

FISCAL MECHANISM FOR COUNTERING NEGATIVE ENVIRONMENTAL EXTERNALITIES

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Abstract. The article analyzes approaches to defining the fiscal mechanism. The authors presented its essence from the perspective of the concept of sustainable development, and also revealed its role in counteracting negative environmental externalities and adapting to climate change.

It is determined that the state's use of the fiscal mechanism to ensure the conditions for sustainable development of society is carried out using its components, each of which is aimed at achieving a certain goal and objectives of forming an eco-socio-economic system through fiscal relations. In the structure of the fiscal mechanism as a hierarchical system, such relatively independent components (subsystems of the second order) are distinguished as the mechanism for accumulating budget revenues (in combination with tax, credit (loan), domain-regalia mechanisms), the expenditure-budget mechanism (as a set of the budget expenditure mechanism and the mechanism for repaying state and local debts).

The theoretical analysis of issues of countering negative environmental externalities allowed us to classify specific instruments and levers of the fiscal mechanism into the following groups: budget expenditures of different levels intended to counter negative environmental externalities and adapt to climate change, namely, state and municipal loans and investments in green economy facilities, green economy subsidies, direct financing of environmental protection measures; specific tax instruments of environmental focus (energy and fuel taxes; transport taxes; taxes on emissions that cause global changes; payments for pollution, waste disposal and recycling, for the use of natural resources and subsoil, for noise impact, etc.); non-tax revenue instruments (revenues from auctions of emission permits); loan instruments of environmental focus (green bonds, sustainable development bonds, climate bonds issued by state and local authorities); quasi-fiscal instruments (international and intergovernmental grants and assistance (including within the framework of international climate initiatives), national climate initiatives).

Keywords: sustainable development, fiscal mechanism, budget expenditures, tax instruments, non-tax revenue instruments, loan instruments, quasi-fiscal instruments.

JEL Classification: G28, H23, Q01

1. INTRODUCTION

The logic of social development has led to the fact that a number of issues have traditionally been resolved through state intervention. The main ones are the distribution of income between social groups and their individual members, meeting the needs for certain goods and services (in particular, social and other non-market goods), countering crisis phenomena and natural disasters. Even the general formulations above make it possible to notice in their composition issues that also concern ensuring sustainable development (in general and the environmental component in particular). The state as a social union over the last centuries of human history has developed a fairly adequate methodology for solving individual distribution problems, issues of providing certain groups with goods and access to

their consumption, protecting individuals (including social), creating systems for protecting the human environment, countering natural disasters, regulating the conditions for the functioning of the economic system and preventing various economic crises, etc. Since the end of the 20th century, it is precisely thanks to the state's creation of certain conditions for the functioning of market structures that examples of cooperation between the public union and the private sector have appeared in some specified areas.

But both state intervention and the solution of problems in cooperation between the state and business structures require the presence of opportunities to influence phenomena, processes and individual subjects of certain types of activity. The state receives these opportunities predominantly thanks to the fiscal mechanism.

2. THEORETICAL FRAMEWORK

The fiscal mechanism is actually a derivative of the financial one, its lower-level subsystem.

Finance theorists give it various definitions. In the bosom of Ukrainian financial science, there is a fairly large number of works in which we find an analysis of this definition (including those of famous modern Ukrainian scientists V.B. Tropina, V.V. Zimovets, O.Yu. Sydorovych, etc.). Systematization of their views allows us to distinguish the following approaches:

- functional (fiscal mechanism - a system of forms and methods for implementing the functions inherent in state finances in order to ensure the economic policy of the state (Maslichenko, 2002, pp. 7-8));

- redistributive (fiscal mechanism - a set of tax and expenditure forms, means and instruments for the formation and use of centralized monetary funds in order to finance the activities of the state, ensure its policy (Vatahovych, 2019, p. 67); withdrawal and redistribution of income by the state within the framework of fiscal policy (Zymovets, 2010, p. 101));

- regulatory (fiscal mechanism - the application of multiplicative effects of budget expenditures and taxes for the purpose of economic growth, as well as the organization of relations of formation and use of budget funds (Banton & Taranhul, 2010, p. 32); a system of fiscal means, forms and methods of state influence on the formation, distribution and use of financial resources in order to ensure the socio-economic development of the country, achieving a balance of state and private interests (Rudenko, 2023, p. 76; Rudenko et al., 2022a, p. 88; Rudenko et al., 2022b, p. 674; Rudenko et al., 2021, p. 85));

- managerial (fiscal mechanism - a system of economic, organizational and legal forms and methods of managing the formation, distribution and use of centralized funds of financial resources to perform state functions (Tropina, 2008, p. 26); "a set of organizational and legal norms, methods and forms of state management of mechanisms for mobilizing income, it's distribution and redistribution in order to achieve economic, social and environmental goals of state formation" (Sydorovych, 2017, p. 18));

- funding (fiscal mechanism - a system of interconnected instruments that serve to determine the optimal parameters of budget formation at different levels and maximize the effects of using the financial resources concentrated in them to ensure the socio-economic development of society (Melnyk, et al., 2017, p. 17); a set of instruments and levers for mobilizing state funds and forming its financial expenditures (Miedviedkova, 2011, p. 8); mobilization of financial resources from tax payments, as well as their distribution and effective use (Tymoshenko, 2017, p. 204); a set of methods and levers for using financial resources (Tkachiv, 2015, p. 65));

- organizational (fiscal mechanism - a system of goals and directions of the development of budget and tax relations and methods for their implementation (Aleskerova, 2016, p. 105; Fedoryshena & Zhmurko, 2016, p. 469); a set of fiscal and legal measures for the financial support of the activities of the state and communities, indirect financing for regulating the development of various sectors of the economy (Fursa & Synytsia, 2016, p. 34; Dehtiarova, 2017, pp. 184-185)).

3. RESEARCH OBJECTIVE, METHODOLOGY AND DATA

Having grouped theoretical approaches to the definition of the fiscal mechanism, we set the task of presenting its essence from the perspective of the concept of sustainable development, as well as revealing its role in counteracting negative environmental externalities and adapting to climate change. For this, a set of research methods was used, in particular: theoretical analysis, observation, generalization, analogies, extrapolation. The specified methods are used to systematize existing theoretical developments and observational data of the latest social phenomena and processes.

4. RESULTS AND DISCUSSION

Taking into account the above, as well as the idea that in the process of ensuring and regulating the sustainable development of society by the state with the help of the treasury, institutional influence is exerted through fiscal organizations (institutions) and rules using established, constantly operating functional relationships, it is possible to offer a refined definition for the conditions of sustainable development: the fiscal mechanism for ensuring the sustainable development of society is a system of fiscal methods, forms, tools and levers, with the help of which centralized funds of financial resources are formed, distributed and used, public and private interests are balanced and sustainable development of society is ensured on the basis of a triune eco-socio-economic system.

The use of the fiscal mechanism by the state to ensure the conditions for sustainable development of society is carried out using its components, each of which is aimed at achieving certain goals and objectives of forming the eco-socio-economic system through fiscal relations. Since any mechanism, based on its characteristic features, is actually a certain system, it itself is a component of higher-order systems and at the same time includes mechanisms (subsystems) of lower order. This is a manifestation of its hierarchy and structure. In our opinion, in the structure of the fiscal mechanism for ensuring sustainable development, such relatively independent components (subsystems of the second order) as the mechanism for accumulating budget revenues (in combination with tax, credit (loan), domain-regalia mechanisms), the expenditure-budget mechanism (as a set of the budget expenditure mechanism and the mechanism for repaying state and local debts) should be distinguished.

It should also be noted that some authors, as part of the fiscal mechanism, separately distinguish the budget balancing mechanism, which includes the state and local credit mechanism. However, balancing the budget includes a technical procedure for determining the deficit, as well as the accumulation of revenues on a credit (loan) basis and debt repayment expenses, the separation of which from the composition of the two above-mentioned mechanisms (accumulation of budget revenues and expenditure-budget) is not entirely clear. In our opinion, this is a purely mechanical fragmentation without sufficient substantive justification.

The mechanism of accumulation of budget revenues is a set of methods, forms, instruments and levers, with the help of which the income of centralized funds of financial resources is formed. Its component - the tax mechanism - is, accordingly, a set of tax methods, forms, instruments, levers, as well as specific fiscal and administrative measures and procedures aimed at ensuring the collection of taxes and fees to the budget. According to V.H. Demyanishyn, its definition can be further detailed as "a set of tax methods, levers, instruments, incentives and sanctions, a set of measures and the sequence of their execution by taxpayers and collection agencies regarding the collection and payment of taxes and fees to budgets of all levels or to state trust funds" (Demianyshyn, 2014, p. 20). The loan mechanism is a systematized group of methods, forms, instruments and levers for attracting funds to budget revenues on a credit basis. By the domain-regalia mechanism we mean the mechanism for accumulating non-tax revenues of the budget. After all, revenues from property (including rental) and entrepreneurial activities of the state, from state capital, from the sale of permits and licenses, and payments for individual state services are nothing more than modernized types of domain and fiscal regalia ("regalia

minora” or “regalia utilia fisci” (Latin)). If we ignore the change from monarchical sole rule to the newest forms of state government, the methods of obtaining income from state lands, forests, industries, and production (including controlled ones, not just appropriated ones) have not changed significantly. Thus, the domain-regalia mechanism is a set of methods, forms, tools, and levers for accumulating non-tax revenues for the budget.

The expenditure-budget mechanism is a system of methods, forms, instruments and levers for implementing total budget expenditures at the expense of previously accumulated revenues. Its lower-level subsystem - the budget expenditure mechanism - is a set of methods, forms, instruments and levers for the implementation of budget programs and budget measures. Another subsystem - the mechanism for repaying state and local debts - is an ordered group of methods, forms, instruments and levers for implementing expenses for repaying the principal amounts of debts. Their separate consideration is due to the fact that the costs of servicing debts (interest, commissions and other payments provided for in the terms of borrowing) are a component of budget expenditures (without repaying of the debt), and those for repaying the principal amounts of debt (actually borrowed amounts from creditors) are separated. That is, total budget expenditures are the sum of budget expenditures (without debt repaying) and funds directed to repaying the principal amounts of debts.

Each of the above mechanisms of the lower order focuses on certain areas of accumulation of revenues or expenditure of centralized funds, differing from others in individual methods, forms, instruments or levers of formation, distribution and use of financial resources. At the same time, subordination to a common goal generates a common focus on ensuring and regulating sustainable development through the implementation of the processes of formation, distribution and use of centralized funds of financial resources.

When characterizing the structure of the fiscal mechanism for ensuring sustainable development, attention should be paid to the composition of its methods, forms, instruments and levers.

In general, the interpretation and systematization of the methods of the fiscal mechanism are infrequent and are debatable issues for domestic financial theory. In particular, O. Yu. Sydorovych sees planning, forecasting, regulation, control, accounting and analysis as part of them. In general, one can agree with this approach, since from a semantic point of view, “method” can mean: a way of knowing phenomena, an approach to studying life, a system of techniques (or technique) in a certain field of activity, a method of action. Of all the above, only the last meaning can be used in application to the fiscal mechanism. And although the named components are also partly management functions, it is precisely because of this that they can be considered through the prism of actions.

The forms of the fiscal mechanism also do not have an unambiguous coverage. Since “form” is mainly used to denote the external outline of something, here it is worth agreeing with V. V. Rudenko, who suggests that the forms of the fiscal mechanism should be understood as external (organizational) manifestations of the processes (Rudenko, 2023, p. 108) of formation, distribution and use of centralized funds of financial resources and processes of influencing society, the economy, and in the case of sustainable development – also the ecology. In this context, the forms of the fiscal mechanism for ensuring sustainable development should include taxation, accumulation of domain-regalia revenues (non-tax revenues), budget and inter-budgetary transfers, estimated financing, budget investment, budget reservation, budget financing, budget lending, state and local borrowing and guarantees.

The instruments of the fiscal mechanism should also be considered primarily through the prism of the general meaning of the word “instrument”. As a rule, this is a certain tool for making something, working on something or a way to achieve something. In particular, they can be seen as specific tools for determining the optimal parameters of the formation and maximization of the efficiency of the allocation and use of budgetary resources (Melnyk et al., 2017, p. 17). V. V. Rudenko defines them as means of forming, distributing and using financial resources of budgets, as well as influencing certain processes (Rudenko, 2023, p. 112). Considering their composition, L. Demydenko distinguishes taxes and fees, state loans, budget financing, state subsidies, subventions, grants, state aid, state investments

(Demydenko, 2012, p. 37). Sometimes tax and budget groups of components are distinguished (respectively: 1 - types of taxes and fees, subjects and objects of taxation, tax rates, tax benefits, special tax regimes, tax sanctions, tax consultations, tax control, automation of taxation processes; 2 - subjects of the budget process, budget plans, budget norms and standards, budget revenues and expenditures, budget sanctions, budget control, inter-budgetary balancing, automation of the budget process) (Melnyk et al., 2017, pp. 17-18). M. I. Vatahovykh distinguishes in this sense budget financing (state participation in capital and public procurement), budget grants and subsidies, state preferential lending and loan guarantees, reduced tax rates and manipulation of rates, tax benefits and preferential taxation subsystems, tax holidays, fiscal and administrative rules and sanctions for their violation (Vatahovykh, 2019, pp. 67-68). V. V. Rudenko – types of income and expenditure according to budget classification (revenue and expenditure instruments), budget deficit and surplus (balancing instruments), state and local borrowing, guarantees, loans (state credit instruments) (Rudenko, 2023, p. 112).

We agree with V. V. Rudenko's opinion about the contradiction in attributing processes or their subjects to the instruments of the fiscal mechanism (i.e., to tools) (Rudenko, 2023, p. 112). Although there is a certain justification for such approaches, it seems to require additional argumentation. Along with the above, we cannot agree with the thesis of the aforementioned author regarding the isolation of balancing instruments. We consider the determination of budget deficit and surplus to be a technical procedure, which essentially involves the use of instruments for accumulating funds to cover the deficit (in particular, income or loan) and instruments for making expenses (to repay debts or use surplus funds). Given the above, we include the following as instruments of the fiscal mechanism for ensuring sustainable development:

- types of income from centralized funds of financial resources;
- types of expenditures from centralized funds of financial resources;
- methods and instruments of state and local borrowing;
- methods and instruments of repaying state and local debts.

In the issue of the characteristics of the levers of the fiscal mechanism, financial theory has perhaps the largest number of contradictory conclusions, the beginnings of which are laid in the interpretation of financial levers. One group of authors identifies them with instruments, another - with forms of the financial mechanism, a third group, giving vague interpretations, considers them something that puts instruments into action, or is a method of action within the framework of financial methods, a fourth - lists the components without definition. Since the "lever" is typically understood as the simplest tool that allows balancing a greater force by applying a smaller one, it can indeed be interpreted as an elementary part of the tool that puts everything else into action. Therefore, we propose to consider the elements of its instruments as the levers of the fiscal mechanism for ensuring sustainable development. They are classified in terms of a specific instrument. So, in general, this is:

- rates and amounts of individual types of income;
- amounts of privileges for fulfilling obligations to centralized funds of financial resources;
- the size of sanctions for failure to fulfill obligations to centralized funds of financial resources or for violation of the procedure for using funds;
- the scale of revenue bases to which certain rates and amounts apply;
- budget norms, limits and reserves;
- the volume of public procurement;
- network indicators of budget institutions and the number of administrators and recipients of budget funds;
- indicators of budget programs (including indicators of their effectiveness);
- the procedure for budget financing;
- types and conditions for providing budget and inter-budgetary transfers;
- volumes of borrowings (state and local), guarantees (state and local);
- volumes of state and local debts;

- volumes of budget loans;
- the size of interest rates on borrowings and loans and other conditions for borrowing and lending.

From the above multifaceted structural characteristics, it follows that the fiscal mechanism is a fairly universal system that can be applied by the state in many areas of implementing its policy and functions. Ensuring and regulating sustainable development of society is no exception. But in this case, all subsystems and structural components of the fiscal mechanism should be oriented towards the simultaneous balancing of the three components of sustainable development: economic, social and environmental. If the fiscal mechanism of socio-economic development has been studied for a long period, then the specifics of its application to counteract negative environmental externalities and adapt to climate change require systematization of existing materials and additional theoretical explorations. Existing scientific developments on the application of the fiscal mechanism in matters of ensuring and regulating socio-economic development create an important theoretical basis for solving problems under many of the goals of sustainable development. However, they are not fully combined with the environmental component and often have a priority orientation either to accelerating economic growth or to solving current and prospective social problems. Counteracting environmental externalities and adapting to climate change were considered either separately or without any justification for the use of special fiscal tools.

In our opinion, it is important to first determine the content of the basic concepts and outline the possibilities of applying the tools of the fiscal mechanism in the specified direction, and, accordingly, the field of further scientific exploration.

Externalities are understood as external effects. Their first characteristics in economic theory appeared a little over 100 years ago - in the 1920s - and were associated with welfare economics and the name of Arthur C. Pigou. Modern economic science interprets externalities as benefits or costs, losses associated with the consumption and production of a good (service), received or incurred by a third party, other than the buyer or seller (McConnell et al., 2021). That is, these are benefits or costs/losses of a third party that did not directly participate in the transaction, received them free of charge, without equivalent, indirectly, involuntarily and unconsciously. This third party can be an individual, a group of individuals, a business entity, society as a whole. From the above it follows that externalities can be positive (in the sense of benefits) and negative (in the sense of costs or losses).

Damage caused to the environment as a result of human activity (including, first of all, economic) are negative environmental externalities. They are different in scale and consequences of impact. Some arise as temporary and can be eliminated over a certain assessable period of time, others spread to subsequent generations; some are localized territorially, others concern a region, a country, or are cross-border and even planetary; some affect the development of one or more industries, others - general economy; some affect one or more communities (society), others - have an impact on the population of the entire country or even the planet. The methods of counteracting them, including fiscal ones, depend on such an effect of coverage or scale. The latter is important given that fiscal policy and the fiscal mechanism are usually limited by national borders, and therefore their coordinated application at the global level is a difficult task. Attempts to create the first partially supranational fiscal structures took place only within the EU and only in certain areas.

Thus, negative environmental externalities can be classified as follows:

- by time: temporary and generational;
- by territory: localized (at the level of one or several communities), regional, national, cross-border and planetary;
- by the scale of the subsequent impact on society: local, nationwide and global;
- by the scale of the subsequent impact on the economy: industry, sectoral and general economic.

Counteraction to negative environmental externalities, according to O. M. Sushchenko, can be carried out using administrative, fiscal and market instruments and levers. At the same time, he includes technical and procedural standards, voluntary restrictions as administrative ones, green and climate

bonds, sustainable development bonds, green certificates, loans, emission allowance trading as market ones, and fiscal ones as environmental taxes, tax breaks, subsidies, auctions for the primary sale of emission allowances, grants, budget expenditures and programs. (Sushchenko, 2021, p. 88, 107)

Such a list of levers was formed by the aforementioned author based on the results of an analysis of the existing experience in implementing the relevant policy. It can be immediately noted that climate and green bonds, as well as sustainable development bonds, can be issued by banks, companies, state and local authorities. Depending on the legislation of a particular state, in the case of the issuance of these bonds by state and local authorities, the funds raised can be considered as loan proceeds to the budget of the appropriate level. In this case, this instrument should be considered as fiscal. When issued by banks and companies, it looks like a market instrument. However, if additional guarantees are provided by the state or local authorities (which is theoretically possible), it becomes a hybrid instrument.

Administrative levers are usually used by restricting certain types of activity or production or standardizing them through the application of certain increased environmental requirements. Moreover, to achieve sustainable development goals, these requirements are gradually becoming stricter. However, the disadvantage of administrative influence is the cumbersomeness of the control system, which entails additional financial costs and generates corruption risks. This makes other levers, primarily financial, relevant. Through financing green economy projects or social activities within the framework of implementing sustainable development goals, it is possible to achieve multiplier effects, which makes financial instruments even more attractive.

The European Union countries use a diversified system of financing the green economy, using a variety of instruments. At the private sector level, these include resale of emission permits by manufacturing companies, investment through innovative and specialized funds, crowdfunding on a voluntary basis, loans from investment and commercial banks, bond loans (through the capital market). The public sector is represented in this case at each level of government and self-government through budget expenditures and taxation, and at the EU level - through the supranational community budget and international financial institutions (European Bank for Reconstruction and Development, European Investment Bank). Thus, municipalities, regional and national governments finance green projects from the budgets of the corresponding level at the expense of revenues, primarily from special taxes and excise duties. Although financing from general taxes and fees can also be observed more and more often.

Budget expenditures of various levels, intended to counteract negative environmental externalities, are state and municipal loans and investments in green economy facilities, green economy subsidies, direct financing of environmental protection measures. However, not only financing is important here, but also regulatory fiscal influence, aimed both at accumulating the funds necessary for financing and at stimulating alternative types of production (especially renewable energy) and limiting (due to additional fiscal burden) the inefficient use of exhaustible resources and polluting producers. For this purpose, environmental (on emissions, waste, etc.), transport, energy, fuel taxes are actively used and modified. One of their common forms is specific excise taxes. The fiscal history of the 20th and early 21st centuries has produced a number of tax instruments and levers of environmental orientation, which can be grouped into 8 groups according to the common main characteristics of the objects of taxation:

- energy taxes (excise duties on electricity and heat);
- fuel taxes (excise duties on motor fuel and oils, nuclear fuel);
- transport taxes (excise duties on car purchases, taxes on owners, mileage taxes, taxes on air transportation);
- pollution charges (for emissions of substances into the atmosphere, water basins, soils);
- charges for waste disposal (dumping) and recycling;
- taxes on emissions that cause global changes (destruction of the ozone layer);
- charges for noise pollution;
- charges for the use of natural resources and subsoil.

The detailed list of known taxes is extremely capacious and varies according to the levels of national tax systems of states.

However, environmental taxes have a very diverse and often unpredictable effect on both payers and bearers of their burden. In this regard, they are characterized by both positive and negative aspects. Their main disadvantage is the transfer to the end consumer of goods and services. That is, the burden of these taxes is borne not so much by polluting producers as by the population. This is natural for excise taxes, which are price supplements. But direct taxes of this subgroup are also transferred, entering into the cost of the product (service), which in turn is a component of the price. They affect direct polluters or resource users only through refraction in solvent demand. Thus, the effectiveness of this impact is almost impossible to predict. This disadvantage in measuring the social effect is compensated if the revenues from these taxes are 100% targeted at financing environmental costs. But their regulatory effect in terms of limiting inefficient consumption of natural resources and environmental pollution cannot be accurately measured.

In addition to the above, O. M. Sushchenko cites several more disadvantages characteristic of environmental taxation:

- impact on the state of equality of income distribution in society;
- negative impact on the growth rate of production;
- lack of guarantees of full use of revenues for their intended purpose in conditions of corruption, which to one degree or another takes place in every country;
- relatively small share in budget revenues and GDP, which calls into question the effectiveness of regulatory influence (Sushchenko, 2021, p. 95).

Along with the above, there are also positive consequences of the functioning of environmental taxes. Among them, the following can be distinguished:

- since the payer is a specific polluter or user of resources, these taxes still partially play the role of an individualized compensator (Hagendorff et al., 2014);
- since for the payer any tax is the withdrawal of part of the financial resources at his disposal, these payments stimulate him to reduce emissions (Gonta & Sushchenko, 2015, pp. 10-12);
- since these taxes contain certain levers of influence (in particular, exemptions, discounts, reduced rates for certain cases, etc.), they are able to motivate the efficiency of resource use and the related innovative activities, as well as investment in scientific research and development work (Mehling et al., 2019).

In our opinion, special attention should be paid to the instruments for combating negative environmental externalities and adapting to climate change, which cannot be confidently attributed to any of the above groups. We mean international and intergovernmental grants provided by more developed donor countries to less developed recipient countries. These are revenues in the form of financial resources for targeted purposes or technical assistance. The corresponding funds can be provided both directly for the implementation of certain projects and activities to public structures, and be credited to the budgets of various levels of recipient countries in order to finance state and municipal programs of an environmental nature. Donor states (or international donors) can accumulate the funds needed to provide grants in different ways - using both fiscal and market instruments. But starting from the stage of formation of the necessary resources, and especially at the stages of providing and using grants and assistance, their transformation into public finance funds occurs. Since the methods of accumulation and ways of using these funds and technical assistance can be fiscal, market, and hybrid, but are carried out at the request of governments in the interests of implementing the relevant policy and after all, at least partially acquire a fiscal nature, in our opinion, the above-mentioned instruments for combating negative environmental externalities and adapting to climate change can be called quasi-fiscal.

In this context, over the past two decades, developed countries have launched and spread the so-called International Climate Initiatives and National Climate Initiatives. One of the first was the

International Climate Initiative of the German federal government. The Federal Ministry for the Environment, Nature Conservation, Construction and Nuclear Safety established a special institution, the tasks of which, within the framework of the International Climate Initiative, included financing research projects (especially in the field of renewable energy), measures to combat climate change, reducing greenhouse gas emissions and promoting the conservation of their sinks, and preserving the diversity of wildlife. The sources of financing at different times were both funds from the auction trade of emission permits and the budget of the ministry. Grants and assistance were and are provided to a number of countries, including Ukraine.

Germany also has extensive experience in implementing the National Climate Initiative, which is aimed at supporting municipal, industrial and individual projects within the country to purchase hybrid transport for cities, industrial air conditioning, installation of mini-cogeneration plants, alternative energy sources for educational institutions, etc. As part of this initiative, along with the allocation of budget funds and subsidies, the government is promoting the attraction of private investment, which also allows us to speak of the quasi-fiscal nature of the tools used.

5. CONCLUSIONS

So, summing up the above, we note that the fiscal mechanism for ensuring sustainable development in matters of countering negative environmental externalities, along with others, includes specific instruments and levers, including:

- budget expenditures of various levels intended to counter negative environmental externalities and adapt to climate change, namely state and municipal loans and investments in green economy facilities, subsidizing the green economy, direct financing of environmental protection measures;
- specific tax instruments of an environmental nature (energy and fuel taxes; transport taxes; taxes on emissions that cause global changes; payments for pollution, waste disposal and recycling, for the use of natural resources and subsoil, for noise impact, etc.);
- non-tax revenue instruments (income from auctions of emission permits);
- ecological debt instruments (green bonds, sustainable development bonds, climate bonds issued by state and local authorities);
- quasi-fiscal instruments (international and intergovernmental grants and assistance (including within the framework of international climate initiatives), national climate initiatives).

In these issues, this mechanism is used along with market and administrative ones, strengthening their effect, eliminating certain shortcomings, stimulating private initiatives and investments.

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Мельник В. М., Гребеножко В. О. Фіскальний механізм протидії негативним екологічним екстерналіям. *Журнал Прикарпатського університету імені Василя Стефаника*, **11** (4) (2024), 111-121.

У статті аналізуються підходи до визначення фіскального механізму. Розкрито його сутність під кутом зору концепції сталого розвитку, а також окреслено його роль у протидії негативним екологічним екстерналіям та адаптації до кліматичних змін.

Визначено, що застосування державою фіскального механізму для забезпечення умов сталого розвитку суспільства здійснюється за допомогою його складових, кожна з яких має спрямування на досягнення певної мети і завдань формування еко-соціо-економічного ладу каналами фіскальних відносин. У структурі фіскального механізму як ієрархічної системи виокремлено такі відносно самостійні складові (підсистеми другого порядку), як механізм акумуляції бюджетних надходжень (у поєднанні податкового, кредитного (позичкового), доменно-регалійного механізмів), витратно-бюджетний механізм (як сукупність механізму бюджетних видатків і механізму погашення державного та місцевих боргів).

Проведений теоретичний аналіз питань протидії негативним екологічним екстерналіям дозволив здійснити класифікацію специфічних інструментів та важелів фіскального механізму на такі групи: видатки бюджетів різних рівнів, призначені для протидії негативним екологічним екстерналіям та адаптації до кліматичних змін, а саме державні і муніципальні кредити та інвестиції у об'єкти зеленої економіки, субсидювання зеленої економіки, пряме фінансування природоохоронних заходів; специфічні податкові інструменти екологічного спрямування (енергетичні і паливні податки; транспортні податки; податки на викиди, що спричиняють глобальні зміни; платежі за забруднення, розміщення і переробку відходів, за використання природних ресурсів і надр, за шумовий вплив, тощо); неподаткові дохідні інструменти (доходи від аукціонів з продажу дозволів на викиди); позичкові інструменти екологічного спрямування (зелені облігації, облігації сталого розвитку, кліматичні облігації, емітовані державними та місцевими органами влади); квазіфіскальні інструменти (міжнародні і міжурядові гранти і допомоги (у тому числі в рамках міжнародних кліматичних ініціатив), національні кліматичні ініціативи).

Ключові слова: сталий розвиток, фіскальний механізм, видатки бюджетів, податкові інструменти, неподаткові дохідні інструменти, позичкові інструменти, квазіфіскальні інструменти.