	40.1	40.3	40.6	41.2
Ukraine	24	25.6	27.7	25.3	25.5	28.7	26.4	25.9	30.1
Belgium	34.6	35.3	35.2	34.9	34.9	35.9	35.9	37.2	37.6
Bulgaria	28.8	32.8	35.6	36.1	36	36	31.9	32.6	36.4
Czech Republic	29.3	29.7	30.4	30.7	29.9	31.8	31	30.1	31.2
Denmark	42.8	42.9	43.8	43.8	42.4	43.9	43.5	43.1	43.6
Germany	42.8	43.2	42.1	42	42.5	42.3	42.3	43.4	43.6
Estonia	28.9	33.5	35.2	33.7	31.3	31	31.1	32.2	33.3
Ireland	35.5	37.5	27	34.8	38	37.5	36.8	35.9	36.4
Greece	33.5	34.5	35.8	37.4	37.6	31.2	40	37.7	41.5
Spain	33.5	35	36.4	36.7	36.5	39.5	39.4	39	39.9
France	41.2	41.7	41.9	42.3	42.6	42.9	43	43	43.3
Croatia	29.8	31.2	31.2	31.8	32.5	32.2	33.1	32.1	31.2
Italy	37.9	38.7	39.8	40.1	40.3	41.2	41.7	42.4	42.7
Cyprus	26.6	27.4	29	29.8	30.8	32	28.2	33.6	35.7
Latvia	24.1	31.7	31.2	30.2	30	30.6	29.9	30.9	32.2
Lithuania	31.9	36.6	33.4	29.3	33.1	32	33	31.8	32.8
Luxembourg	42.4	42.5	42	42.3	42.4	43	43.2	43.8	43
Hungary	35.7	35.9	35.2	34.1	34.4	33.3	31	29.4	30.7
Malta	31.2	33.9	33.4	33.5	32.8	32.9	31.8	30.1	31.6
The Netherlands	33.6	33.8	34.4	35.2	35.7	36.7	36.5	36.3	37.3
Austria	39.3	39.2	40.5	40.7	40.8	41.2	41	42	42.6
Poland	35.8	36.5	36.5	36	37.1	38.3	38.3	38.4	41.2
Portugal	33.3	33.9	33.1	35.5	37.6	38.5	36.3	38.1	40
Romania	29.1	33.2	34.8	32.8	33.1	32.5	32.7	32.1	34.2
Slovenia	35.4	36.2	36.8	37.3	38.1	31.3	35.8	36.2	37
Slovakia	34.1	34.2	36.2	36.1	37	36.9	35.8	33.3	36.4
Finland	40.2	41.4	41.7	41.7	42.3	43.1	43.8	44.8	45.8
Sweden	40.2	41.3	40.8	39.9	40.4	40.9	40.8	41.2	41.7
United Kingdom	33.6	35.6	35.6	36.5	37.5	37.9	37.8	38.3	38.1

Source: Calculated based on data from the International Monetary Fund

An analysis of the amount of expenditures on social security in the Ukraine's consolidated budget and in the EU member states, taken for a comparative analysis, reveals that the share of expenditures in the Ukraine's consolidated budget in 2016 amounted to 30.1 %, which is one of the lowest indicators among the EU member states.

We believe that the financial regulation of human development, as a process that affects the level of its development by means of financial instruments based on a comprehensive approach and taking into consideration the dynamics of exogenous and endogenous changes, is an essential condition for achieving the quantitative and qualitative transformations in the country and for creating conditions for economic growth.

State financial regulation of human development implies the use of methods, tools, and levers of financial policy in order to ensure the conditions for the improvement of the quality level of the institutional environment for the model of economic growth and increasing the level of human development under conditions of growing influence of integration processes on the macroeconomic dynamics, which would contribute to improving the efficiency of structural transformations in the economy and social sphere, and is an important component of social development.

The goals of the state financial regulation of human development are to improve the quality of life of people by improving the quality of education, increasing life expectancy, to improve the level of well-being of population, which s indicated by an increase in the Index of human development and stable pace of socio-economic development. We suggest considering the following principles for the state financial regulation of human development:

— justice — the achievement of maximum possible equity in the allocation of conditions for economic activity, income, social benefits, the level of quality of life;

— comprehensiveness — the development of a system of financial regulation of human development based on the principles of proportionality and coherence in order to strengthen the connection among all elements and subsystems, coordination of all components in the toolset of the state financial regulation of human development;

— promote the development — creating conditions for the maximum possible level of human development under appropriate conditions of the economic environment;

— coherence (consistency) — consistency in all areas of an object's activity to eliminate the discrepancy between them with the aim of organizing well-coordinated activities in the interests of the efficient functioning of the system of state financial regulation of human development;

— efficiency — to provide optimal results under existing level of development of the socio-economic environment;

— stability — the ability of the system to function without changing the structure and stay in equilibrium, maintain constancy over time;

— tenacity — the ability to implement strategic objectives through the achievement of operational and tactical goals;

— priority — the recognition of human development as a strategic objective of the strategy and tactics of public administration.

Based on the above, we determined the following key functions of the state financial regulation of human development:

— social, implying that all strata of population have equal access to public benefits and services;

— stimulating — through the impact, by using incentives of direct and indirect influence, on the formation of conditions for the stable development of the components of human development in the country;

— control — implying ensuring control over fair allocation and maintaining the rights of access to public benefits and services;

— regulating, which is implemented by influencing an object, in order to eliminate or adapt to factors that affect its behavior.

A structural-functional model of the state financial regulation of human development should be based on the integration of the components of fiscal policy in the field of revenues, expenditures, inter-budgetary relations, budget deficit, public debt, taking into consideration the institutional transformation of the country's socio-economic system, the dynamic transformations of endogenous and exogenous environment.

We believe that further improvement of the mechanism of financial support of human development should be carried out taking into consideration the dynamics of changes in the parameters for a macroeconomic environment, changes in the institutional environment of economy and the experience of countries with the developed and transitional economies, which is advisable to adapt and apply under conditions of the Ukrainian economic environment. That would make it possible to strengthen the effectiveness of state's implementation of tasks and functions in ensuring the balanced functioning of branches of the social sector and to raise the level of well-being of people[68].

The processes that form the state financial policy should be aimed at the creation of basic institutional conditions for enhancing the level of human potential, possibilities of its full implementation. The degree of human development potential depends on the totality of its dynamic characteristics, including in the field of health care, education and science, culture, people's income and the uniformity of its allocation. Differentiation of approaches to financial provision of social infrastructure, including a combination of state and market methods and forms, is predetermined by the peculiarities of the country's economic development. The ratio of funding public services is formed based on the existing demand for them in society, the level of their quality and socio-economic efficiency. Strengthening the effectiveness of financial regulation of human development is predetermined by the dynamics of social changes and requires the allocation of a sufficient amount of funds to finance sectors of the social sphere and to improve its infrastructure.

Prerequisites to ensure the intensive economic growth are an appropriate degree of development of the educational and scientific potential,

technological modes of the economy, institutions, and a macroeconomic stability. The system of state financial regulation of human potential requires continuous improvement taking into consideration progressive methods, adaptation to internal and external economic factors under conditions of the institutional transformation of the economy[69].

A financial-budget policy should create favorable conditions for improving the quality and accessibility of services related to medical care, education, science, social protection, and social security. A rather high level of human potential development ensures the proper institutional environment and is characterized by the quality of interaction among economic actors, rules, and the nature of the implementation of financial regulation, which affect the country's economic prospects in a global space. Given the above, it is important to effectively combine the toolset of budgetary, tax, monetary, social policy in the country with market mechanisms that financially support human development[70].

The system of state financial regulation of human development could be reproduced using the proposed structural-functional model that is based on the integration of the components of the fiscal policy in the area of revenues, expenditures, inter-budgetary relations, a budget deficit, a public debt and the financial market taking into consideration the institutional transformation of the country's socio-economic model, the dynamic changes in endogenous and exogenous environment, which would make it possible to enhance the effectiveness of the state's execution of tasks and functions to ensure a balanced functioning of branches in the social sector and to raise the level of well-being of people. The purpose of the state financial regulation of human development is to ensure high standards of quality of life in the country through the creation of prerequisites for the efficient functioning of the market of educational services, for increasing an average life expectancy, increasing the level of well-being of population, which is reflected by an increase in the value for the index of human development and a stable rate of growth in the real gross domestic product, based on the principles of fairness, comprehensiveness, integrity, efficiency, stability, tenacity and priority of ensuring the effectiveness of the functions of regulation, control, promotion and achieving social justice.

Further improvement of the mechanism of financial support of human development should be carried out taking into consideration the dynamics of macroeconomic indicators, changes in the institutional environment of the economy and the experience of countries with the developed and transitional economies that could be adapted to local conditions. The structure to finance the sectors that contribute to the formation of human potential in the developed countries differs significantly depending on the features of socio-economic systems. In most such countries, the structure of financing the sectors of education and health care is dominated by the private sector of the economy. At the same time, countries of the «Scandinavian» model

of economic development spend a significant part of budget funds to finance measures related to the strengthening of human potential.

The experience of state regulation of human development in the developed countries indicates an increase in funding the sectors of education and health care from their budgets. In general, in the European Union countries, the average share of public expenditure in the countries' GDP over 2006 — 2016 for health care is 7 %, education — 5.1 %, social protection and social security — 18.7 %[71].

Priority directions for the financial policy in the field of providing conditions for social development are also to reduce the uneven distribution of incomes, to improve the quality and accessibility of public services, to improve the system of criteria in order to receive social assistance. An important global trend under conditions of economic transformation is the growth of expenditures on pensions, including taking into consideration the worsening demographic situation. The implementation of the above predetermined the introduction of successive measures related to increasing the retirement age and encouraging late retirement, changes in the conditions for granting pensions, lengthening an insurance record for receiving pension payments, changes in the procedure of indexation of pensions.

A systemic tool for the implementation of a budget policy is a program-target method, which has significant advantages in comparison with the estimated, and makes it possible to assess the achievement of specific results at all stages of the budgetary process[72].

An important task for the country's budgetary policy is to ensure the balanced development of public institutions in order to carry out structural changes in the financial support to sectors of education, science, health care, and social protection of people. The expenditures of state and local budgets on human development include funds aimed to finance education, health care, social protection, and social security. The average share of expenditures from the consolidated budget to finance the specified industries in the gross domestic product over 2001 — 2015 is 17.71 %, including in 2001 — 2005 — 15.08 %, in 2006 — 2010 — 18.6 %, in 2011 — 2017 — 19.46 % (Table 4.5).

The processes that form the fiscal policy of human development should be implemented taking into consideration the totality of macroeconomic factors, the identified priorities, possibilities to finance respective activities. Functional improvement of the budgetary mechanism that financially supports local communities is an important component of economic regulation that affects the process of formation and execution of local budgets, ensuring an effective mechanism of inter-budgetary relations and the state of human potential development. The amount of budget expenditures cannot fully meet the needs in rendering a set of public services to population, which affects the level of development of components of the human potential. Improving the quality of services in the areas of education, health care,

and social protection based on budget funds requires the optimization of the network of institutions of secondary and higher education, health care, social protection, according to the needs of local communities, improvement of the mechanism of competitive selection of national and local programs, scientific-technical, social, and national-cultural development. By using the tools and levers of fiscal policy, the state should promote the improvement of material and technical condition of institutions of social infrastructure through capital investments, raise the professional level of employees in the budget-funded field, including through the provision of competitive size of remuneration[74].

Table 4.5 Budget expenditures to finance programs related to human potential development (education, health care, social protection, spiritual and physical development), % of expenditures based on the functional classification of budget expenditures

Year	Share of expenditures in GDP			Share in the total amount of budget expenditures		
	Consolida-ted budget	State budget	Local budgets	Consolida-ted budget	State budget	Local budgets
2001	13.69	5.79	7.90	50.35	36.52	73.14
2002	14.37	6.13	8.24	53.81	38.97	75.05
2003	14.08	5.57	8.51	49.66	33.57	72.40
2004	14.49	6.66	7.83	48.76	36.05	69.63
2005	18.67	10.23	8.44	58.03	50.26	71.46
2006	17.47	8.56	8.91	54.17	45.16	67.00
2007	16.61	7.03	9.58	52.62	39.11	71.41
2008	17.81	8.41	9.40	54.11	43.71	70.07
2009	19.95	9.09	10.86	58.74	46.03	77.97
2010	21.16	9.87	11.29	60.44	47.33	80.40
2011	18.49	7.76	10.73	57.11	42.33	78.33
2012	20.22	8.28	11.94	57.51	43.08	76.15
2013	21.46	9.10	12.36	61.71	46.02	82.39
2014	18.85	7.65	11.20	56.44	39.99	78.50
2015	18.26	7.34	10.92	53.18	36.07	78.06
2016	20.13	8.56	11.56	57.44	29.81	78.72
2017	19.72	7.05	12.74	55.85	25.06	76.63

Source: calculated based on data from the State service of statistics of Ukraine

A model of financing the health care sector requires in-depth diversification with the targeted funding of health care services. Relevant is the issue related to the introduction of a mechanism for the allocation of budget funds to health care establishments depending on the quality and volume of their rendering medical care with respect to the needs of people. It is important

to combine government guarantees and the de-monopolization and promotion of entrepreneurship and competition in the health sector. Required is the institutional transformation of the financing system to pay for services, the introduction of mandatory health insurance, review of standards and volumes of budgetary financing to the sector, methodological improvement of the process of financial support to local programs in health care, as well as basic scientific research in this field.

Taking into consideration the need to strengthen the human potential, it is advisable to improve the institutional environment for the development of education, including expanding the financial and administrative autonomy of educational institutions. Implementation of the normative method to finance them is based on the calculation of the cost of the rendered budgetary educational service depending on the number of students in a class would contribute to ensuring equal access to the state's educational standards, to independence of educational institutions in the field of planning and using financial resources. It is appropriate to expand the list of effective indicators for the functioning of higher educational institutions, which would ensure equal access to the state's educational standards to the recipient of services and ensure the effectiveness of their activities. Given the above, it is important to develop an institute for external independent evaluation, research, financial and economic, international activities of higher education institutions. In order to improve the effectiveness of expenditures from the state budget on financing target scientific programs, it is necessary to assess the achieved performance indicators by a respective allocator of budget funds compared to other allocators that perform similar research.

Social order is an effective instrument for implementation of state and local target social programs and social projects, by agreeing social contracts on a competitive basis. In the medium term, these processes would improve the efficiency of using budget funds, quality, and a reduction in the production costs of social services, the formation of the market of social services where manufactures would compete.

Decreasing budget expenditures on research in the areas that provide human development could lead to the weakened effectiveness of policy in the specified direction, so it is necessary to take it into account when forming strategic priorities and targets for socio-economic development. An important factor in the growth of spending on scientific research is the structural optimization of budget expenditures. A positive effect on increasing the financing of programs could, in particular, be exerted by a decrease in the cost of servicing the public debt in the medium term. The issues related to monitoring the implementation of respective agreements under received government loans would require institutional settlement, as well as the improvement of procedures for drafting documents on getting international loans in terms of their validity and coordination at the level of the main allocators of budget funds.

Tax policy affects the level of human development in the course of collecting taxes through the fiscal and regulating functions. The main tools of impact are the changes in the mode of taxation of social goods and services and stimulation through tax benefits, an increase in the level of expenditures by legal entities on human development. The first approach is used mainly in the taxation of a value added tax and the tax on enterprises' profits, the second is a form of investment in the form of tax breaks for obtaining services in the sector of education, training, health care, and, in general, those services that provide for a growth in the level of human development.

Fiscal tools that are applied in order to promote human development mainly include tax benfits, tax credits, tax rebates. Tax social privilege is an instrument to regulate monthly income in the form of wages that do not exceed 140 % of the subsistence minimum for able-bodied persons, by reducing the amount of taxable income. It is important to improve the institutional foundations for forecasting the volume of a tax social benefit based on the provided benefits with the use of the coefficient of change in the number of beneficiaries, taking into consideration the dynamics of ratio of the subsistence minimum to an average wage at the beginning of a year. A tax credit is a form of tax regulation of the development of scientific advancements in the field of small- and medium-sized entrepreneurship and covers enterprises that receive patents, create new highly technological projects, launch new products with a high share of added value.

The degree of influence of direct taxes on human development depends on the size of their rates and the non-taxed minimum income on individuals, which is determined taking into consideration the financial, economic and social factors and in most developed countries it corresponds to the level of a subsistence minimum for able-bodied people. In addition, the taxation of individuals' income takes into consideration a social status, the number and age of children, the number of employees, as well as the level and structure of household expenditures. The countries with a high level of income per capita apply a progressive scale of taxation on the income of individuals, aimed primarily at improving the level of social justice in a society, which is an important financial tool for the development of human potential.

Strengthening a tax burden in the area of consumption of excisable goods is a tool to promote human development. Given the peculiarities of the taxation mechanism, an excise tax accordingly affects consumer behavior due to the effect of lower consumption. The prospects of slowing economic growth through a reduced level of aggregate demand and rising inflation require the use of a balanced approach by combining the economic and social effects of the excise tax.

VAT has the highest fiscal value in forming revenue part of the budget, whose share in 2006 − 2015 in the revenues of the consolidated budget amounted to 38.2 %, whereas in the EU countries the average respective indicator overr the same period amounted to 17.3 %, with the lowest value

in Italy, 14 %, and the highest in Croatia, 32.9 %. In these countries, there is a common tendency to a decrease in this tax in the structure of the consolidated budget revenues. Application of the reduced rates of VAT for social groups of goods and services is a common practice in the developed countries. The taxation of preparations and food products is applied at differentiated rates, the goods of long-term use at base rate, luxury products — at higher rates. In Ukraine, it is advisable to introduce a special regime of VAT taxation to social groups of goods and services, which would make it possible to substantially reduce the tax burden on the socially vulnerable groups of people. In the process of administration of a value added tax, it is advisable to reduce the list of benefits and to establish transparent mechanisms for its refund.

Complexity of the tax system is a deterrence to human development, a prerequisite for the effectiveness of tax incentives — simplified method of their application, including procedures for the administration and reporting. It is advisable to improvement tax administration in terms of carrying out the monitoring of the taxation, which would make it possible to enhance the effectiveness of forecasting the respective group of tax revenues to the state and local budgets. An important role belongs to the institutional foundations for the harmonization of the effect of tax mechanisms, in particular in the areas of collecting indirect taxes. In this context, coordination of international relations to eliminate constraints on the way to attract investment and economic cooperation is an important component of the country's socio-economic development. A common form of such a coordination is the system of international treaties for avoidance of double taxation, including taxation of individuals' incomes.

The share of environmental taxes in the European Union countries over 2006—2015 reached on average 6.3 % of the total tax revenues, ranging from 4.5 % in France to 10.1 % in Bulgaria, respectively, with a tendency to grow[75]. The average share of environmental taxes in the structure of tax revenues to the consolidated budget of Ukraine over specified period is 4.1 %. Strengthening the tax burden in the field of collecting environmental taxes is a tool to promote human development through influence on the behavior of legal entities. Revenues from these taxes provide the formation of financial resources, which in some way may be used to support the policy of protection of the environment; progressive environmental taxation is a tool for reducing the negative impact on the environment.

Financial institutions are important tools of state regulation of human potential development, which perform the functions of increasing the level of material security of citizens, the transformation of cash savings into an investment resource, with its subsequent chandelling on the development of the national economy, maintaining the value of cash savings over time through investment in securities and obtaining an investment income, meeting the needs of people in credit resources, neutralizing the risks related

to the loss of people's income due to loss of working potential, improvement of quality of life.

Insurance is an effective means to implement the state's social policy by raising the level of material support to citizens through payments of additional pensions, obtaining the sources of financial support via a system of state social insurance. The necessary measures for the development of a market of insurance services are the establishment of an effective institutional structure and a working mechanism of management. The tools to guarantee and stimulate amounts of insurance premiums could include the introduction of state guarantees for the preservation of insurance savings, the liability of insurance companies in the process of attracting and using savings of people, the implementation of a state employment policy, which ensures the creation of new jobs, increases productivity and wages, prevents shadow employment. To popularize the insurance and engagement of savings into investment process, it is necessary to apply a set of financial levers that would contribute to the capitalization of income, expanding the list of insurance products, in particular by concluding long-term contracts for personal insurance, life insurance, which would lead to an increase in the level of social support to citizens. It is important to support the financial stability of the insurance services market using the tools of financial policy, including through the development of an institute of prudential supervision over the activity of insurance companies, providing tax incentives for people to conclude long-term contracts of insurance through the application of differentiated tax rates and the reduction of the taxation base taking into consideration respective insurance payments. In order to provide an investment income for insurers, it is advisable to expand the list of areas for investment of insurance reserves that would serve as a stimulus to concluding long-term life insurance agreements.

Investing pension assets is aimed at providing the participants of non-state pension provision with additional, to the mandatory state pension insurance, payments along with ensuring a profit on assets above the level of inflation and attracting long-term investments needed to modernize the economy. Development of private pension funds should take place through the restoration of people's credibility to institutions in the financial sector, the functioning of a reliable system to guarantee the preservation of pension savings, facilitating the participation of citizens in the mechanisms of non-state pension provision, improvement and expansion of the infrastructure of the market for pension services. Non-government pension funds do not perform at the required level the stimulating functions, which is based, among others, on taking into consideration the evaluation of aggregate demand for services of non-state pension funds. This is evidenced by the following indicators: the demand for these financial services among people and employers; investment income for participants of non-government pension funds. It is important to further regulate the institutional foundations for the

activity of the market of non-state pension support, to extend the list of financial tools suitable for investing pension funds into them. To form an effective system of non-government pension provision, it is necessary to expand the areas for investing pension assets, to develop a stock market and to achieve macroeconomic stability.

Savings by households play an important role in the process of forming and redistribution of investment resources and, along with the non-state pension funds and insurance companies, are the institutional investors that provide for investments in the country's economy. Given the above, it is necessary to intensify the investment activities of citizens through the mechanism of collective investing, which requires the improvement of the mechanism of tax regulation, the improvement of institutional support to the functioning of an investment infrastructure, the improvements to the basic principles of activity of institutes of joint investment.

For the complete implementation of credit unions' possibilities to influence the strengthening of people's financial potential, it is necessary to ensure their functioning on the principle of non-profitability. Important is the introduction of a system to guarantee deposits of credit unions' participants by creating a body to guarantee deposits similar to that in the banking sector or by creating reserve funds and introducing a deposit insurance system by insurance companies. Reducing the risk of defaulting loans and improving a credit market counl be achieved by the formation of a single bureau of credit histories, access to which would be provided to banks and credit unions. Elaboration of common regulations and standardization of the operating activities of credit unions would be precedes the initiation, at the state level, of the process to unite credit unions based on regional location, to stimulate the process of forming associations, which could play the role of self-regulatory organizations.

Statement and implementation of state and local target programs aimed at human potential development based on the principles of consistency, effectiveness, taking into consideration the influence of exogenous factors, the adequacy of funding, the sequence of evaluation at all stages of the implementation, is one of the priority directions in financial regulation. The main structural components that define the effectiveness of these programs are their consistency with the provisions of the concept of human potential development, the respective strategy of financial security, the lack of duplication of purposes by programs with other approved programs, as well as the achieved performance indicators of socio-economic efficiency, service quality, and efficiency of management. When assessing the effectiveness of programs for development of human potential in the field of labor market activation, sectors of education and health care, special attention should be paid to the relationship between the planned and achieved social effect[76].

To raise the level of human potential, it is important to find a balance between the totality of institutional constraints, responsibility and incentives

for economic agents to strengthen human capital, strengthening of coordination between state and non-government sectors of the economy for achieving goals. An important task of the state policy of human potential development is the formation of institutional foundations to ensure the implementation of this potential under conditions of current transformational changes and an increase in the degree of impact of globalization factors on economic processes. The respective component in the system of human potential development, which is represented by a sector of social production, has different forms and methods of funding. In view of the above, when conducting a structural transformation of the system of financial support to industries and fields of social production, it is necessary to take into consideration the specified characteristics, the principle of adaptive efficiency of forms, mechanisms, and tools of funding.

Optimization of budget expenditures that affect the growth of the quality level of human potential requires the determination of priorities with assigning responsible performers to achieve the goals. A component of the institutional modernization of the system of financial regulation of human potential development is to increase the effectiveness of expenditures from state and local budgets on these goals. For the purpose of implementation of the above, budgetary priorities include improving the effectiveness of the application of tools of the program-target method in the budgetary process, creating conditions for improving the quality of public services, strengthening the effectiveness of the mechanism to carry out public procurement, improving the mechanisms of state financial control, ensuring the engagement of citizens to the procedures of discussion and decision making in the field of forming basic indicators for the budget of a local community[77].

Priority tasks for the state policy in the system of human development is to ensure the effectiveness of resource management in the solidary state pension insurance, to reform the pension system in the context of carrying out decentralization, to improve the mechanisms for forming revenues to the budget of the pension fund, which implies the improvement of methods for planning revenues, strengthening a cooperation between government institutions, a transparent allocation of sources of financing the payment of pensions, defined based on a series of pension programs, searching for reserves for a growth in the weighted indicators for revenues to the budget of the pension fund at the expense of their own revenues. Of special significance are the issues related to reducing a budget deficit of this social insurance target fund.

It is important to ensure a growth in the size of pension payments according to the trends of economic development, sustainable balance between increasing the size of the subsistence minimum for persons incapacitated and the size of the minimum wage, to reduce a budget deficit of the solidarity system of mandatory state pension insurance and to increase a coverage coefficient for the retirement salary, to coordinate activities on

the development and adoption of the state budget and the budget of the Pension fund, which would help balance the solidarity system of mandatory state pension insurance.

Implementation of systemic measures by the state related to the policy to revitalize a labor market implies the use of a set of institutional and financial measures, which include training workers in order to reduce the gap between the number of unemployed and vacancies in the labor market, to create new jobs, including through government subsidies, to use financial support to entrepreneurship. Formation of a favorable investment environment through a transformation of the institutional system of the economy by deregulating administrative procedures for conducting business activity, by increasing the level of effectiveness of property rights of investors, providing a balanced coordination of the objectives and tasks of the tax and budgetary policy, the long-term macroeconomic stability, have a positive effect on the promotion of employment and requires general public adaptation with the aim of reducing the level of unemployment and creating new jobs in the economy.

The feasibility of intensification of cooperation between the private and public sectors of the economy is predetermined by the limited capabilities of public finance and the respective indicators for the degree of wear of fixed assets, primarily social infrastructure. The benefits of public-private partnerships as a form of financing human potential development include the ability to attract additional financial resources, the capability to solve a problem of budgetary constraints by attracting funds from private sector for the development of social infrastructure, by improvement of the efficiency of using financial resources, by accelerating the introduction of innovations to economic activity.

The dynamics of social development predetermines the need to enhance the effectiveness of financial regulation of human potential, the allocation of sufficient amount of funds to finance sectors in the social sphere and to improve its infrastructure, while the country's financial police has to build favorable conditions for improving the quality and accessibility of services in medical care, education, science, social protection, and social security. In view of the above, the system of state financial regulation of human potential requires continuous improvement taking into consideration progressive methods, adaptation to internal and external economic factors under conditions of institutional transformations in the economy.

The state should apply a systematic approach to financial support to programs aimed at stimulating human potential, which includes the identification of priority targets, the development of measures of financial policy related to supporting and development of social sphere over medium term, matching financial capabilities of the state to the implementation of these goals within budgetary periods, ensuring the functioning of the mechanism of financial regulation, monitoring, control, audit, development of institutional principles to financially support sectors of social production, which

would make it possible to expand the proportion of insurance, investment sources in the general structure of funding measures to increase the level of human potential development.

It is important to further strengthen the role of a financial component in the human potential development in the processes of economic growth while priority directions of the state financial policy of human potential development should be the formation of a hierarchical system of target social programs, construction of the institutional component in financing education, science, health care, in enhancing the effectiveness of application of a program-target method in the budgetary process, to enhance the effectiveness of relations between the state budget and local budgets, to improving the pension system.

4.4 Long-term budget strategy in the system of economic cycles

One of the main tools of state regulation of social and economic development is prospective budget planning, whose essence is the development of the main directions to form and use budgetary funds over medium and long terms, given the need to solve tasks that the society faces at a certain stage of its development. Pursuing a targeted financial-budgetary policy implies the introduction of strategic budgeting. The process of prospective budget planning creates conditions for solving key problems related to the state influence on economic development. Development and implementation of the budgetary strategy is a necessary condition for improving the quality of the process of budget planning, strengthening the impact of budget regulation on the country's socio-economic development. To enhance the impact of budget strategy on the socio-economic development of society, it is necessary to take measures aimed at increasing the level of balance and transparency of the budget, the effectiveness of spending budget funds, improving inter-budgetary relations, ensuring the quality execution of budgets of all levels, implementing effective financial control.

A goal of the budgetary strategy is to provide the appropriate level of socio-economic development of society taking into consideration the balance of public finances, which is implemented through the institutions of budget regulation, the state financial control. State regulation under current conditions is a macroeconomic regulator of reproduction processes, aimed at the implementation of the strategic priorities of the country's socio-economic development. Budget forecasting is an important tool of state regulation of economic and social processes, since it justifies directions to use budget funds in the future, taking into consideration the specified goals and priorities in the country's socio-economic development over a long term.

At the beginning of 1920s the Russian economist M. D. Kondratiev (1892 — 1938) defined a certain recurrence in the long-term dynamics of economic development, a phase of growth is followed by an economic downturn with a period of fluctuation from 40 to 60 years. These fluctuations received the name of Kondratiev's long waves (K-waves). There have been certain regularities in the development of large cycles. Prior to the onset of an ascending wave at each cycle there typically occur substantial changes in the conditions of social development, including major social upheavals, scientific discoveries, revolutionary processes, and wars. The descending waves of these cycles are followed by a long-term economic depression. Based on the dynamics and trends of economic cycles, the following long waves were determined from the end of the 19th century:

I.   The upward wave 1787 — 1794 to 1810 — 1817.
     The downward wave 1810 — 1817 to 1844 — 1851.
II. The upward wave 1844 — 1851 to 1870 — 1875.
     The downward wave 1870 — 1875 to 1890 — 1896.
III. The upward wave 1890 — 1896 to 1914 — 1920.
     The downward wave 1914 — 1920 to 1936 — 1940.
IV. The upward wave 1936 — 1940 to 1966 — 1971.
     The downward wave 1966 — 1971 to 1980 — 1985.
V.   The upward wave 1980 — 1985 to 2000 — 2007.
     The downward wave 2000 — 2007 to 2020 — 2025 predicted.
VI. The upward wave 2020 — 2025 to 2042 — 2048 predicted.
     The downward wave 2042 — 2048 to 2060 — 2065 predicted.
VII. The upward wave 2060 — 2065 to 2082 — 2087 predicted.
     The downward wave 2082 — 2087 to 2101 — 2106 predicted.

Achieving strategic objectives of the country's socio-economic development depends on the degree of accounting in a budgetary policy for the features of the institutional environment, the functioning of financial and economic relations, the dynamics of social development. A budget strategic planning is one of the important tools of the country's economic policy, which is based on determining the parameters for forming budget revenues and expenditures, a budget deficit, a public debt management, regulation of inter-budgetary relations over a prospective period in the relationship with the main goals and tasks of the country's economic and social development. It is advisable to form in the country appropriate institutional conditions for enhancing the effectiveness of budget expenditures and the efficiency of the budgetary process. A budgetary strategy is defined based on the three variants of long-term economic growth, in particular, the average indicator for 2001 — 2100 is, respectively, 2.3 percent, 3.4, and 4.2 per cent, including over 2001 — 2050 — 2.6 percent, 3.5, and 4.3 percent, over 2051 — 2100 — 2.0 percent, 3.3, and 4.1 percent.

Planned indicators for economic growth over five-year, ten-year periods are determined by taking into consideration the long-term, medium-

term, short-term economic cycles. The largest indicator according to the pessimistic scenario is 2.3 and 2.4 per cent in 2041−2050 and 2051−2060, respectively, the lowest indicator of 1.8 per cent over 2071−2080 and 1.9 per cent in 2011−2020, 2081−2090. The largest indicator for five-year periods is 2.6 per cent over 2016−2020 and 2.5 percent in 2046−2050, 2051−2055, the lowest indicator of 1.2 percent in 2011−2015 and 1.7 and 1.8 per cent over 2076−2080 and 2061−2065, 2081−2085, respectively. The largest indicator according to basic scenario is 3.7 and 3.5 per cent in 2041−2050 and 2031−2040, 2051−2060, respectively, the lowest indicator of 2.7 per cent in 2011−2020 and 3.1 and 3.2 per cent in 2071−2080, 2081−2090, respectively. The largest indicator for five−year periods is 3.9 per cent in 2046−2050 and 3.8 and 3.7 percent in 2031−2035, 2051−2055, respectively, the lowest indicator of 1.8 per cent in 2011−2015 and 3.0 and 3.1 per cent in 2076−2080 and 2061−2065, and 2081−2085, respectively. The largest indicator according to the optimistic scenario is 4.8 and 4.5 and 4.3 per cent in 2041−2050 and 2031−2040, 2051−2060, respectively, the lowest indicator of 3.5 per cent in 2011−2020, and 3.9 per cent over 2071−2080 (Table 4.6).

The largest indicator for five-year periods is 5.0 per cent in 2046−2050 and 4.8 percent over 2031−2035, the lowest indicator of 2.4 per cent in 2011−2015 and 3.6 per cent over 2076−2080.

Planned indicators for specific weight of the consolidated budget's revenues are determined based on the importance of implementing a budget-tax regulation taking into consideration economic cycles, including a reduction in the tax burden during recession compared to past period, and an increase in the tax burden during economic growth compared to a previous period. The largest indicator according to the pessimistic scenario is 30.50 and 30.25 percent over 2011−2020 and 2021−2030, respectively, the lowest indicator of 28.69 and 28.78 percent is over 2071−2080 and 2061−2070. The largest indicator for five-year periods is 30.88 and 30.38 percent in 2016−2020 and 2026−2030, respectively, the lowest indicator of 28.52 and 28.63 per cent is in 2061−2065 and 2076−2080. The largest indicator according to basic scenario is 31.07 and 30.78 percent in 2011−2020 and 2021−2030, respectively, the lowest indicator of 29.24 and 29.35 percent is in 2071−2080 and 2061−2070. The largest indicator for five-year periods is 31.54 and 30.95 per cent in 2016−2020 and 2031−2035, respectively, the lowest indicator of 29.05 and 29.18 percent is over 2061−2065 and 2076−2080. The largest indicator according to the optimistic scenario is 31.57 and 31.26 per cent in 2011−2020 and 2021−2030, respectively, the lowest indicator of 29.72 and 29.86 percent is over 2071−2080 and 2061−2070. The largest indicator for five-year periods is 31.98 and 31.52 per cent in 2016−2020 and 2031−2035, respectively, the lowest indicator of 29.52 and 29.56 percent is over 2061−2065 and 2076−2080.

Table 4.6 Long-term budget strategy up to the year of 2100

	Pessimistic scenario					Basic scenario					Optimistic scenario			
Years	Real GDP growth	Specific share of budget revenues in GDP	Specific share of budget deficit in GDP	Specific share of budget expenditures in GDP	Years	Real GDP growth	Specific share of budget revenues in GDP	Specific share of budget deficit in GDP	Specific share of budget expenditures in GDP	Years	Real GDP growth	Specific share of budget revenues in GDP	Specific share of budget deficit in GDP	Specific share of budget expenditures in GDP
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2001−2005	7.7	27.88	0.94	28.82	2001−2005	7.7	27.88	0.94	28.82	2001−2005	7.7	27.88	0.94	28.82
2006−2010	1	30.49	2.66	33.15	2006−2010	1	30.49	2.66	33.15	2006−2010	1	30.49	2.66	33.15
2001−2010	**4.3**	**29.19**	**1.8**	**30.99**	**2001−2010**	**4.3**	**29.19**	**1.8**	**30.99**	**2001−2010**	**4.3**	**29.19**	**1.8**	**30.99**
2011−2015	1.2	30.12	2.02	32.14	2011−2015	1.8	30.6	1.78	32.38	2011−2015	2.4	31.16	1.59	32.75
2016−2020	2.6	30.88	1.82	32.7	2016−2020	3.6	31.54	1.7	33.24	2016−2020	4.6	31.98	1.53	33.51
2011−2020	**1.9**	**30.5**	**1.92**	**32.42**	**2011−2020**	**2.7**	**31.07**	**1.74**	**32.81**	**2011−2020**	**3.5**	**31.57**	**1.56**	**33.13**
2021−2025	2	30.12	2.03	32.15	2021−2025	3.2	30.64	1.87	32.51	2021−2025	3.9	31.07	1.72	32.79
2026−2030	2.2	30.38	1.95	32.33	2026−2030	3.6	30.92	1.81	32.73	2026−2030	4.5	31.45	1.66	33.11
2021−2030	**2.1**	**30.25**	**1.99**	**32.24**	**2021−2030**	**3.4**	**30.78**	**1.84**	**32.62**	**2021−2030**	**4.2**	**31.26**	**1.69**	**32.95**
2031−2035	2.4	30.3	1.98	32.28	2031−2035	3.8	30.95	1.85	32.8	2031−2035	4.8	31.52	1.74	33.26
2036−2040	2	29.64	2.16	31.8	2036−2040	3.2	30.09	2.01	32.1	2036−2040	4.2	30.58	1.82	32.4
2031−2040	**2.2**	**29.97**	**2.07**	**32.04**	**2031−2040**	**3.5**	**30.52**	**1.93**	**32.45**	**2031−2040**	**4.5**	**31.05**	**1.78**	**32.83**
2041−2045	2.3	29.7	2.15	31.85	2041−2045	3.5	30.2	2.02	32.22	2041−2045	4.6	30.64	1.9	32.54

Continuation Table 4.6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2046 – 2050	2.5	29.88	2.09	31.97	2046 – 2050	3.9	30.48	1.96	32.44	2046 – 2050	5	31.02	1.84	32.86
2041 – 2050	**2.4**	**29.79**	**2.12**	**31.91**	**2041 – 2050**	**3.7**	**30.34**	**1.99**	**32.33**	**2041 – 2050**	**4.8**	**30.83**	**1.87**	**32.7**
2051 – 2055	2.5	29.55	2.15	31.7	2051 – 2055	3.7	30.14	2.03	32.17	2051 – 2055	4.6	30.72	1.89	32.61
2056 – 2060	2.1	28.97	2.21	31.18	2056 – 2060	3.3	29.52	2.07	32.59	2056 – 2060	4	30.04	1.93	31.97
2051 – 2060	**2.3**	**29.26**	**2.18**	**31.44**	**2051 – 2060**	**3.5**	**29.83**	**2.05**	**31.88**	**2051 – 2060**	**4.3**	**30.38**	**1.91**	**32.29**
2061 – 2065	1.8	28.52	2.36	30.88	2061 – 2065	3.1	29.05	2.24	31.29	2061 – 2065	3.9	29.52	2.16	31.68
2066 – 2070	2.2	29.04	2.24	31.28	2066 – 2070	3.5	29.65	2.16	31.81	2066 – 2070	4.3	30.2	2.1	32.3
2061 – 2070	**2**	**28.78**	**2.3**	**31.08**	**2061 – 2070**	**3.3**	**29.35**	**2.2**	**31.55**	**2061 – 2070**	**4.1**	**29.86**	**2.13**	**31.99**
2071 – 2075	1.9	28.75	2.31	31.06	2071 – 2075	3.2	29.3	2.23	31.53	2071 – 2075	4.2	29.88	2.17	32.05
2076 – 2080	1.7	28.63	2.37	31	2076 – 2080	3	29.18	2.27	31.45	2076 – 2080	3.6	29.56	2.21	31.77
2071 – 2080	**1.8**	**28.69**	**2.34**	**31.03**	**2071 – 2080**	**3.1**	**29.24**	**2.25**	**31.49**	**2071 – 2080**	**3.9**	**29.72**	**2.19**	**31.91**
2081 – 2085	1.8	29.18	2.2	31.38	2081 – 2085	3.1	29.72	2.07	31.79	2081 – 2085	3.8	30.15	1.92	32.07
2086 – 2090	2	29.5	2.12	31.62	2086 – 2090	3.3	30.06	1.99	32.05	2086 – 2090	4.2	30.73	1.86	32.59
2081 – 2090	**1.9**	**29.34**	**2.16**	**31.5**	**2081 – 2090**	**3.2**	**29.89**	**2.03**	**31.92**	**2081 – 2090**	**4**	**30.44**	**1.89**	**32.33**
2091 – 2095	2.1	29.92	1.99	31.91	2091 – 2095	3.6	30.5	1.84	32.34	2091 – 2095	4.4	31.1	1.64	32.74
2096 – 2100	1.9	29.74	2.05	31.79	2096 – 2100	3.2	30.28	1.9	32.18	2096 – 2100	4	30.7	1.72	32.42
2091 – 2100	**2**	**29.83**	**2.02**	**31.85**	**2091 – 2100**	**3.4**	**30.39**	**1.87**	**32.26**	**2091 – 2100**	**4.2**	**30.9**	**1.68**	**32.58**
2001 – 2050	**2.6**	**29.94**	**1.98**	**31.92**	**2001 – 2050**	**3.5**	**30.38**	**1.86**	**32.24**	**2001 – 2050**	**4.3**	**30.78**	**1.74**	**32.52**
2051 – 2100	**2**	**29.18**	**2.2**	**31.38**	**2051 – 2100**	**3.3**	**29.74**	**2.08**	**31.82**	**2051 – 2100**	**4.1**	**30.26**	**1.96**	**32.22**
2001 – 2100	**2.3**	**29.56**	**2.09**	**31.65**	**2001 – 2100**	**3.4**	**30.06**	**1.97**	**32.03**	**2001 – 2100**	**4.2**	**30.52**	**1.85**	**32.37**

Planned indicators for the specific weight of the consolidated budget's deficit are determined based on the importance of implementing a budget-tax regulation, taking into consideration economic cycles, including an increase in the budget deficit during economic downturn compared to past period and a decrease in the budget deficit during economic growth compared to previous period. The largest indicator according to the pessimistic scenario is 2.34 and 2.3 per cent over 2071 − 2080 and 2061 − 2070, respectively, the lowest indicator of 1.92 and 1.99 percent is in 2011 − 2020 and 2021 − 2030. The largest indicator for five-year periods is 2.37 and 2.36 per cent in 2076 − 2080 and 2061 − 2065, respectively, the lowest indicator of 1.82 and 1.95 per cent is in 2016 − 2020 and 2026 − 2030. The largest indicator according to basic scenario is 2.25 and 2.2 per cent in 2071 − 2080 and 2061 − 2070, respectively, the lowest indicator of 1.74 and 1.84 percent is in 2011 − 2020 and 2021 − 2030. The largest indicator for five-year periods is 2.27 and 2.24 percent over 2076 − 2080 and 2061 − 2065, respectively, the lowest indicator of 1.70 and 1.78 percent is over 2016 − 2020 and 2011 − 2015, respectively. The largest indicator according to the optimistic scenario is 2.19 and 2.13 percent in 2071 − 2080 and 2061 − 2070, respectively, the lowest indicator of 1.56 and 1.68 percent is in 2071 − 2080 and 2061 − 2070. The largest indicator for five-year periods is 2.21 and 2.17 percent in 2076 − 2080 and 2071 − 2075, respectively, the lowest indicator of 1.53 and 1.59 percent is over 2016 − 2020 and 2011 − 2015.

Planned indicators for the specific weight of the consolidated budget's expenditures are determined based on the importance of implementing a budget-tax regulation, taking into consideration economic cycles, including a reduction in the tax burden, an increase in the budget deficit during economic downturn compared to previous period and an increase in the tax burden, a decrease in the budget deficit during economic growth compared to previous period. The largest indicator according to the pessimistic scenario is 32.42 and 32.24 per cent in 2011 − 2020 and 2021 − 2030, respectively, the lowest indicator of 31.03 and 31.08 percent is over 2071 − 2080 and 2061 − 2070, respectively. The largest indicator for five-year periods is 32.70 and 32.33 percent in 2016 − 2020 and 2026 − 2030, respectively, the lowest indicator of 30.88 and 31.00 per cent is over 2061 − 2065 and 2076 − 2080. The largest indicator according to basic scenario is 32.81 and to 32.62 percent in 2011 − 2020 and 2021 − 2030, respectively, the lowest indicator of 31.49 and 31.55 percent is over 2071 − 2080 and 2061 − 2070. The largest indicator for five-year periods is 33.24 and 32.80 percent in 2016 − 2020 and 2031 − 2035, respectively, the lowest indicator of 31.29 and 31.45 percent is in 2061 − 2065 and 2076 − 2080. The largest indicator according to the optimistic scenario is 33.13 and 32.95 per cent over 2011 − 2020 and 2021 − 2030, respectively, the lowest indicator of 31.91 and 31.99 percent in 2071 − 2080 and 2061 − 2070. The largest indicator for five-year periods is 33.51 and 33.26 percent over 2016 − 2020 and 2031 − 2035,

respectively, the lowest indicator of 31.68 and 31.77 percent is in 2061 — 2065 and 2076 — 2080.

A budgetary strategy is an important component of state regulation of the socio-economic development of society. Establishment of financial relations takes place under conditions of economic transformation, which is a prerequisite and the object of their influence at the same time. Based on the economic development strategy related to enhancing the level of its endogenous component, it is necessary to introduce appropriate institutional changes to the system of financial-budgetary regulation of the economy, which is formed in a particular institutional environment and is a set of such financial-budgetary and economic components as revenue part of the budget, expenditure part of the budget, a budget deficit, a public debt, tax regulation, inter-budgetary relations, the country's economic processes, external economic environment, and relationships between them. The transformation of the system of financial-budgetary regulation is largely related to changes in the institutional environment of the society, the components of a financial policy are improved with the development of the socio-economic sphere, economic strategy, and characterize the adaptation possibilities of the architectonics of financial system.

Budgetary regulation affects both simultaneously and with time lags the pace of socio-economic development, as well as the stability and balance of the financial system. The main objective of fiscal policy is to ensure the fulfillment of tasks related to the socio-economic development of the state and administrative-territorial units, however, it is important in this case to support primarily the reserve of stability within a budgetary system. In order to develop and implement a balanced budget regulation over a certain period, a budgetary policy should be determined based on the cycles in economic development, as well as the state of public finances and the reserve of budgetary system stability, whose significant reduction could lead to complications in carrying out effective fiscal regulation regarding the positive impact on economic growth. The institutional approach implies the consideration of budgetary regulation as a dynamic system that is constantly being improved and adapted to the challenges of socio-economic development.

Implementation of the institutional approach to studying a fiscal policy is important and includes defining the attributes of an institute of budget regulation, institutional environment, which provides its operation, as well as transaction costs, applying a theory of public choice. The institutions in a budgetary system have a complex internal structure of norms, rules; the evolution of these institutions is closely linked to the development of institutions of state governance, macroeconomic regulation. Institutions could be represented as a result of the processes that took place in previous periods of time, and so they reflect first of all the past environment. Important is to determine the degree of adequacy of these institutes to modern circumstances, the term of start, stages, the speed of introducing the required

institutional changes. This affects the efficiency of development of public finances, the national economy, and society as a whole.

If institutions are to mean the limitations imposed by society on a certain activity, then institutional changes in the budgetary process imply the introduction of a series of constraints in accordance with the stage of economic development. This includes, in particular, the level of an investment component in a budget, a budget deficit, and the structure of sources of its funding, the volume and structure of revenue and expenditure part of the budget. The basic characteristics of the functioning and development of socio-economic systems in the area of social life with its philosophical, legal, social, psychological, cultural peculiarities, are directly affected by the manifestation of close connections among such factors as the economic behavior of legal entities and the factors that determine it; the system and structure of incentives and motives of economic agents; norms, principles, rules of economic behavior. Under such conditions, a substantiated budgetary policy should be decisive in maintaining the integrity of the budget system, its balance in the medium term and the formation of a working mechanism for effective impact on the ongoing development of the society. To this end, a budgetary system as an adaptive mechanism in the system of state regulation should aim at ensuring the adequacy of e regulatory measures to internal and external changes in the economic environment in order to develop the state and its regions, and, on this basis, to improve welfare of the society. The necessary institutions in the area of public finances are formed in the process of social development; certain functional relationships that are established between them are the foundation for the emergence of respective financial relationships. Institutional environment reveals the influence of the financial mechanism on the indicators for economic and social development.

Studying the interrelationship between the functioning of a budgetary strategy in the system of state regulation and the characteristics of the country's institutional environment proves that the institutional environment itself largely creates the conditions under which, within the limits of the institutional architectonics of economic system, its component is built — the institutional architectonics of the financial system. Such conditions significantly depend on the number of the country's features in the historic and socio-cultural aspects, the establishment of institutions in society, the characteristics of its institutional environment. Thus, there is a close interaction between the structure and the functioning of the institutions of a market economy and the institutions of financial policy and the mechanisms of their impact on the socio-economic development. The institutional structure of a budgetary strategy evolves along with the institutional matrix of the state mechanism, which is part of the institutional system of society. According to the theory of institutionalism, institutional changes do not occur discretely, they are characterized by the gradual transition from the old to the new

institutions, dependence on trends in the previous development determines the institutional stability of society. Reciprocal influence occurs between the institutional environment of society and the state's budgetary strategy. Positive results of the planned institutional changes affect the efficiency of mechanisms of financial policy in the system of state regulation, otherwise one may experience the respective states of the system of financial regulation, which are shown in the formation of institutional voids, gaps, which would have a negative effect on the socio-economic development.

Achieving the medium- and long-term goals of economic development of the state depends on the degree of accounting in the budget policy for features of the institutional environment of society, therefore the institutional architectonics of a budgetary strategy must imply the improvement of qualitative characteristics of budget institutions that would contribute to the development of a socio-economic component of the society. The above requires the improvement of the institutional environment of economic and budget space, preparing respective institutional changes. An important aspect of these changes, which should be considered when forming a budgetary strategy, adequate to the institutional environment, is the interconnectedness of institutions, their close relationships create a single institutional system; a budget space within the institutional architectonics of the fiscal policy is a component of the national institutional environment; changing one of the institutions without considering its ties to the institutional system could lead to disruption of the balance in the institutional environment. An institution, borrowed from typical conditions, and introduced to the dynamic environment of the architectonics of a budgetary strategy, may not give the expected result that must be considered when implementing respective institutional changes.

An important factor for an effective fiscal policy is the quality of the institutional environment, whose change takes place under the influence of the development of the information potential of the economy. The architectonics of a fiscal strategy must create institutional conditions for the functioning of a budgetary mechanism with the purpose of effective influence on economic growth, community development, improvement of the well-being of people. An institutional structure of the budgetary strategy as an important component of government regulation is an effective tool for the country's socio-economic development. Given that the economic activity is carried out within the framework of the respective institutional model, which is a set of interrelated institutions, the effective model of a budgetary strategy must be based on the institutional environment of society as a system of basic economic, social, political, and legal provisions that are determined by the country's history, traditions, culture. The establishment of appropriate institutional conditions for the statement and implementation of an effective budget strategy requires the use of the adaptive architectonics of the system of budgetary regulation, which would contribute

to the achievement of balanced and sustainable socio-economic development of the state.

Efficient and effective use of budget funds also remains one of the most important tasks for planning and execution of the budget under conditions of rather limited budgetary resources; an important step to address this issue is the improvement of the system to manage budget expenditures in terms of improving the efficiency of their use. The main objectives in this case are to define priorities in the allocation of budgetary resources, application of the principles of prospective budget forecasting and planning; to optimize budget programs taking into consideration the national priorities and to improve the methodology to evaluate their effectiveness; to implement a control system over target and effective use of budget funds, assessment of the effectiveness of budgetary programs and the activities of allocators of budget funds. A budgetary policy that is implemented through a system of budget mechanisms should provide budgetary balance and effective impact on the socio-economic processes. A mechanism for forming the volume and structure of budget revenues and expenditures is an important component of budget regulation in order to ensure the all-round development of society.

The current stage of development of budgetary relations is characterized by the strengthening of the role of budget expenditures in the process of regulation of the socio-economic development of the state and its regions. Recent years have witnessed significant steps related to strengthening the substantiation of budget planning, its impact on economic growth and social development. For the purpose of the most efficient allocation of budgetary resources, there is a further improvement of planning and execution of expenditure part of the budget based on a program-target method, primarily as a component in the system of prospective budget forecasting and planning. It is advisable to introduce a strategic planning to the practice of work of the main allocators of budget funds and for their drafting proper plans of activities for the current, and the next three, budgetary periods, focused on results, in order to strengthen responsibility of allocators of budget funds for achieving the set goals, streamlining and improving the effectiveness and efficiency of public spending.

Taking into consideration the defined long-term tasks of the country's socio-economic development, the key priorities should be: the modernization and diversification of the economy; social modernization; improving the quality of public services; quality improvement of the infrastructure for life activities. It is necessary to ensure increasing the efficiency of management of investment projects, which are financed from budgetary funds, including through the strengthening of accountability for fulfillment, under the specified terms, of all scheduled events, supporting innovative projects and scientific developments aimed at the modernization and technological development of economy, improving its energy efficiency. In this case,

the mechanism for allocating budgetary grants to support local innovation projects should be aimed at ensuring the state's priorities.

Social modernization implies the improvement of solidary and cumulative pension system, further improvement of the system of remuneration in the public sector, targeted support for certain categories of citizens. Improvement of the mechanism of social protection of people, increasing the funds for remuneration of public sector workers, optimizing the scope and forms of the support to economy implies the implementation of measures related to ensuring the unconditional implementation of all legislatively defined obligations to pay for social security and compensation, support to citizens with incomes below the subsistence minimum. In this connection, there is a need to expand the powers of local governments in the formation and application of tools of social policy.

A long-term development strategy for the development of the pension system should be aimed at ensuring the adequacy of pension payments and financial sustainability of this system. In this connection, it is necessary to introduce qualitative transformation to all components of the pension system, thereby increasing the efficiency of the functioning of the pension system and providing the socially acceptable level of pensions in proportion to wages. It should be noted that the issue of the retirement age increase should be considered only under condition for the introduction of a second pension system via endowment funds; it is important to fund measures related to ensuring sustainable and productive employment of people. To improve the quality of public services, it is necessary to develop information systems in order to render services in an electronic format.

The economic basis of current functioning, prospective and strategic development of the system of budgetary regulation should be dominant when deciding on financing investment and innovation projects.

The main priorities for economic, financial, investment, social development should be investment and innovative projects, the results of whose implementation could greatly contribute to the economic growth, increase in the volume of the material and spiritual goods used by people. In this case, channeling financial resources to the priority programs and projects may have a different character for the bodies of state power and local self-government and largely depend on the specificity of the country's socio-economic and financial-investment development.

In order to pursue an effective budget-investment policy, it is necessary to change approaches to budgetary investments. Taking into consideration the experience of previous years, investment planning should be carried out pragmatically and constructively, taking into consideration long-term tasks aimed at the diversification of national economy, development of the infrastructure and the private sector as a basis for stability and sustainability in the development of the national economy. Given the above, budgetary investments should be concentrated on projects with a significant level of

socio-economic impact. Achieving the specified goal implies the revision of a budget investment planning system, which as early as at the stage of formation of investment proposals to develop the feasibility studies and design-budget documentation would strictly select projects according to relevant criteria and determine the scheme of their funding. At the same time, when selecting projects, one should in the first place take into consideration the following priority criteria: at the macro level — priorities in the development of sectors of the economy, the impact on the development of industries, elimination of inter-regional imbalances, a possibility to involve private investments; at the project level — the level of socio-economic yield and a possibility to attract private investments.

At the same time, a change in the structure of government commitments and active budget-investment policy implies the improvement of tax policy. Specifically, it is advisable to carry out an assessment of the effectiveness and uniformity of tax burden in order to determine the potential of its possible increase. To determine the effectiveness of change in the tax burden, it is advisable to carry out an analysis of interrelation between tax revenues and indicators for the economic development of territories. It is important to develop a monitoring system for main categories of taxpayers, which would make it possible to perform a qualitative analysis of the dynamics of tax payments to the budget, the volume of sales that might give an idea of the basic metrics that are used for the calculation of a taxation base. Analysis of these indicators would make it possible to evaluate the real potential of a legal entity and the substantiation of tax liability imposed on it.

Given the negative processes in the domestic economy that lead to a decrease in the level of filling a revenue part of the budget, a cost-saving measure for the purpose of redirecting budgetary funding on the innovative development of the national economy could be a reduction in the budget expenditures on funding state functions, primarily at the expense of rational optimization of the structure of public administration. An essential prerequisite to solve a given task is a compliance of the adopted financial liabilities to the revenue potential, based on the consideration of available assets, the amount of granted state guarantees for loans, received for the implementation of investment and innovation projects.

A comprehensive approach to stimulating innovation and investment processes would contribute to the creation of conditions for the full cycle of development of innovations, including by ensuring macroeconomic stability, accelerating economic growth, the introduction of efficient governance. Along with this, support to innovations should not be limited to the implementation of individual programs, but meet the requirements for creating an innovative environment, including the development of human capital, formation of the state demand for innovative products, and for improving an investment climate.

It is important to note that under current conditions there remains a series of unsolved structural problems that impede the sustainable and balanced development of the national economy, in particular the non-optimal structure of public administration, which is evident in the lack of strategic orientation towards the development of sectors of the economy; the uncertainty and variability of conditions for entrepreneurial activities, including pricing, tariff and currency policy; the insufficient level of labor productivity and significant production costs, predetermined by weak innovative activity of the real sector of the economy; theh inefficient system of allocating financial resources in the economy; the insufficient foreign direct investmenst; a growth of the external debt.

To ensure the adequacy of needs of the national economy in financial resources and to increase their availability. A significant role belongs to attracting direct foreign investments that are a major factor in the modernisation of economy on a debt-free basis. However, we marked a decrease in them: in 2015, compared to previous year, by 21.05 %; in 2016, compared with previous year, by 5.55 %.

It is advisable to carry out systemic measures aimed at minimizing the dependence of national economy on the impact of external economic conditions. The main effort in this case should be concentrated on increasing the volume of exports of products with a high added value and increasing the share of innovative products in exports.

It is important to note that the acceleration of economic growth should take place through increasing the competitiveness of the economy. The above makes it a relevant issue to develop active innovation strategy, which implies ensuring the modernization of basic industries and the accelerated formation of new highly technological sectors of the economy. In this case, the most important factor to increase competitiveness of basic industries is the widespread introduction of information and communication technologies.

Implementation of effective state governance under current conditions is of special significance. The experience of countries with the developed economies shows that improving the efficiency and efficiency of state governance is carried out by measuring the effectiveness of public administration. A key aspect to improve the efficiency and quality of state governance is the creation of a comprehensive and objective system of indicators, which reflect the performance and the extent of achievement of specified objectives. The most common approach both in countries with the developed and transitional economies is the use of integrated indicators of effectiveness and efficiency that reflect basic economic and political parameters of the state management bodies. Specifically, with the aim of upgrading the systems of public administration, the countries of Central and Eastern Europe launched Support Program for Improving Governance and Management.

The purpose of the evaluation based on this program is to provide assistance to countries beneficiaries in their aspirations to better state

management, which would improve the efficiency of administration and stimulate compliance of government representatives with democratic values, ethics and respect for the rule of law; to rovide assistance in strengthening the countries' potential at the central level, which should contribute to solving the tasks of globalization and to support integration plans of countries to the European Union; to support the initiatives of the European Union and other donors, aimed at helping beneficiaries in the reform of public administration.

At the same time, a significant impact on the efficiency of state governance is exerted by the level of development of information technologies. Specifically, in Ukraine, the task on implementing effcient governance implies the development of e-government that would make it possible to improve the efficiency of public administration, to simplify the interaction between government, businesses, and citizens and to reduce the cost of implementation of administrative procedures.

A criterion for the implementation of efficient governance must be an effective return on the use of budgetary funds by strengthening a link between budget assignments and the priorities of the country's socio-economic development, directing financial resources to the most socially important areas, through the strengthening of decentralization processes that requires appropriate legislative support.

Up to now, a series of regulations have been adopted, including: Law of Ukraine «On voluntary association of local communities» dated 5.02.2015, No. 157-VIII, aimed at fostering an effective base level of local self-government; Law of Ukraine «On the cooperation of local communities» dated 17.06.2014, No. 1508-18, aimed at the creation of a mechanism to address common problems of communities; Ordinance of the Cabinet of Ministers of Ukraine «On approval of the Concept of reform of local budgets» dated 23.05.2007, No. 308-r. That defined the decentralization of management of budgetary funds, the main task for the transformation of local budgets into an effective tool for the socio-economic development of administrative-territorial units; Ordinance of the Cabinet of Ministers of Ukraine «On approval of the Concept of reform of local self-government and territorial organization of power in Ukraine» dated 1.04.2014, No. 333-r. That defined the optimal distribution of responsibilities among local governments and executive authorities based on the principles of subsidiarity and decentralization.

These legislative acts have created the prerequisites for increasing the competitiveness of administrative-territorial units, ensuring their development, contributed to strengthening the country's motivation to inter-municipal consolidation and formation of capable territorial communities. At the same time, there remain the unresolved issues regarding an insufficiently working mechanism to financially support voluntary associations of local communities, in particular, an increase in their number is not accompanied by a proportional increase in the volume of subvention for the infrastructure development; the issue on the distribution of responsibilities among local

authorities and executive bodies, as well as functions and responsibilities among local councils of combined local communities and district state administrations; important is the introduction of a strategic planning and a programming of the development of combined territorial communities; to improve the mechanisms of control over activities of local self-government bodies.

Implementation of systemic transformations in the system of public finance implies enhancing its transparency and accountability in governance, providing the effectiveness of allocation and use of financial resources, effective budget forecasting.

In order to ensure the effective development and implementation of budgets of different levels, an important task is to improve the system of medium-term budget planning. Specifically, in accordance with the Strategy for reforming the management of state finances over 2017 — 2020, an important task to implement a model of medium-term budget planning, the main element of which is a three-year budget declaration as a tool to unify the state's strategic priorities and budget capabilities. It was substantiated that a budget declaration should contain the limiting indicators for expenditures by the main allocators of budget funds within the limits of which they should plan their activities. With the aim of enhancing the reliability of a budget in the medium term, it is implied to introduce a control system of fiscal risks.

It is important in this case to build a quality system of macroeconomic forecasts, to coordinate budget planning with the country's strategic plans and programs of development, to substantiate the principles underlying state planning.

An important issue is to provide the acceptable size of a budget deficit and the sources of its financing, which determine its impact on the economy both in the short- and long-term periods. At present, the intention of state authorities to optimize the level of a budget deficit means, above all, the strengthening of economic base for current functioning and future development of the country.

Creating a budget with a minimal deficit through economically justified level of taxation, the rational structure of taxes that corresponde to the specific conditions of development of the economy, determining budget expenditures within the limits of the possible amount of revenue sources, their optimization for priorities, would contribute to the sustainable growth of production.

With the aim of sustainable development of the national economy, a priority for the budgetary policy is to finance a budget deficit mainly by domestic borrowing and ensuring a growth of the domestic capital market.

Under conditions of limited financial resources, it is necessary, first of all, to ensure the stabilization of economic processes, which implies reducing a budget deficit to the appropriate level. In the short period, an acceptable level of a budget deficit must be determined by the dynamics of macroeconomic indicators and the demand for government securities, which depends on the degree of confidence by potential lenders.

Application of a budget deficit as a tool of financial-economic regulation by channeling relevant funds for the development of priority areas would provide in the future a growth in production, which would have a positive impact on the development of society. It is important to note that in the world practice, the sources to cover a budget deficit is the issue of money, proceeds from the sale of securities, and external funding. Depending on the selected source of funding, a budget deficit could cause inflation, rising interest rates (refinancing), deterioration in the investment climate, a disbalance of payments, etc. If the issue of money causes an increase in inflation, the interest payments for securities increase the burden on the budget in coming years and cause financial problems that in turn divert money from the real sector to speculative financial markets, which leads to the issue of money and devaluation of the national currency. At the same time, covering a budget deficit through foreign loans causes a strain on the country's balance of payments and thus worsens its financial position and lowers credit rating in the world community.

In most countries with the well-developed economies, dominating are the non-emission forms of financing a budget deficit, which does not directly lead to a rise in inflation. These forms include the sale of government securities in the financial market, obtaining loans from commercial banks by the state. In the case of budget financing by loans from subjects of the national economy, in particular the placement of government bonds in the domestic market or in foreign stock markets, there is no any increase in the inflationary burden. In the first case, financial resources are mobilized, which are already in circulation, in the second — additional issue of national currency to finance budget expenditures is fully ensured by the influx of foreign currency. Thus, the internal debt of the state does not increase the total resources, which the country owns, but only shifts them from the private sector to the state.

Currently, the deficit of the State budget of Ukraine is one of the factors for an increase in the level of inflation, which does not contribute to ensuring the country's financial and economic stability. When developing measures to finance a budget deficit, it is necessary to take into consideration the experience of foreign countries, economic cycles, the dynamics of budgetary parameters, including the amount of the national debt. It is possible to regulate the financing of a budget deficit by applying the ratios between government securities that are issued for a short-term, medium-term, and long-term period. In this case, the principle of limiting the size of a budget deficit becomes an important lever of rational financial and fiscal policy. The important task is to stabilize the level of debt load, to ensure consistency between the volume of budget expenditures for servicing a public debt and the dynamics of macroeconomic indicators and the level of balanced public finances.

Improving a public debt management system provides for the appropriate level of debt and debt sustainability in the country, the upper limit

of the national debt and the debt of a quasi-government sector in the aggregate should be not more than 60 % of GDP. In the case of exceeding the specified level, state authorities should thoroughly analyze the status and structure of external debt in the relationship with the strategic programs of the country's economic development, and, if necessary, make adjustments in the attraction of external financing or timing of the implementation of economic projects with foreign participation, strengthen the indirect measures aimed to destimulate foreign borrowings of residents.

Monitoring and assessment of the country's debt sustainability should include a detailed analysis of the internal and external debt, including possible threats of the occurrence of crises, the state of readiness of residents-borrowers to overcome them. In this case, attracting loans should be done based on the well-founded public debt management policy and ensuring financial stability of legal entities in the state sector of the economy, taking into consideration the liquidity risk — imbalance of financial assets and financial liabilities, credit risk — a failure or improper fulfillment of their obligations, the currency risk — fluctuations of rates of foreign currencies, the interest rate risk — fluctuations of floating rates.

It is important to note that the further development of the national market of debt securities is one of the key priorities of public debt policy in the medium-term period. It is advisable to improve the efficiency of operation and improve the infrastructure of a government securities market, to increase liquidity, to expand and diversify the investors' base, creating a competitive environment for investors. When allocating funds from the state budget on the development of territories, it is necessary to take into consideration comparative advantages of administrative-territorial units and problems in the socio-economic field, the state of infrastructure, trade and commercial potential, reproduction base, the arrangement of productive forces, the maturity of innovative forms of management practices, etc.

Improving the effectiveness of a fiscal policy at present implies concerted measures aimed at ensuring the stability and balance of the budget, increasing the effectiveness of budget expenditures, supplemented by real, clearly defined revenue sources that would positively affect the development of economy. An important task is to ensure a reasonable level of public debt. Its growth amid a recession and declining manufacturing investments suggests that the production employs current expenditures against likely future revenues and eventually causes the crisis processes in the financial sector.

The implementation of the specified measures would ensure the stability of a budgetary system, improve the effectiveness of budget expenditures, including budgetary investments, increase the amount of private investments in the economy, improve the efficiency of activities by bodies of state power and local self-government, create favorable conditions for sustainable economic growth.

Since the most important areas of fiscal policy are the formation of budget revenues, execution of the budget, management of a budget deficit and a public debt, the efficiency of the entire budgetary policy should be evaluated based on the effectiveness of activity of bodies of state power and local self-government in the specified areas. In this case, it is important to note that because the budget is an important tool for ensuring economic growth, the dynamics of basic macroeconomic indicators could also be one of the criteria for the effectiveness of fiscal policy conducted.

The main criteria for evaluating the effectiveness of a fiscal policy include: the level of collecting budget revenues in general and tax revenues in particular; the level of execution of budget obligations; the level of a budget deficit and its monetization; the amount of foreign currency reserves, which are used to finance the budget deficit; the level of a public debt and the rate of its growth; the amount of financial resources to service the public debt; the degree of implementation of legislation in the public sector.

Development of a budgetary strategy should be based on the qualitatively new approaches to a budget mechanism taking into consideration the criteria of realism, consistency, efficiency and effectiveness of budgeting. A budgetary policy should be based on a deliberate strategy of the country's socio-economic development and include clear guidelines regarding the resourcing of budget programs, the directions to provide a balanced budget. The components of a budgetary strategy should provide a synergistic effect in the process of institutional transformation of the economy in order to increase the level of financial and fiscal stability in the country.

The basis of a fiscal strategy must be a strategic budget planning based on long-term forecasting of budgetary indicators. The goals of the strategic budget planning should be: to maintain the stability of the budget without increasing the level of a public debt and to use consolidating measures over a budgetary cycle.

At the present stage of development of finance, it is necessary to rethink the essence of a budgetary system in the process of regulation of the economy, to raise the theoretical-methodological level of fiscal policy and, given the domestic and foreign experience, to develop, based on the identified features of a budgetary process, the new paradigm of the system of budgetary control, on the one hand, as an instrument of influence, on the other hand, as object to regulate economic development. Development and implementation of a budgetary strategy should rely on the scientifically-substantiated provisions and results of the research conducted on the effectiveness of budgetary relations, which would definitely enhance the balance of public finances and create the necessary conditions for better controllability of economic processes in the country. The institutional model of the fiscal strategy must combine, based on the provisions of the economic architectonics, the social and innovative budgetary components that would provide the quality functioning of the country's financial and economic system. It is important

to conduct further research aimed at determining the main directions and mechanisms of implementation of a budgetary strategy in the system of state regulation taking into consideration features of the institutional environment of society, which would provide for a better understanding of the essence of financial-budgetary relations as an important tool for the country's socio-economic development. The above would make it possible to deepen the understanding of the economic essence of the budget and a budgetary system as an important regulator of economic processes that would facilitate the efficient development of financial-budgetary relations.

Establishing long-term goals and objectives of the budget strategy, quantitative and qualitative criteria for their implementation and, on this basis, determining the volume of budgetary resources for the future is a necessary condition for improving the quality of the process of budget planning and strengthening the impact of the budget strategy on the country's socio-economic development. Development of predictive budget indicators for a long term, a budgetary strategy taking into consideration the cyclic economic development, would certainly improve the manageability of a budgetary process. Reasonability and timeliness of adoption of the specified decisions affect the effectiveness of a budgetary policy and the functioning of the fiscal system in general. At the same time, the budget as an instrument of economic regulation should be balanced both in medium- and long-term periods, which primarily concerns the indicators for volume and structure of the public debt, a budget deficit, accounts receivable and accounts payable at public institutions, debts of legal entities for payment of taxes and fees, the level of implementation of planned indicators for budgets of all levels. Given this, there is a need to strengthen the scientifically-substantiated prospective budget forecasting and planning and the creation of theoretical foundations for the system of budgetary control, which would increase the quality of functioning of the budgetary system as one of the basic tools of state regulation of economic development. Applying an institutional approach when forming and implementing a budgetary strategy would help accelerate the transformations in the field of public finance and increase the quality level of development of socio-economic relations in society.

A budgetary strategy is one of the most important components of the system of state regulation of the country's socio-economic development. Budget regulation should constantly improve and adapt to the institutional transformation of economic environment, the dynamics and trends of social development, economic cycles, taking into consideration the need to increase the level of balance and effectiveness of the functioning of public finances. The results of the budgetary strategy are determined by the excess of effectiveness of budget expenditures of the fiscal impact of budget revenues. The value for this excess must be the greatest. The countries, which can to a certain extent achieve the above, possess an effective instrument of economic growth.

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Appendices

Appendix A

Table A1 Share of tax revenues in GDP in countries with developed and transitional economies over 2001 – 2016, %

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
USA	27.2	24.9	24.4	24.6	25.9	26.7	26.7	25.7	23.0	23.5	23.9	24.1	25.7	25.9	26.2	26.0
Japan	26.0	24.9	24.5	25.2	26.2	27.0	27.5	27.4	26.0	26.5	27.5	28.2	28.9	30.3	30.7	30.7
United Kingdom	32.8	31.8	31.5	32.5	32.9	33.1	33.2	32.6	31.6	32.6	33.5	32.8	32.6	32.2	32.5	33.2
Canada	34.1	32.6	32.5	32.3	32.2	32.4	32.1	31.7	32.0	30.6	30.5	31.0	30.9	31.2	32.0	31.7
Italy	40.3	39.8	40.1	39.3	39.1	40.6	41.7	41.7	42.1	41.9	41.9	43.9	44.1	43.5	43.3	42.9
France	42.7	42.1	42.0	42.2	42.8	43.1	42.4	42.2	41.3	42.0	43.2	44.3	45.2	45.3	45.2	45.3
Germany	35.0	34.4	34.6	33.9	33.9	34.5	34.9	35.4	36.1	35.0	35.7	36.4	36.8	36.8	37.1	37.6
Lithuania	29.3	29.0	28.7	29.3	29.5	30.4	30.4	30.9	30.6	28.7	27.6	27.3	27.4	28	27.6	27.3
Latvia	28.1	27.8	27.4	27.6	27.8	28.6	28.1	27.7	27.9	28.1	27.7	28.4	28.5	28.8	29.0	30.2
Estonia	30.4	31.2	30.9	31.2	30.0	30.5	31.3	31.4	34.9	33.3	31.5	31.7	31.7	32.8	33.9	34.7
Poland	32.9	33.0	32.5	31.9	33.0	33.6	34.6	34.1	31.2	31.4	31.9	32.1	31.9	32.0	32.4	33.6
Romania	28.8	28.4	27.9	27.7	28.3	29.0	29.6	28.3	27.0	26.9	28.1	27.9	27.4	27.7	27.8	27.6
Bulgaria	30.2	27.8	30.4	31.5	30.3	29.7	31.4	30.6	27.2	26.3	25.5	26.6	27.9	27.8	27.5	27.7
Kazakhstan	9.6	12.1	13.1	13.9	17.2	15.0	12.8	13.0	8.1	8.9	13.2	14.1	13.4	12.8	13.0	13.3
Russia	36.6	35.6	34.6	35.3	34.4	36.7	37.1	36.7	31.7	32.7	36.6	36.4	36.2	36.9	36.7	36.9
Belarus	41.5	39.7	40.7	22.5	21.8	20.2	19.7	28.2	41.5	38.5	34.3	34.2	34.6	35.1	34.8	35.0
Spain	32.8	33.2	33.1	34.1	35.1	35.9	36.4	32.1	29.7	31.2	31.2	32.2	33.1	33.7	33.8	33.5
Portugal	30.8	31.2	31.3	30.2	30.8	31.3	31.8	31.7	29.9	30.4	32.3	31.8	34.1	34.3	34.6	34.4
Greece	32.0	32.2	30.9	29.9	31.2	30.3	31.2	31.0	30.6	32.0	33.6	35.5	35.5	35.9	36.4	38.6
Ireland	28.6	27.3	27.9	28.9	29.4	30.8	30.4	28.4	27.3	27.0	27.3	27.5	28.2	28.5	23.1	23.0

Source: *Calculated based on data from the International Monetary Fund*

Table A2 The share of public expenditures in GDP in countries with developed and transitional economies over 2001 − 2017, %

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
USA	35.0	35.9	36.3	36.1	36.3	36.0	34.5	37.3	41.6	40.0	38.9	37.3	36.1	35.6	35.7	35.4	35.7
Japan	36.8	37.1	36.8	34.2	34.2	34.7	33.3	35.7	40.0	38.9	40.6	39.8	40.6	39.8	39.3	37.8	37.5
United Kingdom	36.5	37.6	38.8	40.0	41.3	40.8	40.9	44.4	47.3	47.6	45.9	45.8	43.9	43.0	42.2	41.4	40.9
Canada	41.5	40.9	40.8	39.7	39.2	39.3	38.6	38.9	43.5	43.2	41.7	41.0	40.3	39.0	40.3	40.7	40.3
Italy	47.5	46.8	47.2	46.8	47.1	47.6	46.8	47.8	51.2	49.9	49.4	50.8	51.1	50.9	50.3	49.3	48.9
France	51.7	52.8	53.3	53.0	53.3	52.9	52.6	53.3	57.2	56.9	56.3	57.1	57.2	57.2	56.8	56.6	56.5
Germany	46.9	47.3	47.8	46.3	46.2	44.7	42.8	43.6	47.6	47.3	44.7	44.3	44.7	44.1	43.7	44.0	43.9
Lithuania	37.1	35.1	33.6	34.0	34.1	34.3	35.3	38.1	44.9	42.3	42.5	36.1	35.5	34.6	34.9	34.2	33.3
Latvia	34.8	35.1	33.4	34.7	34.2	36.0	34.0	37.6	44.2	45.5	40.5	38.0	37.7	38.1	38.2	37.1	38.0
Estonia	35.0	36.1	35.2	34.3	34.0	33.6	34.1	39.7	46.1	40.5	37.4	39.3	38.5	38.4	40.2	40.6	40.2
Poland	45.0	45.4	45.8	43.6	44.4	44.7	43.2	44.3	45.0	45.8	43.9	42.9	42.6	42.3	41.6	41.1	41.2
Romania	36.0	34.8	33.1	33.2	33.1	35.2	37.2	37.8	39.7	39.9	39.3	37.2	35.4	35.0	35.8	34.6	33.4
Bulgaria	40.7	39.4	38.9	38.1	37.0	33.9	37.7	37.1	39.4	36.2	33.8	34.5	37.6	42.1	40.7	35.0	35.2
Kazakhstan	24.0	23.8	23.5	22.8	23.6	23.7	23.7	27.1	23.5	22.5	21.8	22.4	20.2	22.3	23.0	22.1	24.9
Russia	33.7	36.3	34.9	31.7	32.8	31.1	32.1	32.2	38.8	35.7	33.5	34.6	35.6	35.4	36.4	36.5	34.7
Belarus	49.2	49.0	48.7	48.7	48.0	47.9	47.9	48.8	46.2	42.1	34.5	38.9	41.9	39.5	42.6	45.8	43.4
Spain	38.5	38.6	38.3	38.7	38.3	38.3	39.0	41.2	45.8	45.6	45.8	48.1	45.6	44.8	43.8	42.2	41.0
Portugal	44.1	43.7	45.3	46.1	46.7	45.2	44.5	45.3	50.2	51.8	50.0	48.5	49.9	51.8	48.2	44.9	45.9
Greece	46.0	45.8	46.6	47.6	45.6	45.1	47.1	50.8	54.1	52.5	54.1	55.7	62.3	50.2	53.8	49.5	48.0
Ireland	32.5	33.2	33.0	33.2	33.3	33.8	35.9	41.8	47.0	65.1	46.3	41.9	40.2	37.6	28.9	27.1	26.1

Source: *Calculated based on data from the International Monetary Fund*

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Table A3 Specific weight of fiscal deficit in GDP in countries with developed and transitional economies over 2001 − 2016, %

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
USA	0.58	3.79	4.74	4.27	3.13	2.04	2.86	6.68	13.15	10.92	9.59	7.88	4.40	4.14	3.72	4.22
Japan	6.04	7.71	7.79	5.95	4.81	3.65	2.09	4.11	10.39	9.30	9.81	8.76	8.52	6.16	5.24	3.51
United Kingdom	+0.41	2.06	3.39	3.59	3.53	2.91	2.99	5.03	10.72	9.64	7.66	7.74	5.63	5.62	4.43	2.95
Canada	+0.53	0.23	0.13	0.77	+1.56	+1.83	+1.82	+0.18	3.89	4.75	3.32	2.53	1.88	0.50	1.69	1.95
Italy	3.39	3.07	3.41	3.57	4.17	3.59	1.53	2.69	5.27	4.25	3.48	2.94	2.92	3.03	2.63	2.44
France	1.44	3.09	3.86	3.49	3.17	2.34	2.54	3.18	7.16	6.79	5.10	4.81	4.08	3.95	3.65	3.41
Germany	3.05	3.88	4.07	3.66	3.26	1.55	+0.31	0.02	3.03	4.06	0.86	+0.09	+0.15	+0.31	+0.64	+0.76
Lithuania	3.62	1.80	1.27	1.53	0.50	0.45	1.00	3.27	9.33	6.90	8.95	3.15	2.62	0.67	0.69	1.56
Latvia	1.99	2.51	1.60	1.00	1.03	0.46	+0.60	3.16	7.01	6.49	3.10	+0.08	0.56	1.69	1.52	+0.01
Estonia	0.08	+0.25	+1.67	+1.64	+1.61	+2.44	+2.36	2.90	1.93	+0.19	+1.03	0.41	0.29	+0.75	+0.53	0.27
Poland	4.79	4.85	6.08	5.15	3.99	3.59	1.85	3.63	7.32	7.53	4.85	3.69	4.02	3.30	2.93	2.42
Romania	3.18	2.59	2.21	3.34	0.68	1.34	3.10	4.74	7.13	6.30	4.20	2.48	2.47	1.87	1.46	1.16
Bulgaria						+1.80	+1.10	+1.60	4.10	3.20	2.00	0.30	0.40	5.40	2.10	4.23
Kazakhstan		+1.92	+4.00	+2.58	+5.95	+7.65	+5.13	+1.23	1.33	+1.47	+5.95	+4.53	+5.05	+1.81	5.34	4.82
Russia	+3.00	+0.68	+1.36	+4.60	+7.63	+7.84	+5.61	+4.57	5.92	3.21	+1.44	+0.39	1.19	1.09	3.50	3.21
Belarus	0.61	0.76	+2.45	+1.55	+1.91	+1.21	+1.52	+1.90	0.38	0.46	+4.24	+1.69	0.75	1.13	0.26	1.43
Spain	0.55	0.41	0.37	0.03	+1.21	+2.20	+2.00	4.42	10.96	9.39	9.46	10.44	6.91	5.89	4.55	4.54
Portugal	4.79	3.34	4.42	6.19	6.19	4.33	3.01	3.77	9.81	11.17	7.38	5.66	4.84	7.18	4.39	1.68
Greece	5.47	6.02	7.83	8.83	6.19	5.95	6.71	10.17	15.15	11.21	10.24	6.50	2.95	3.94	4.21	0.73
Ireland	0.93	0.33	0.42	+1.38	+1.57	+2.79	+0.23	7.01	13.79	32.18	12.41	7.95	5.55	3.88	1.59	0.57

Source: Calculated based on data from the International Monetary Fund

Table A4 Dynamics of long-term interest rates in the OECD countries
over 2008 — 2017, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Australia	5.82	5.04	5.37	4.88	3.38	3.7	3.66	2.71	2.34	2.64
Austria	4.36	3.94	3.23	3.32	2.37	2.01	1.49	0.75	0.38	0.58
Belgium	4.42	3.9	3.46	4.23	3	2.41	1.71	0.84	0.48	0.72
Canada	3.6	3.23	3.24	2.78	1.87	2.26	2.23	1.52	1.25	1.78
Chile	7.1	5.67	6.25	5.97	5.43	5.31	4.74	4.48	4.41	4.24
Czech Republic	4.63	4.84	3.88	3.71	2.78	2.11	1.58	0.57	0.43	0.98
Denmark	4.28	3.59	2.93	2.73	1.4	1.75	1.33	0.69	0.32	0.48
Estonia	4.29	3.74	3.01	3.01	1.88	1.86	1.45	0.72	0.36	0.55
Finland	4.23	3.65	3.12	3.32	2.54	2.2	1.67	0.84	0.47	0.81
France	3.98	3.22	2.74	2.61	1.5	1.57	1.16	0.5	0.09	0.32
Germany	4.8	5.17	9.09	15.75	22.5	10.05	6.93	9.67	8.36	5.98
Greece	8.24	9.12	7.28	7.64	7.89	5.92	4.81	3.43	3.14	2.96
Hungary	11.07	8.26	6.09	5.98	6.19	5.79	6.37	6.26	5.6	4.86
Iceland	4.55	5.23	5.99	9.58	5.99	3.83	2.26	1.11	0.69	0.79
Ireland	5.92	5.06	4.68	4.98	4.4	3.8	2.89	2.07	1.88	1.91
Israel	4.68	4.31	4.04	5.42	5.49	4.32	2.89	1.71	1.49	2.11
Italy	1.47	1.33	1.15	1.1	0.84	0.69	0.52	0.35	−0.07	0.05
Japan	5.57	5.17	4.77	4.2	3.45	3.28	3.19	2.31	1.75	2.28
Latvia	6.43	12.36	10.34	5.91	4.57	3.34	2.51	0.96	0.53	0.83
Lithuania	5.61	14	5.57	5.16	4.83	3.83	2.79	1.38	0.9	0.31
Mexico	8.31	7.96	6.9	6.67	5.6	5.68	6.01	5.93	6.19	7.25
The Netherlands	4.23	3.69	2.99	2.99	1.93	1.96	1.45	0.69	0.29	0.52
Norway	6.08	5.46	5.6	4.95	3.69	4.09	4.3	3.42	2.76	2.99
Poland	4.46	4	3.53	3.13	2.1	2.58	2.52	1.56	1.33	1.64
Portugal	6.07	6.12	5.78	5.96	5	4.03	3.52	2.7	3.04	3.42
Slovakia	4.52	4.21	5.4	10.24	10.55	6.29	3.75	2.42	3.17	3.05
Slovenia	4.72	4.71	3.87	4.42	4.55	3.19	2.07	0.89	0.54	0.92
Spain	4.61	4.38	3.83	4.97	5.81	5.81	3.27	1.71	1.15	0.96
Sweden	4.36	3.97	4.25	5.44	5.85	4.56	2.72	1.74	1.39	1.56
Switzerland	3.89	3.25	2.89	2.6	1.59	2.12	1.72	0.72	0.52	0.66
Turkey	2.9	2.2	1.63	1.47	0.65	0.95	0.69	−0.07	−0.36	−0.07
United Kingdom	4.59	3.65	3.62	3.14	1.92	2.39	2.57	1.9	1.31	1.24
USA	3.67	3.26	3.21	2.79	1.8	2.35	2.54	2.14	1.84	2.33

Table A5 Dynamics of short-term interest rates in the OECD countries
over 2008 − 2017, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Australia	6.97	3.43	4.68	4.85	3.73	2.78	2.68	2.26	1.99	1.74
Austria	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Belgium	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Canada	3.34	0.69	0.78	1.17	1.16	1.16	1.17	0.82	0.82	1.06
Czech Republic	4.04	2.19	1.31	1.19	1	0.46	0.36	0.31	0.29	0.41
Denmark	5.27	2.5	1.25	1.38	0.62	0.27	0.32	−0.12	−0.15	−0.26
Estonia	6.66	5.93	1.57	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Finland	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
France	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Germany	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Greece	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Iceland	15.82	11.28	6.79	4.26	5.51	6.19	6.05	5.89	6.28	5.06
Ireland	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Israel	3.56	0.64	1.64	2.8	2.25	1.32	0.55	0.12	0.11	0.12
Italy	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Japan	0.85	0.58	0.38	0.33	0.33	0.24	0.2	0.17	0.07	0.06
Latvia	5.49	2.63	2.67	3.44	3.3	2.72	2.49	1.77	1.49	1.44
Lithuania	7.99	13.08	2	0.96	0.89	0.36	0.21	−0.02	−0.26	−0.33
Mexico	8.35	5.93	5	4.86	4.81	4.29	3.53	3.34	4.57	7.12
The Netherlands	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Norway	8.02	3.04	3	2.8	2.67	2.66	3.42	3.24	2.33	1.96
Poland	6.22	2.46	2.5	2.87	2.23	1.76	1.7	1.29	1.07	0.89
Portugal	6.35	4.34	3.93	4.58	4.87	2.98	2.49	1.74	1.7	1.73
Slovakia	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Slovenia	3.85	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Spain	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Sweden	4.63	1.23	0.81	1.39	0.57	0.22	0.21	−0.02	−0.26	−0.33
Switzerland	3.9	0.4	0.5	1.66	1.25	0.93	0.42	−0.29	−0.66	−0.69
Turkey	2.48	0.36	0.19	0.12	0.07	0.02	0.01	−0.78	−0.75	−0.73
United Kingdom	5.69	1.31	0.69	0.86	0.85	0.51	0.54	0.57	0.51	0.35
USA	2.96	0.56	0.31	0.3	0.28	0.17	0.12	0.23	0.64	1.15

Appendix B

Table B1 Specific weight of revenues in the Ukraine's consolidated budget in GDP over 2001 – 2017, %

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Budget revenues	25.82	27.44	28.16	26.52	30.40	31.57	30.52	31.42	29.89	29.04	30.59	31.57	30.43	29.11	33.01	32.77	34.13
Tax revenues	18.60	20.10	20.30	18.30	22.20	23.10	22.40	24.00	22.80	21.60	25.70	25.60	24.50	23.50	25.69	27.31	27.79
Value added tax	5.64	5.97	4.71	4.85	7.66	9.26	8.24	9.71	9.26	7.97	9.99	9.84	8.82	8.87	9.03	9.88	10.54
Tax on individuals' income	4.75	4.79	5.06	3.83	3.92	4.19	4.83	4.84	4.87	4.71	4.63	4.83	5.00	4.80	5.06	5.82	6.17
Profit tax	4.24	4.16	4.95	4.68	5.31	4.81	4.80	5.10	3.60	3.70	4.20	4.00	3.40	2.57	1.98	2.53	2.53
Excise tax	2.14	2.01	2.28	2.51	2.30	1.95	1.94	1.77	2.28	3.10	3.13	2.24	2.60	3.10	3.58	4.27	4.08
Customs duty	1.14	1.06	1.34	1.52	1.76	1.60	1.78	1.67	0.68	0.95	0.98	1.01	0.95	0.87	2.57	0.85	0.84
Non-tax revenues	6.18	6.51	6.82	7.12	7.20	7.45	6.74	6.38	6.40	6.82	4.61	5.73	5.84	5.15	7.09	5.26	5.21
Funds from NBU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.55	1.44	0.91	1.67	1.94	1.46	3.13	1.60	1.59

Source: calculated based on data from the Ministry of Finance of Ukraine and the State Treasury Service of Ukraine

Appendix C

Table C1 Specific weight of basic budget indicators in gross
domestic product over 2001 — 2017, %

	2001 — 2005	2006 — 2010	2011 — 2015	2016 — 2017	2001 — 2017
Revenues of consolidated budget, including:	27.67	30.52	30.83	33.44	31.68
— tax revenues;	19.90	22.78	25.00	27.56	25.21
— non-tax revenues	6.76	6.75	5.68	5.23	5.78
Expenditures of consolidated budget, including:	28.83	33.14	34.01	35.24	33.71
— expenditures on servicing a public debt;	1.16	0.77	2.64	3.87	2.75
— deficit of consolidated budget	0.96	2.62	3.18	1.85	2.06
State and state-guaranteed debt, including:	28.31	24.68	52.55	76.39	57.22
— internal;	7.57	7.29	21.09	27.12	20.08
— external	20.74	17.39	31.46	49.07	37.04
Repayment of public debt, including:	2.76	1.87	8.74	4.36	4.42
— internal;	1.49	1.06	3.46	3.28	2.71
— external	1.27	0.81	5.28	1.09	1.71

Source: *calculated based on data from the Ministry of Finance of Ukraine and the State Treasury Service of Ukraine*

Appendix D

Table D1 Specific weight of the state and state-guaranteed debt of Ukraine
in GDP over 2001 — 2017, %

Years	State and state-guaran- teed debt	Direct debt			Guaranteed debt			GDP, UAH million
		Inter- nal	Exter- nal	Total	Inter- nal	Exter- nal	Total	
2001	36.55							
2002	33.54	9.47	19.08	28.55	0.00	4.99	4.99	225,810
2003	29.00	7.68	17.06	24.74	0.00	4.26	4.26	267,344
2004	24.75	6.07	13.54	19.61	0.00	5.13	5.13	345,113
2005	17.70	4.35	9.96	14.30	0.00	3.40	3.40	441,452
2006	14.80	3.05	9.10	12.15	0.00	2.65	2.65	544,153
2007	12.31	2.47	7.42	9.89	0.14	2.28	2.42	720,731
2008	19.98	4.71	9.08	13.79	0.21	5.98	6.19	948,056
2009	34.81	9.97	14.88	24.85	1.54	8.42	9.96	913,345
2010	39.93	13.09	16.79	29.88	1.28	8.77	10.05	1,082,569
2011	36.34	12.40	15.04	27.44	0.94	7.96	8.90	1,302,079
2012	36.53	13.51	14.83	28.34	1.15	7.10	8.25	1,411,238
2013	40.19	17.66	15.34	33.00	1.86	5.33	7.19	1,454,931
2014	70.26	29.05	30.63	59.68	1.76	8.82	10.58	1,586,915
2015	79.42	25.55	41.55	67.10	1.08	11.24	12.32	1,988,544
2016	80.98	28.14	41.13	69.27	0.80	10.91	11.71	2,383,182
2017	71.82	25.29	36.23	61.52	0.41	9.89	10.30	2,445,587

Source: calculated based on data from the Ministry of Finance of Ukraine and the National Bank of Ukraine

Appendix E

Table E1 Organizational structure of Ukraine's SFS

Name of structural unit	
As of 01.08.2014	As of 01.08.2018
Department to support Service operation.	Department to support Service operation
Organizational-distributing department	
Department of State secrets, technical and cryptographic protection of information	Department of State secrets, technical and cryptographic protection of information
Department of infrastructure	Department of material support and infrastructure development
Human resources department	Department of personnel policy and human resources
Department of financial-economic operations and accounting	Department of finance, accounting, and reporting
Main operational unit	Main operational unit
Main unit of internal security	Main unit of internal security
Main unit of financial investigations	Main unit of financial investigations
Department of legal work	Regulatory-legal department.
	Department of administrative appeal and litigation support
Taxpayers' service department.	Taxpayers' service department
Information-communication department	
Department of international relations	Department of combating customs crimes and international interaction
Department of departmental control and internal audit	Internal audit department
Department of taxation of legal entities	Department of taxes and fees for legal entities.
	Department of customs duties administration
Department for combating money laundering of proceeds from crime	Department for combating money laundering of proceeds from crime
Department of revenues and fees from individuals	Department of taxes and fees from individuals
Department of IT development, electronic services and account of payers	Department of information technologies
Department of methodological work on taxation	Department of methodological and legal work
Coordination-monitoring department	Department for monitoring income and accounting-reporting systems
Department of tax and customs audit	Audit department
Department of debt repayment	Department of debt repayment
Department of customs	Department of targeting and customs risk management Department of organization of customs control

Table E2 Corporate profit tax rates in countries with developed
and transitional economies

Some of the countries with the highest rates	
United Arab Emirates	55 %
United States of America	38.91 %
Argentina, Malta	35 %
India	34.61 %
France	34.43 %
Domestic rate and world's average	
Ukraine	18 %
World, on average	22.96 %
Some of the countries with the lowest rates	
Uzbekistan	7.5 %
Turkmenistan	8 %
Hungary, Montenegro	9 %
Bosnia and Herzegovina, Bulgaria, Kosovo, Kirgizstan, Qatar	10 %
Moldova	12 %
Cyprus, Ireland, Lichtenstein	12.5 %

Data compiled from numerous sources including: PwC, KPMG, Deloitte, and the U.S. Department of Agriculture

Table E3 Average normed corporate profit tax rates by region
or by a group of countries with developed and transitional economies

Region or a group of countries	Average rate	Medium-weighted rate	Number of countries
Africa	28.73 %	28.20 %	48
Asia	20.05 %	26.26 %	45
Europe	18.35 %	25.58 %	49
North America	23.08 %	37.01 %	30
Oceania	23.67 %	27.10 %	18
South America	28.73 %	32.98 %	13
BRICS	28.32 %	27.34 %	5
EU	21.82 %	26.25 %	28
G 20	28.04 %	30.90 %	19
G 7	29.57 %	33.48 %	7
OECD	24.18 %	31.12 %	35
World	22.96 %	29.41 %	202

Data compiled from numerous sources including: PwC, KPMG, Deloitte, and the U.S. Department of Agriculture

Table E4 Standard rates of value added tax in the European Union member states

EU countries	Standard rate
Countries in which the rate is lower than that in Ukraine	
Luxembourg	17 %
Malta	18 %
Cyprus, Germany	19 %
Countries with the same rate	
Austria, Bulgaria, Estonia, France, Romania, Slovakia, United Kingdom	20 %
Countries in which the rate is much higher	
Greece, Ireland, Poland, Portugal	23 %
Finland	24 %
Croatia, Denmark, Sweden	25 %
Hungary	27 %

Source: Calculated based on data from the European Commission

Table E5 Main types of tax incentives to research and innovation activities in foreign countries

Type of incentive	Essence	Countries
Tax incentives for increasing R&D expenditures	Research tax rebates/credits (incremental, volumetric, mixed)	USA, Norway, United Kingdom, Australia, France, Hungary, Poland
Tax incentives for small- and medium science-intensive firms	Cash reimbursement of expenditures on research and development. Tax breaks on income tax	USA, Norway, United Kingdom, Australia, France, Canada
Tax incentives to increase expenditures for purchasing the latest equipment	Cancellation/reimbursement of expenditures on the purchase of equipment in the form of depreciation, accelerated depreciation, depreciation bonus	USA, United Kingdom, Hungary
Tax stimulation of investments into new technologies (such as venture investments)	Benefits when buying new technology — tax deductions (discount), tax write-offs, investment tax credits	USA, Hungary, Poland, Canada
Establishment of special economic zones (including technological parks)	Benefits for income, land taxes, VAT, and customs duties for participants in technoparks and special economic zones	Poland, USA

Source: Точиліна І. В. Досвід податкового стимулювання інноваційного розвитку економіки. Наукові праці НДФІ. 2016. Вип. 3. С. 54—68

Table E6 Reforms conducted in different countries according to the World Bank
reports «Doing Business 2006» — «Doing Business 2017»

Country	Number of reforms based on «DB 2006–2017»		Rated score		
	Taxation	Total	Based on the number of reforms in taxation	Total based on «Doing Business 2017»	Based on the indicator for taxes paid «Doing Business 2017»
Albania	8	25	1	58	97
Moldova	8	30	1	44	31
Belarus	7	37	2	37	99
Czech Republic	7	31	2	27	53
Brunei Darussalam	6	19	3	72	89
Spain	6	27	3	32	37
Morocco	6	30	3	68	41
Romania	6	31	3	36	50
Ukraine	**6**	**32**	**3**	**80**	**84**
Georgia	5	46	4	16	22

Source: calculated based on data from Doing Business. The World Bank

Table E7 Main indicators for Ukraine's tax system based
on the rating Paying Taxes in 2008 — 2018, %

	Total tax rate (% of profit)	Income taxes	Labor wage taxes	Other taxes (% of profit)
2008	57.2	12.3	43.3	1.7
2009	57.2	12.3	43.3	1.7
2010	55.5	10.4	43.3	1.8
2011	57.1	12.2	43.3	1.6
2012	55.4	11.6	43.1	0.7
2013	54.4	11.3	43.1	0.1
2014	52.7	9.5	43.1	0.1
2015	52.2	9.0	43.1	0.1
2016	52.3	8.7	43.1	0.5
2017	37.8	11.9	24.8	1.1
2018	41.7	11.0	29.6	1.1

Source: compiled by author based on data from PwC and the World Bank Group

Table E8 Evaluation of effectiveness of activities of the Ukraine's State
fiscal service, 2013—2017, %

Key indicators	2013	2014	2015	2016	2017
Share of tax declarations, submitted in compliance with law, in the total number of filed tax declarations	95.74	96.02	95.74	97.6	98.2
Share of paid monetary obligations, calculated additionally based on the results of audits, in the total amount of monetary obligations, calculated additionally based on results of audits	30.4	14.23	8.02	14.2*	18.6
Share of the agreed monetary obligations, calculated additionally based on the results of audits, in the total amount of monetary obligations, calculated additionally based on results of audits	35.0	34.3	12.6	42.7*	60.2
Share of tax and customs disputes, solved by courts at different levels in favor of different bodies of SFS in the total number of tax and customs disputes involving SFS, solved by courts at different levels	29.1	21.7	26.6	47.3	54.2
Proportion of the amount of claims on disputes, solved by courts in favor of SFS bodies, in the total amount of disputes, solved by courts at different levels	34.6	22.8	36.6	53.4	35.9
Share of the planned documentary audits to the total number of audits	8.58	17.77	19.36	51.2	45.8
Share of tax declarations filed using electronic services of SFS	30.95	45.80	46.32	73	74.0
Proportion of the considered appeals in the total number of requests by tax payers, submitted using the service «Pulse»	96.3	98.00	95.6	100	93.2

*Note: * — January-February 2017.*
Source: compiled based on data from the Ministry of Finance of Ukraine and the State fiscal service of Ukraine

Table E9 Institutional changes to the current tax system in Ukraine

Problem	Direction of institutional changes
Low quality of tax audits of tax and fee payers	Improve efficiency of the risk assessment system operation. Ensure the substantiation of amounts calculated additionally, which would reduce the possibility of their appeal in appeal and court proceedings. Improve professional level of Ukraine's SFS auditors, correct application of current tax legislation
Lack of effectiveness of appeal procedures	Improve procedures for pre-trial dispute resolution. Introduce a system to account the effectiveness of dispute consideration. Improve the efficiency of monitoring the effectiveness of the units of appeals
Lack of quality in the risk evaluation system of tax evasion	Create at the central level of the State fiscal service of Ukraine a separate division of risk management. Define a system of criteria for the identification of risks related to non-fulfilment of tax legislation for each type of taxes and fees. Widespread introduction of risk-oriented approach when executing customs control
Tax debt	Introduce a transparent mechanism to work with those payers of taxes and fees that have debts
Low level of using electronic services	Extension of the scope of application of electronic services
Low level of services to advise taxpayers	Introduction a system of quality evaluation of the level of satisfaction of taxpayers with the consultations provided by Ukraine's SFS bodies
Insufficient level of voluntary execution of tax obligation	Ensure simplicity and comprehensibility of tax legislation. Simplify tax reporting. Improve the perception of fiscal bodies by taxpayers

Appendix F

Table F1 Share of current expenditures by budgetary
institutions (State budget) in GDP, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Current expenditures of budgetary institutions, including	8.72	9.86	9.35	8.47	8.92	8.66	8.62	8.45	8.44	8.74
Wages	3.47	3.76	3.60	3.15	3.21	3.34	3.35	3.08	3.71	3.78
Accrual of salaries	1.10	1.19	1.13	0.98	1.03	1.08	1.07	0.95	0.72	0.74
Goods and services procurement	1.23	1.66	1.36	1.22	1.27	1.02	1.16	1.43	1.32	1.21
Expenditures on trip allowance	0.08	0.09	0.08	0.07	0.08	0.07	0.08	0.10	0.10	0.10
Expenditures and measures of special purpose	0.16	0.15	0.11	0.11	0.13	0.08	0.44	0.70	0.50	0.65
Payment of utility services	0.28	0.34	0.38	0.32	0.38	0.37	0.29	0.28	0.27	0.26
Research and development, expenditures on the state (regional) purposes	2.32	2.58	2.59	2.60	2.80	2.69	2.20	1.90	1.83	1.86
Stipends	0.08	0.10	0.09	0.02	0.02	0.02	0.02	0.00	0.00	0.13

Source: calculated by authors based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table F2 Share of current expenditures by budgetary
institutions (local budgets) in GDP, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Current expenditures of budgetary institutions, including	7.96	9.27	9.50	8.62	9.77	9.78	8.72	8.20	7.53	8.58
Wages	4.22	4.90	4.92	4.51	5.12	5.24	4.38	3.93	4.01	3.54
Accrual of salaries	1.51	1.76	1.76	1.61	1.82	1.87	1.56	1.41	0.87	0.78
Goods and services procurement	1.30	1.43	1.51	1.30	1.42	1.33	1.23	1.48	1.62	1.08
Expenditures on trip allowance	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Payment of utility services	0.65	0.89	0.94	0.88	1.00	0.88	0.73	0.83	0.75	0.48
Research and development, expenditures on the state (regional) purposes	0.24	0.25	0.31	0.21	0.32	0.37	0.74	0.47	0.22	2.65
Stipends	0.02	0.03	0.03	0.08	0.08	0.07	0.06	0.06	0.05	0.04

Source: calculated by authors based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Appendix G

Table G1 Structure of current expenditures by budgetary
institutions (State budget), %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Wages	39.84	38.12	38.52	37.22	36.02	38.62	38.93	36.49	43.89	43.22
Accrual of salaries	12.64	12.07	12.10	11.61	11.54	12.45	12.39	11.26	8.47	8.45
Goods and services procurement	14.07	16.86	14.50	14.38	14.19	11.73	13.41	16.96	15.67	13.85
Expenditures on trip allowance	0.91	0.87	0.89	0.87	0.87	0.80	0.91	1.14	1.17	1.17
Expenditures and measures of special purpose	1.81	1.47	1.15	1.28	1.45	0.90	5.16	8.33	5.92	7.49
Payment of utility services	3.18	3.45	4.11	3.75	4.29	4.23	3.42	3.34	3.22	2.98
Research and development, expenditures on the state (regional) purposes	26.61	26.20	27.74	30.66	31.43	31.03	25.57	22.45	21.65	21.33
Stipends	0.94	0.97	0.99	0.23	0.22	0.23	0.20	0.03	0.02	1.51
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: calculated by authors based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table G2 Structure of current expenditures by budgetary
institutions (local budgets), %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Wages	53.03	52.82	51.83	52.37	52.37	53.59	50.26	47.96	53.22	41.31
Accrual of salaries	18.92	18.97	18.55	18.65	18.61	19.08	17.93	17.16	11.62	9.12
Accrual of salaries	16.34	15.42	15.93	15.09	14.56	13.60	14.13	18.06	21.47	12.57
Expenditures on trip allowance	0.34	0.25	0.24	0.21	0.15	0.12	0.15	0.15	0.15	0.12
Payment of utility services	8.12	9.58	9.89	10.24	10.26	9.05	8.39	10.14	9.92	5.56
Research and development, expenditures on the state (regional) purposes	2.98	2.66	3.27	2.49	3.25	3.80	8.45	5.76	2.94	30.84
Stipends	0.28	0.32	0.29	0.95	0.80	0.76	0.70	0.78	0.68	0.48
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: calculated by authors based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table G3 Structure of current expenditures by budgetary
institutions (consolidated budget), %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Wages	46.13	45.24	51.70	44.86	44.57	46.56	44.63	42.14	48.29	42.27
Accrual of salaries	15.64	15.41	17.55	15.16	15.23	15.97	15.18	14.17	9.96	8.78
Goods and services procurement	15.15	16.16	17.39	14.74	14.38	12.72	13.77	17.50	18.40	13.22
Expenditures on trip allowance	0.64	0.57	0.64	0.54	0.50	0.44	0.53	0.65	0.69	0.65
Expenditures and measures of special purpose	0.95	0.76	0.65	0.64	0.69	0.42	2.56	4.23	3.13	3.78
Payment of utility services	5.54	6.42	8.03	7.02	7.41	6.79	5.92	6.69	6.38	4.26
Research and development, expenditures on the state (regional) purposes	15.33	14.79	3.31	16.45	16.70	16.59	16.96	14.23	12.83	26.04
Stipends	0.62	0.66	0.73	0.60	0.52	0.51	0.45	0.40	0.33	1.00
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: calculated by authors based on reports from the State treasury service of Uk-raine and data from the State service of statistics of Ukraine

Appendix H

Table H1 Share of expenditures on research and development in the total volume of the consolidated, state, local budgets and in GDP, %

	Consolidated budget		State budget		Local budgets	
	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %
2008	1.59	0.52	2.04	0.52	0.00	0.00
2009	1.38	0.46	1.75	0.46	0.00	0.00
2010	1.26	0.44	1.57	0.44	0.00	0.00
2011	1.27	0.40	1.59	0.40	0.00	0.00
2012	1.31	0.46	1.64	0.46	0.00	0.00
2013	1.18	0.41	1.49	0.41	0.00	0.00
2014	1.01	0.34	1.23	0.34	0.00	0.00
2015	0.78	0.27	0.92	0.27	0.00	0.00
2016	0.64	0.22	0.78	0.22	0.00	0.00
2017	0.66	0.23	0.83	0.23	0.00	0.00

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table H2 Share of expenditures on health care in the total volume of expenditures in the consolidated, state, local budgets and in GDP, %

	Consolidated budget		State budget		Local budgets	
	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %
2008	10.85	3.54	3.05	0.78	18.85	2.76
2009	11.89	4.00	3.11	0.82	21.31	3.18
2010	11.84	4.13	2.89	0.81	22.53	3.32
2011	11.75	3.72	3.07	0.78	21.40	2.94
2012	11.87	4.15	2.87	0.81	21.16	3.34
2013	12.17	4.23	3.19	0.89	22.15	3.35
2014	10.92	3.65	2.46	0.68	20.64	2.97
2015	10.44	3.59	1.98	0.58	21.26	3.01
2016	9.03	3.17	1.82	0.52	17.98	2.65
2017	9.69	3.43	1.99	0.56	17.27	2.87

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table H3 Share of expenditures on education in the total volume of expenditures
in the consolidated, state, local budgets and in GDP, %

	Consolidated budget		State budget		Local budgets	
	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %
2008	19.71	6.43	8.93	2.27	28.35	4.16
2009	21.72	7.31	9.87	2.62	31.45	4.69
2010	21.13	7.37	9.49	2.66	31.93	2.21
2011	20.69	6.55	8.17	2.07	32.61	4.48
2012	20.62	7.21	7.64	2.15	32.04	5.06
2013	20.86	7.25	7.67	2.13	33.93	5.13
2014	19.14	6.39	6.67	1.83	31.66	4.56
2015	16.80	5.77	5.23	1.52	29.99	4.24
2016	15.49	5.43	5.09	1.46	26.99	3.97
2017	16.82	5.96	4.90	1.38	27.54	4.58

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table H4 Share of expenditures on the spiritual and physical development
in the total volume of expenditures in the consolidated, state,
local budgets and in GDP, %

	Consolidated budget		State budget		Local budgets	
	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %	Share in budget expenditures, %	Share of expenditures in GDP, %
2008	2.56	0.83	1.21	0.31	3.60	0.53
2009	2.71	0.91	1.33	0.35	3.75	0.56
2010	3.05	1.06	1.70	0.48	3.98	0.59
2011	2.58	0.82	1.15	0.29	3.83	0.53
2012	2.77	0.97	1.39	0.39	3.66	0.58
2013	2.70	0.94	1.27	0.35	3.89	0.59
2014	2.65	0.88	1.13	0.31	3.20	0.46
2015	2.39	0.82	1.15	0.33	3.43	0.49
2016	2.02	0.71	0.72	0.21	3.41	0.50
2017	2.30	0.82	0.94	0.26	3.31	0.55

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Appendix I

Table I1 Structure of expenditures of budgetary institutions (State budget) on the development of intellectual capital, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Research and development, including in the areas of:	11.98	9.58	8.82	10.03	10.30	9.20	8.94	7.98	7.38	7.63
– state governance;	7.05	6.33	5.82	6.44	7.04	6.97	6.74	5.94	5.12	5.38
– defense;	0.87	0.17	0.24	0.25	0.00	0.00	0.00	0.00	0.00	0.00
– public order, security, and judiciary;	0.10	0.09	0.05	0.18	0.64	0.28	0.28	0.26	0.29	0.10
– economy;	3.67	2.78	2.52	2.96	2.46	1.79	1.74	1.59	1.79	1.98
– environment protection;	0.21	0.14	0.13	0.15	0.13	0.13	0.14	0.16	0.15	0.15
– household and communal services;	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
– social security	0.06	0.06	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Health care	20.36	19.65	18.69	22.28	21.64	23.90	21.83	21.84	22.10	23.49
Education	59.59	62.39	61.47	59.35	57.61	57.42	59.18	57.56	61.74	57.78
Spiritual and physical development	8.07	8.39	11.02	8.35	10.45	9.49	10.05	12.62	8.79	11.09
Total expenditures on human development	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table I2 Structure of expenditures by budgetary institutions (local budgets) on the development of intellectual capital, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Health care	37.10	37.71	38.54	37.00	37.21	36.93	36.67	38.88	37.17	35.88
Education	55.82	55.65	54.64	56.38	56.35	56.58	56.25	54.85	55.79	57.23
Spiritual and physical development	7.08	6.64	6.81	6.61	6.44	6.48	7.08	6.27	7.04	6.89
Total expenditures on human development	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table I3 Structure of expenditures by budgetary institutions (consolidated budget) on the development of intellectual capital, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Research and development, including in the areas of:	4.06	3.19	2.95	3.06	3.02	2.67	2.47	2.03	1.84	1.75
– state governance;	2.39	2.10	1.95	1.96	2.06	2.02	1.86	1.52	1.28	1.23
– defense;	0.30	0.06	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00
– public order, security, and judiciary;	0.03	0.03	0.02	0.06	0.19	0.08	0.08	0.07	0.07	0.02
– economy;	1.24	0.92	0.84	0.90	0.72	0.52	0.48	0.41	0.45	0.46
– environment protection;	0.07	0.05	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.03
– household and communal services;	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
– social security	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Health care	31.43	31.70	31.91	32.52	32.64	33.15	32.57	34.53	33.41	33.04
Education	57.09	57.89	56.93	57.28	56.72	56.82	57.06	55.54	57.27	57.35
Spiritual and physical development	7.41	7.22	8.22	7.14	7.62	7.36	7.90	7.89	7.48	7.85
Total expenditures on human development	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Appendix J

Table J1 Structure of expenditures by budgetary institutions on research and development, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
State governance	51.82	57.35	57.39	55.59	57.08	62.66	61.71	58.74	54.02	55.28
Defense	6.42	1.56	2.35	2.18	0.00	0.00	0.00	0.00	0.00	0.00
Public order, security, and judiciary	0.74	0.78	0.48	1.60	5.16	2.50	2.55	2.56	3.03	1.04
Economic activity	26.95	25.19	24.79	25.58	19.92	16.06	15.92	15.74	18.88	20.38
Environment protection	1.53	1.26	1.24	1.28	1.06	1.16	1.24	1.53	1.58	1.51
Household and communal services	0.14	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health care	4.70	5.88	5.58	6.01	5.05	5.53	6.59	7.77	6.63	5.63
Spiritual and physical development	0.50	0.56	0.57	0.66	0.65	0.65	0.72	0.56	0.51	0.40
Education	6.73	6.76	6.96	6.77	10.75	11.11	10.90	12.78	15.04	15.46
Social security	0.47	0.51	0.50	0.34	0.33	0.35	0.37	0.31	0.30	0.31
Total expenditures	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: *calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine*

Appendix K

Table K1 Structure of expenditures on health care in the State budget, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Medical goods and equipment	0.00	0.35	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
Polyclinics and ambulatories, emergency and first aid	7.95	7.30	7.94	9.52	5.84	12.73	5.89	5.82	9.36	7.91
Hospitals and sanatorium establishments	45.44	42.19	48.82	50.43	53.16	51.41	51.91	39.07	38.17	36.48
Sanitary and preventive and anti-epidemic measures and institutions	20.98	30.02	23.28	19.76	16.79	8.30	9.63	9.69	9.33	8.52
Research and development in the field of health care	3.14	3.30	3.03	3.12	2.88	2.57	3.30	3.60	2.84	2.33
Other health activities	22.48	16.84	16.94	17.17	21.34	24.98	29.23	41.82	40.30	44.76

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table K2 Structure of expenditures on health care by local budgets, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Medical goods and equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyclinics and ambulatories, emergency and first aid	15.49	15.50	15.48	15.23	19.50	22.76	25.09	22.76	24.18	25.05
Hospitals and sanatorium establishments	77.42	76.87	77.24	76.79	71.73	69.07	67.36	69.75	66.07	65.88
Sanitary and preventive and anti-epidemic measures and institutions	0.08	0.22	0.08	0.07	0.08	0.07	0.07	0.06	0.06	0.05
Other health activities	7.00	7.41	7.19	7.91	8.70	8.10	7.48	7.43	9.69	9.02

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table K3 Structure of expenditures on health care in the consolidated budget, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Medical goods and equipment	0.00	0.07	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Polyclinics and ambulatories, emergency and first aid	13.84	13.81	14.01	14.04	16.84	20.66	21.54	20.03	21.73	22.25
Hospitals and sanatorium establishments	70.41	69.72	71.68	71.28	68.12	65.38	64.50	64.80	61.47	61.08
Sanitary and preventive and anti-epidemic measures and institutions	4.67	6.36	4.62	4.18	3.33	1.80	1.84	1.61	1.59	1.44
Research and development in the field of health care	0.69	0.68	0.59	0.65	0.56	0.54	0.61	0.58	0.47	0.38
Other health activities	10.40	9.35	9.10	9.84	11.16	11.63	11.50	12.97	14.75	14.86

Table K4 Structure of expenditures on education in the State budget, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pre-school education	0.17	0.18	0.21	0.28	0.22	0.23	0.23	0.31	0.31	0.00
General secondary education	0.83	0.77	0.91	0.87	0.65	0.71	0.68	0.62	0.57	0.69
Vocational and technical education	14.07	13.72	14.35	3.81	4.07	4.58	4.61	0.41	0.37	0.47
Higher Education	78.88	79.94	78.99	88.88	87.39	87.37	89.02	92.60	91.53	83.76
Postgraduate education	1.83	1.66	1.62	2.01	1.86	2.00	1.88	1.95	1.94	2.15
Out-of-school education	0.48	0.79	0.95	0.96	0.79	0.66	0.39	0.31	0.41	0.69
Programs of material support of educational institutions	0.86	0.77	0.98	0.93	2.02	1.61	0.62	0.87	1.01	0.99
Research and development in the field of education	1.54	1.20	1.15	1.32	2.30	2.15	2.01	2.24	2.31	2.60
Other educational institutions and activities	1.35	0.98	0.85	0.94	0.69	0.67	0.57	0.68	1.55	8.65

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table K5 Structure of expenditures on education by local budgets, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total expenditures on education	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pre-school education	18.22	19.33	0.18	19.92	20.42	20.90	21.17	21.48	21.15	20.65
General secondary education	64.03	64.08	0.77	59.30	59.26	59.00	59.12	58.90	59.54	61.53
Vocational and technical education	1.86	1.92	13.72	7.23	6.74	6.62	6.39	7.20	6.40	5.92
Higher Education	3.94	4.29	79.94	4.09	4.07	3.98	3.94	3.61	3.55	3.09
Postgraduate education	0.70	0.63	1.66	0.54	0.52	0.51	0.49	0.43	0.40	0.38
Out-of-school education	5.93	6.05	0.79	5.72	5.96	6.04	5.96	5.57	5.56	5.51
Programs of material support of educational institutions	0.00	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.03	0.01
Other educational institutions and activities	5.33	3.68	0.98	3.20	3.03	2.95	2.93	2.81	3.37	2.92

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table K6 Structure of expenditures on education in the consolidated budget, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pre-school education	11.84	12.47	12.83	13.72	14.40	14.84	15.17	15.89	15.54	15.87
General secondary education	41.68	41.39	41.15	40.85	41.81	41.91	42.38	43.49	43.68	47.45
Vocational and technical education	6.18	6.15	6.40	6.15	5.94	6.03	5.88	5.40	4.78	4.66
Higher Education	30.43	31.40	31.32	30.86	28.88	28.43	28.31	27.13	27.22	21.76
Postgraduate education	1.10	1.00	0.98	1.00	0.92	0.94	0.89	0.83	0.82	0.79
Out-of-school education	4.00	4.17	4.13	4.22	4.42	4.46	4.36	4.18	4.18	4.39
Programs of material support of educational institutions	0.31	0.28	0.36	0.29	0.60	0.47	0.18	0.23	0.29	0.23
Research and development in the field of education	0.54	0.43	0.41	0.42	0.69	0.63	0.58	0.59	0.62	0.60
Other educational institutions and activities	3.92	2.71	2.42	2.49	2.33	2.28	2.25	2.24	2.88	4.24

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table K7 Structure of expenditures on the spiritual and physical development in the State budget, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Physical culture and sport	28.68	45.47	54.44	36.77	36.07	36.67	50.33	55.10	28.45	30.20
Culture and art	42.88	33.41	26.71	39.50	37.12	41.49	31.59	27.26	40.57	50.04
Mass media	27.14	20.25	18.12	22.44	25.27	19.88	16.66	16.75	29.92	18.24
Research and development in the field of spiritual and physical development	0.84	0.74	0.53	0.91	0.77	0.76	0.78	0.45	0.55	0.35
Other activities in the field of spiritual and physical development	0.47	0.14	0.20	0.37	0.77	1.21	0.64	0.44	0.51	1.17

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Table K8 Structure of expenditures on the spiritual and physical development in local budgets, %

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Physical culture and sport	24.55	23.96	23.24	23.16	23.96	23.33	23.28	25.73	26.11	27.83
Culture and art	71.18	72.19	73.38	73.68	73.37	73.96	73.82	71.71	71.55	69.80
Mass media	4.27	3.85	3.33	3.15	2.66	2.70	2.90	2.56	2.34	2.37
Other activities in the field of spiritual and physical development	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: calculated by author based on reports from the State treasury service of Ukraine and data from the State service of statistics of Ukraine

Appendix L

Table L1 Allocation of Ukraine's consolidated budget revenues
between the state and local budgets in 1992 − 2017, %

	State budget	Local budgets
1992	52.44	47.56
1993	52.13	47.87
1994	69.54	34.46
1995	58.23	41.77
1996	63.76	36.24
1997	56.82	43.18
1998	54.31	45.69
1999	60.00	40.00
2000	70.86	29.14
2001	67.71	32.29
2002	68.64	31.36
2003	70.01	29.99
2004	75.11	24.89
2005	77.41	22.59
2006	76.80	23.20
2007	73.47	26.53
2008	75.20	24.80
2009	73.98	26.02
2010	74.40	25.60
2011	78.26	21.74
2012	77.37	22.63
2013	76.25	23.75
2014	77.83	22.17
2015	81.52	18.48
2016	78.20	21.80
2017	77.43	22.57

Table L2 Allocation of Ukraine's consolidated tax revenues
between the state and local budgets in 1998 − 2017, %

	State budget	Local budgets
1998	47.20	52.80
1999	56.38	43.62
2000	62.49	37.51
2001	59.84	40.16
2002	63.66	36.34
2003	65.72	34.28
2004	71.09	28.91
2005	75.97	24.03
2006	75.42	24.58
2007	72.35	27.65
2008	73.90	26.10
2009	71.55	28.45
2010	71.20	28.80
2011	78.16	21.84
2012	76.18	23.82
2013	74.24	25.76
2014	76.24	23.76
2015	80.65	19.35
2016	77.43	22.57
2017	75.73	24.27

Appendix M

Table M1 Allocation of Ukraine's consolidated budget non-tax revenues
between the state and local budgets in 1998 — 2017, %

	State budget	Local budgets
1998	80.08	19.92
1999	83.78	16.22
2000	85.59	14.41
2001	86.83	13.17
2002	85.71	14.29
2003	86.76	13.24
2004	90.98	9.02
2005	88.79	11.21
2006	88.40	11.60
2007	86.80	13.20
2008	87.44	12.56
2009	86.82	13.18
2010	88.21	11.79
2011	81.83	18.17
2012	84.43	15.57
2013	85.75	14.25
2014	84.86	15.14
2015	85.62	14.38
2016	82.65	17.35
2017	83.19	16.81

Table M2 Allocation of revenues from capital transactions
in the Ukraine's consolidated budget between the state and local
budgets in 1999 — 2017, %

	State budget	Local budgets
1999	96.68	3.32
2000	50.00	50.00
2001	70.00	30.00
2002	43.64	56.36
2003	42.40	57.60
2004	34.02	65.98
2005	25.90	74.10
2006	18.75	81.25
2007	28.13	71.88
2008	31.34	68.66
2009	29.73	70.27
2010	19.35	80.65
2011	21.74	78.26
2012	40.00	60.00
2013	18.75	81.25
2014	45.00	55.00
2015	11.11	88.89
2016	12.01	87.99
2017	13.28	86.72

Table M3 Allocation of revenues to the Ukraine's consolidated
budget target funds between the state and local budgets in 1998 — 2017, %

	State budget	Local budgets
1998	73.93	26.07
1999	58.25	41.75
2000	84.90	15.10
2001	39.09	60.91
2002	38.00	62.00
2003	29.32	70.68
2004	28.59	71.41
2005	18.21	81.79
2006	33.33	66.67
2007	25.00	75.00
2008	30.30	69.70
2009	27.27	72.73
2010	42.86	57.14
2011	20.00	80.00
2012	37.50	62.50
2013	28.57	71.43
2014	40.00	60.00
2015	35.71	64.29
2016	36.75	63.25
2017	97.97	2.03

Table M4 Allocation of expenditures in the Ukraine's consolidated budget
between the state and local budgets in 1991 — 2017, %

	State budget	Local budgets
1991	68.63	31.37
1992	62.17	37.83
1993	60.59	39.41
1994	69.70	30.30
1995	60.72	39.28
1996	65.59	34.41
1997	60.10	39.90
1998	51.86	48.14
1999	54.58	45.42
2000	64.71	35.29
2001	59.74	40.26
2002	58.90	41.10
2003	58.57	41.43
2004	62.16	37.84
2005	63.32	36.68
2006	58.77	41.23
2007	57.60	42.40
2008	59.33	40.67
2009	59.00	41.00
2010	59.89	40.11
2011	57.71	42.29
2012	55.42	44.58
2013	56.89	43.11
2014	57.27	42.73
2015	59.27	40.73
2016	58.56	41.44
2017	53.63	46.37

Appendix N

Table N1 Dynamics of the main types of tax revenues in the Ukraine's consolidated budget over 2013 − 2017

Years	2013	2014	2015	2016	2017
Volume of basic types of tax revenues to the Ukraine's consolidated budget, UAH billion					
Taxes on income, taxes on profit, taxes on the increased market value	127.14	115.40	139.04	199.01	259.08
Rent payment	28.86	33.60	41.96	46.61	51.13
Internal taxes on goods and services	164.94	184.12	249.25	337.26	435.43
Taxes on international trade and external transactions	13.34	12.61	40.30	20.37	24.54
Local taxes	7.32	8.06	27.04	42.26	53.28
Other taxes and fees	12.36	33.38	10.05	5.28	4.69
Share of main types of tax revenues in the Ukraine's consolidated budget in the overall structure of tax revenues, %					
Taxes on income, taxes on profit, taxes on the increased market value	35.92	29.81	27.39	30.58	31.28
Rent payment	8.15	8.68	8.27	7.16	6.17
Internal taxes on goods and services	46.60	47.56	49.10	51.82	52.58
Taxes on international trade and external transactions	3.77	3.26	7.94	3.13	2.96
Local taxes	2.07	2.08	5.33	6.49	6.43
Other taxes and fees	3.49	8.62	1.98	0.81	0.57
Share of main types of tax revenues in the Ukraine's consolidated budget in the overall structure of budget revenues, %					
Taxes on income, taxes on profit, taxes on the increased market value	28.71	25.30	21.32	25.42	25.48
Rent payment	6.52	7.37	6.43	5.95	5.03
Internal taxes on goods and services	37.25	40.37	38.23	43.08	42.82
Taxes on international trade and external transactions	3.01	2.76	6.18	2.60	2.41
Local taxes	1.65	1.77	4.15	5.40	5.24
Other taxes and fees	2.79	7.32	1.54	0.67	0.46

Source: *calculated by author based on reports from the State treasury service of Ukraine over respective years*

Appendix O

Table O1 Specific weight of capital investments
in the Ukrainian economy in the gross domestic product based on sources
of financing over 2010-2017, %

	2010	2011	2012	2013	2014	2015	2016	2017	2010–2017
Funds of the state budget	1.08	1.53	1.25	0.44	0.20	0.48	0.45	0.63	0.76
Funds of local budgets	0.60	0.68	0.66	0.48	0.43	1.00	1.32	1.70	0.86
Own funds of enterprises and organizations	11.73	12.96	13.14	11.81	11.29	12.88	12.21	12.68	12.34
Bank credits and other loans	2.41	3.22	3.05	2.47	1.59	1.45	1.33	1.21	2.09
Funds of foreign investors	0.39	0.44	0.38	0.30	0.41	0.57	0.48	0.25	0.40
Funds from individuals to housing construction	1.99	1.55	1.73	1.71	1.61	2.23	1.47	1.34	1.70
Other sources of funding	0.82	0.82	0.77	0.57	0.49	0.47	0.37	0.53	0.61
Total	19.02	21.20	20.97	17.79	16.03	19.07	17.63	18.34	18.76

Source: calculated by author based on data from the National Bank of Ukraine and the State service of statistics of Ukraine

Appendix P

Table P1 Specific weight and structure of capital expenditures of local budgets in the gross domestic product in 2008 − 2017, %

Capital expenditures	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Capital transfers to enterprises	0.7	0.3	0.2	0.3	0.3	0.3	0.2	0.4	0.6	1.0
Overhaul	0.9	0.4	0.5	0.5	0.4	0.4	0.4	0.7	0.9	0.9
Items and equipment for long-term use	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.3
Capital construction	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.2
Other	0.5	0.1	0.1	—	—	—	—	—	—	—
Total	2.7	1.3	1.2	1.3	1.2	1.0	0.9	1.6	2.2	2.5

Source: calculated by author based on data from the State treasury service of Ukraine and the State service of statistics of Ukraine

Table P2 Specific weight and structure of capital expenditures of the state budget in the gross domestic product in 2008 − 2017, %

Capital expenditures	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Capital transfers to enterprises	0.6	1.1	1.3	1.0	0.5	0.1	0.2	0.2	0.3	0.6
Overhaul	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.1
Items and equipment for long-term use	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.1
Capital construction	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.1
Land and intangible assets	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
State reserves	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Capital inter-budgetary transfers	0.0	0.2	0.5	0.3	0.2	0.1	0.1	0.3	—	0.0
Total	1.1	1.9	2.4	2.1	1.2	0.5	0.9	1.2	0.9	1.1

Source: calculated by author based on data from the State treasury service of Ukraine and the State service of statistics of Ukraine