

Economic, environmental and social dimensions of green transformation in Ukraine: aspects of management in conditions of war and post-war reconstruction

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ABSTRACT

Purpose. The purpose of the article is to analyze and assess the effectiveness of existing financial and economic instruments of the green transformation in Ukraine's public administration, and to provide a rationale for improving specific areas in the post-war reconstruction context.

Methods. The research is based on a systemic and comparative analysis of regulatory frameworks, policy documents, and statistical data related to Ukraine's green transformation. Qualitative and analytical methods were used to identify barriers to effective policy implementation, while comparative assessment allowed evaluation of Ukraine's mechanisms in the context of EU environmental and fiscal practices. The study also incorporates expert assessments and secondary data from international organizations such as the OECD, World Bank, and UNEP.

Results. The analysis revealed several structural barriers hindering the effectiveness of financial and economic instruments for the green transition. These include policy fragmentation, lack of an integrated national strategy, overlapping departmental functions, and high corruption risks. The impact of the full-scale war has significantly reshaped the priorities of public administration, redirecting fiscal resources toward defense, increasing infrastructure destruction, and slowing green investment. Nevertheless, the post-war recovery period presents opportunities to integrate sustainability principles into the reconstruction process. The key principles of achieving sustainable development goals are determined by the economic, environmental and social components. Criteria for their measurement have been established: economic criteria show how effectively financial resources are used to achieve green goals. Environmental criteria directly measure the impact of the mechanism on the state of the environment. Social and institutional criteria reflect the impact of the mechanism on society and the effectiveness of public administration. The application of these criteria will allow not only to state the fact of the implementation of green policy, but also to objectively assess its effectiveness, identify weaknesses and substantiate recommendations for its improvement.

Conclusions. The study concludes that Ukraine's post-war recovery represents a unique opportunity for a "green leap," enabling structural modernization of the national economy according to sustainable principles. Effective implementation of fiscal and institutional reforms, combined with enhanced transparency and public accountability, can accelerate Ukraine's integration into the European Green Deal and global sustainability frameworks.

Keywords: *green transformation, environmental policy, European Green Deal, economic mechanisms, public administration, sustainable development, investment policy, institutional changes, post-war recovery, environment.*

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Introduction. The green transformation of the economy is one of the main priorities of modern global policy aimed at ensuring sustainable development, reducing environmental risks and increasing competitiveness. In Ukraine, given the need for integration into the European space, as well as the challenges associated with post-war reconstruction and modernization, the urgency of this matter is intensifying.

Despite the presence of individual initiatives and strategies in the field of environmental policy, there is an issue of insufficient effectiveness of existing financial and economic instruments and mechanisms of public administration to ensure a comprehensive and systemic green transformation. The modern system of public administration in Ukraine faces such challenges as

– fragmentation of financial and economic instruments – the absence of a single, coordinated

public policy, which leads to dispersion of efforts and a decrease in the synergistic effect;

– insufficient financial support – limited budget resources and low involvement of private capital into green projects;

– weakness of the institutional environment – bureaucratic obstacles, imperfect legislative framework and lack of effective monitoring of the implementation of green initiatives;

– low investment attractiveness – insufficient level of guarantees and risks for investors, which inhibits the inflow of funds into the relevant sectors.

Thus, the relevance of the study lies in the need to develop and substantiate new, adapted to Ukrainian realities, financial and economic instruments and mechanisms of public administration that will be able to ensure the effective green transformation, promote post-war reconstruction and achieve sustainable development goals.

Analysis of recent research and publications

shows that the issue of financial and economic instruments and mechanisms of the green transformation in Ukraine's public administration is relevant and actively discussed, especially in the context of post-war reconstruction (Bilokinna I. [1], Dzyubak K. [3], Kolyada T., Prozorov Yu. [7], Medynska N. [9], Osipova L. [10], Petrakov Ya. [12], Pshybelsky V. [14], Skal O. [16], Skoryk M. [17], Sachs, J. [15], etc.). Some studies show that, despite the war, some communities in Ukraine are already implementing green projects using various green technologies (Dyachuk A., Efremova O., Mateyuk O., Shevchenko S. [4], Maksymenko N. [8], Petrova I. [13], etc.).

The purpose of the article is to analyze and assess the effectiveness of existing financial and economic instruments of the green transformation in Ukraine's public administration, and to provide a rationale for improving specific areas in the post-war reconstruction context.

Methods. The research is based on a systemic and comparative analysis of regulatory frameworks, policy documents, and statistical data related to Ukraine's green transformation. Qualitative and analytical methods were used to identify barriers to effective policy implementation, while comparative assessment allowed evaluation of Ukraine's mechanisms in the context of EU environmental and fiscal practices. The study also incorporates expert assessments and secondary data from international organizations such as the OECD, World Bank, and UNEP.

Presentation of the main material. Public administration is a central subject in the process of the green transformation, since it has unique powers and tools that are not available to other participants. The state performs a number of key functions, including

- regulatory and legal – only the state can create and implement a legislative framework that regulates environmental standards, emission standards, and requirements for the use of natural resources. These rules create uniform “playing conditions” for all economic entities, forcing them to adapt to green requirements

- fiscal and budgetary – public administration controls budgetary and tax levers. With the help of the environmental tax, subsidies, grants, and state funding programs, it can stimulate or inhibit certain types of economic activity, which allows for the effective redistribution of financial flows in favor of environmentally friendly projects;

- strategy and coordination – the green transformation is a long-term and complex process that requires coordination of actions of many sectors of the economy. The state is the only institution capable of developing and implementing national strate-

gies, integrating them with international obligations (for example, with the European Green Deal) and coordinating the efforts of various ministries, departments, and regions;

- investment and innovation – the state can act as a major investor into green infrastructure (for example, public transport, energy networks), as well as stimulate private investment by providing state guarantees, soft loans, and other mechanisms. It also supports scientific research and development in the field of green technologies, creating an innovative base for transformation.

A more detailed consideration should be now given to the financial and economic instruments and mechanisms underpinning the green transformation in Ukraine's public administration. However, first of all, it should be noted that financial and economic instruments are mechanisms that the state or other entities use to impact economic processes, market behavior, enterprises, and the population. These instruments serve to achieve certain economic goals, such as stimulating growth, regulating inflation, supporting certain sectors of the economy or, as in this particular case, promoting green transformation.

Financial and economic instruments can be conditionally divided into four groups:

- 1) fiscal instruments – instruments related to the state budget, for example, taxes (environmental tax, tax breaks for green companies), subsidies and grants (for example, a green tariff);

- 2) monetary instruments – those related to the money supply and credit policy (for example, changing the discount rate, refinancing, open market operations);

- 3) market instruments – those creating economic incentives, but working through market mechanisms (examples: emissions trading, the “polluter pays” mechanism, green bonds);

- 4) investment instruments – instruments aimed at attracting capital to certain sectors (for example, government grants, soft loans for investments in renewable energy, creation of environmental funds) [3; 6].

In the context of the green transformation, these tools play a key role in reorienting the economy from traditional, environmentally harmful industries toward environmentally sustainable and innovative ones.

Taking the above into consideration, a schematic representation of the functioning of financial and economic instruments in Ukraine's green transformation will now be provided (Fig. 1).

The figure shows a complex system of financial and economic levers of public administration aimed at stimulating the green transformation of the economy, and consisting of four groups of instruments - tax, budget and subsidy, market, and finance and

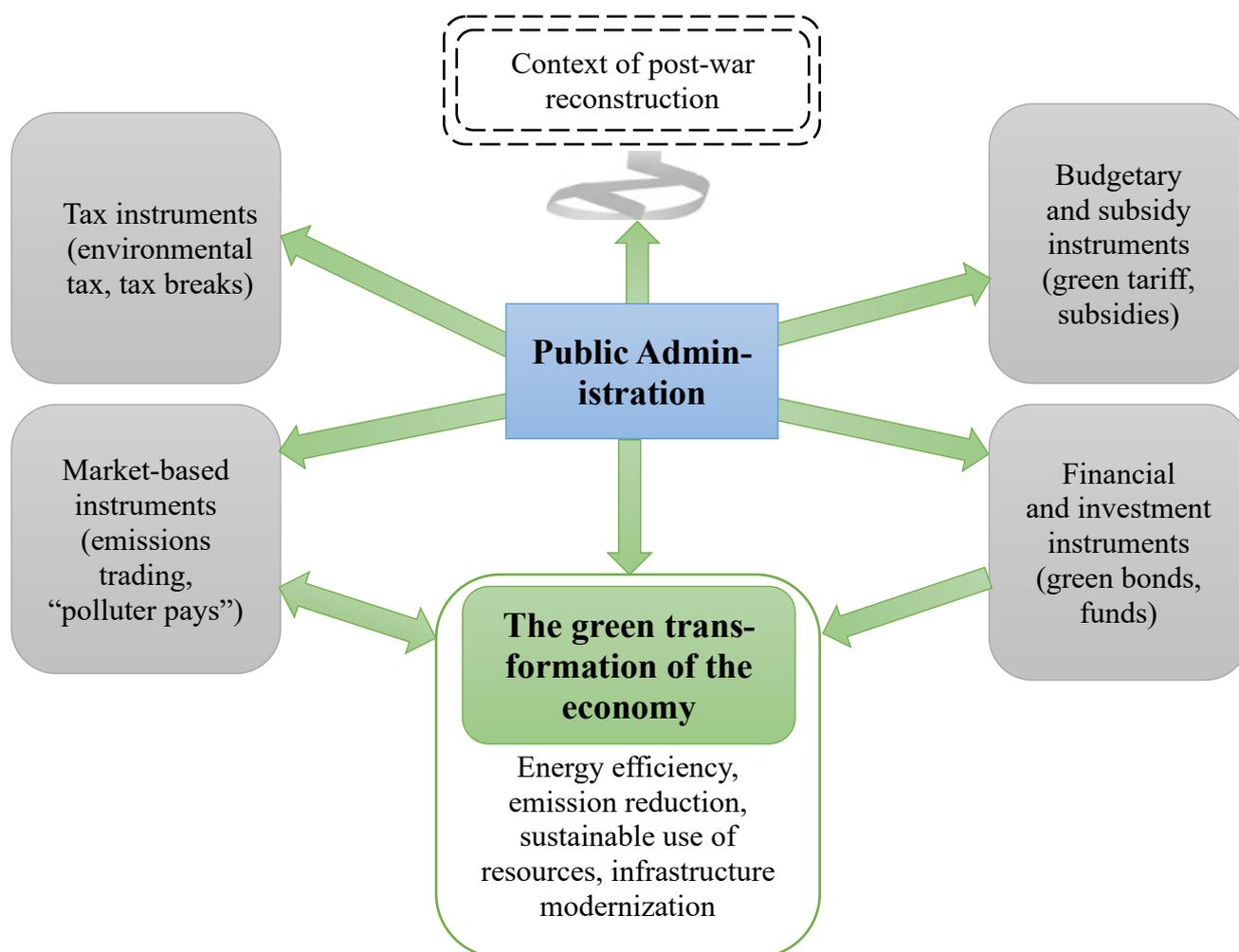


Fig. 1. The operational mechanism of financial and economic instruments for the green transformation in Ukraine's public administration (Source: compiled by the author)

investment. Each of the instruments used by the state is a lever of impact that creates economic incentives for businesses and citizens. These incentives, in turn, form financial flows that are directed to the implementation of green technologies and modernization.

The state is a key player in the process of the green transformation due to its unique powers and functions, which can be grouped into three main categories:

- regulatory, which creates and implements the legislative framework regulating environmental standards and norms,
- stimulant, as through financial and economic instruments the state actively encourages desired behavior and also uses various mechanisms to make green solutions economically attractive, and
- investment, when the state can act as a major investor in key infrastructure projects that are too large or risky for private capital [3; 11].

Thus, the state does not simply control, but actively shapes the environment for the green transformation, using its levers to create stable and predictable policies. The private sector and civil socie-

ty, of course, play a vital role, but it is the state that sets the general vector of movement, creates rules and provides incentives. In this regard, the central block represents the block of state administration, which acts as an entity that forms and implements state policy.

The state administration system creates favorable context for the development of renewable energy, using a systemic approach that involves the interaction of different groups of instruments [13]. In particular, for the effective operation of financial and economic instruments, the state creates a legislative framework that guarantees stable conditions for investment. At the same time, it uses fiscal instruments, for example, by providing tax breaks for the import of equipment for solar power plants. This reduces the cost of projects and makes them more appealing.

To minimize risks for investors and guarantee profitability, the state uses budget and subsidy instruments. In particular, the green tariff is, in fact, a state-guaranteed increased tariff for electricity generated from renewable sources, which guarantees that the investor will receive a fixed, increased price

for the generated electricity over a long period [14]. Such a guarantee reduces risks and makes investments in solar, wind, or biogas plants very attractive. Without this tariff, the private sector would not have sufficient incentives for the large-scale development of renewable energy. At the same time, subsidies are a form of direct state aid. For example, the government can allocate funds for programs that partially offset the costs of home insulation or the purchase of electric vehicles. This reduces the financial burden on citizens and businesses, stimulating them to invest in green technologies.

The use of tax instruments makes the introduction of new technologies more profitable. In particular, tax benefits, profit benefits if a company invests in research and development (R&D) of green technologies, VAT exemptions for environmentally friendly equipment, etc., contribute to the fact that the state reduces the cost of the innovation process, making it more attractive for businesses.

A special mechanism of state support is a guaranteed green tariff. It obliges the state or energy supply companies to purchase electricity generated from renewable sources (sun, wind, biomass) at a fixed, economically justified tariff, which is usually higher than the market rate [7].

The combination of tax breaks and a guaranteed green tariff makes renewable energy projects attractive for investment. In response to these incentives, financial and investment instruments are activated. Investors (both private and international) are more willing to invest, as they see potential profitability and stability. This is manifested in the emission of green bonds or the provision of preferential loans for the construction of plants.

It should be noted that green bonds are an instrument that directly attracts capital. The funds received from their sale are specifically directed to financing environmental projects [16]. For example, a municipality can issue green bonds for the construction of a modern waste processing plant. Investors who buy them know that their money will go to a green cause, which makes this instrument attractive to socially responsible funds and private individuals.

All these interrelated actions create a new market in which market instruments are already operating. Due to the growth of green electricity production, dependence on traditional sources is reduced, and the energy market becomes more competitive.

The operational framework of financial and economic instruments supporting Ukraine's green transformation functions in the special context of the post-war reconstruction. It is worth noting that its effectiveness depends on external factors that affect changes in funding priorities, create threats to investments, but, at the same time, contribute to

opportunities for a green leap and expand integration with international partners. In particular, in the context of post-war reconstruction, the state budget and international financial assistance will be directed primarily to critical needs, such as defense, reconstruction of destroyed infrastructure, humanitarian and social programs. This means that financing green projects, although still important, may not be the top priority.

War and associated risks (mine hazard, possible shelling) significantly increase investment risks for private capital. Investors considering projects in renewable energy or energy efficiency will require additional guarantees and insurance, which makes it difficult to attract funds.

At the same time, the destruction of infrastructure creates a unique opportunity not only to restore it, but to modernize it using new, green technologies. Restoration can become a catalyst for a large-scale green transformation if the state creates the right incentives and mechanisms for this [1]. For example, instead of rebuilding old power plants, modern solar or wind power plants that meet European standards can be built on the spot.

Post-war reconstruction is closely linked to the process of integration into the EU. This requires Ukraine to harmonize its legislation with the European Green Deal. Thus, the context of reconstruction forces public administration not only to implement green policies, but to do so taking into account European requirements and standards.

Therefore, post-war reconstruction is not just an external factor, but a defining context that can both complicate and accelerate the green transformation.

The final result of this mechanism is the green transformation of the Ukrainian economy, which is manifested in increased energy efficiency (for example, a 15% reduction in energy consumption in the housing and communal services sector), reduced emissions (in particular, achieving the goals set by the Paris Agreement or alignment with European standards) and sustainable use of natural resources (including increase in waste recycling by 30% and implementing the principles of the circular economy).

As it was shown in the Figure 1, the result is not the final point. Achieving the goals of the green transformation creates a feedback loop with public administration. Successful results can become the basis for developing new, more ambitious strategies, as well as for attracting additional investments. In addition, the green transformation not only improves the environment, but also creates new jobs, improves public health and increases the quality of life. This is also an important final result of the operational mechanism of financial and economic instruments for the green transformation in

Ukraine's public administration.

We believe that assessing the effectiveness of the operational mechanism of financial and economic instruments for the green transformation is an important stage of research. For this, a system of criteria can be used that covers both quantitative and qualitative indicators. They will allow for a comprehensive analysis of how successfully the set goals are achieved.

Some criteria for assessing the effectiveness of the mechanism of financial and economic instruments of the green transformation in Ukraine's public administration are proposed [10, 18-21]. The criteria, indicators and their description are provided in Table 1.

Each of the criteria listed in the table has its own meaning. Thus, economic criteria show how

effectively financial resources are used to achieve green goals. Environmental criteria directly measure the impact of the mechanism on the state of the environment. Social and institutional criteria reflect the impact of the mechanism on society and the efficiency of public administration. The application of these criteria will allow not only to state the fact of the implementation of green policies, but also to objectively assess their efficiency, identify weaknesses and substantiate recommendations for their improvement.

It should be noted that the implementation of the green transformation policy in Ukraine before the full-scale invasion faced a number of fundamental challenges that hindered systemic progress, and this has remained largely unchanged. One of the key issues is the fragmentation of the policy.

Table 1

Criteria for assessing the effectiveness of the mechanism of financial and economic instruments for the green transformation in Ukraine's public administration (*Source:* developed by the author)

Criteria	Indicator	Description
Economic	Amount of investments raised	Measured by the amount of private and foreign capital invested in renewable energy projects, energy efficiency, and other green initiatives
	Cost/result ratio	Shows how much public funds (subsidies, tax breaks) were spent to achieve a certain environmental effect (e.g., reducing emissions by 1 ton)
	Innovation stimulation	Assessed by the number of patents in the field of green technologies, the amount of funding for R&D projects and the share of innovative products in the total volume of production
Environmental	Emission reduction	The main indicator, measured in tons of reduced greenhouse gases (CO ₂) emissions and other pollutants
	Increase in the share of renewable energy sources	Measured as a percentage of the total amount of electricity consumed or produced
	Environmental quality improvement	Can be assessed by indicators such as air, water and soil quality in regions where green projects have been implemented
Social and institutional	Job creation	Measured by the number of new jobs created in green sectors of the economy
	Transparency and accountability level	Assessed by the availability and accessibility of public reports on the use of funds allocated for green initiatives
	Compliance with international standards	Evaluated in terms of the compliance of national legislation and policies with EU requirements (e.g. European Green Deal)

It means that instead of a single, coordinated plan, various departments and state bodies work on similar tasks independently of each other. This is manifested in some aspects, in particular:

- the absence of a single management center. There is no single body responsible for coordinating all aspects of the green transformation. For example, the Ministry of Energy of Ukraine may develop a policy on renewable energy sources, and the Ministry of Environmental Protection and Natural Re-

sources of Ukraine – a policy on waste management, without proper communication between them;

- conflicts of interest – sometimes the interests of different departments do not coincide, and even contradict each other. For example, economic departments may prefer projects that bring quick profits, but have a negative impact on the environment, while environmental departments advocate for stricter restrictions;

- functional overlap, when different authori-

ties may perform similar functions, which leads to inefficient use of resources and slows down decision-making. For example, several ministries (the Ministry of Community and Territorial Development of Ukraine through the State Agency for Energy Efficiency and Energy Saving of Ukraine and the Ministry of Energy of Ukraine) deal with energy efficiency issues;

– weak coordination with local authorities. National strategies are often not properly integrated with plans at the regional and local levels, which complicates their implementation in practice.

This fragmentation not only creates bureaucratic obstacles, but also prevents the formation of a holistic, systemic policy that could effectively promote the transition to a green economy.

At the same time, significant barriers to green projects in Ukraine are corruption risks and bureaucracy, which manifest themselves in several aspects.

First of all, there is opacity and chaos in issuing permits. The permitting system is complex and confusing. Investors often face the need to obtain numerous approvals from different agencies, which creates a risk of abusive practices. Opacity in the decision-making process and the lack of clear deadlines for reviewing documents leads to the fact that projects can be “stuck” for months or even years.

The second aspect is corruption in the distribution of green tariffs and subsidies. The renewable energy support system, known as the green tariff, although designed to stimulate investment, in practice faces corruption risks. This can manifest itself in priority connection to the networks for certain companies, uneven distribution of state support, or the use of “illicit schemes” to obtain subsidies. This situation repels honest investors who do not want to work in such conditions.

Another aspect is bureaucratic inertia and the lack of a single window. The dispersion of functions between different ministries and agencies creates long bureaucratic chains. Investors have to interact with many state structures, each having its own requirements and procedures. The lack of a “single window” mechanism for green projects makes administrative procedures excessively complex, expensive and lengthy, which significantly increases risks and costs for investors.

Overall, the combination of these factors creates an unfavorable investment environment that hinders the development of the green economy in Ukraine, despite its significant potential.

It is important to emphasize the specific challenges of the post-war period. In particular, the full-scale war added new, unprecedented challenges that radically changed the context of the green transformation. The most obvious consequence is the destruction of the infrastructure. The scale of the de-

struction that Ukraine has suffered is colossal and unprecedented. Russian shelling has destroyed a significant part of the energy, transport and industrial infrastructure. This includes power plants, transformer substations, oil depots, bridges, railways, and factories. The restoration of these facilities requires enormous financial and human resources. In the context of the green transformation, it means that Ukraine has a unique, albeit tragic, opportunity not only to restore what was destroyed, but to rebuild according to the principles of a green economy, i.e. using energy-efficient technologies and renewable energy sources. However, at the initial stage, the priority is to restore vital systems as soon as possible, which does not always allow for the implementation of more expensive and long-term green solutions.

Certainly, the number one priority is the redistribution of budgetary resources to defense and security. After the start of the full-scale invasion, budgetary resources in Ukraine were redistributed to defense and security. This became an absolute priority for the survival of the Ukrainian state. As a result, funding for environmental programs and green initiatives has been significantly reduced. Programs that previously received state subsidies or support have been curtailed or are financed on a residual basis. Accordingly, most green projects that were previously in development or at the implementation stage have been frozen until the situation stabilizes. This creates a serious obstacle to the development of renewable energy, energy efficiency and other environmental areas that largely depend on state support.

Another, no less important, specific challenge of the post-war period for Ukraine is the mine hazard and contamination of territories with ammunition. Vast areas of the country are mined and contaminated with explosives, making the implementation of projects in certain regions difficult or impossible. Until the areas are demined and cleared, construction work cannot begin, agricultural activities cannot be carried out, and infrastructure facilities, including solar and wind power plants, cannot be installed. The mine hazard factor not only threatens people’s lives, but also makes large areas unsuitable for economic activity, including green projects. Demining is a complex, expensive, and lengthy process that requires significant efforts from the international community.

Finally, another specific challenge is the change in priorities. The war has radically changed the priorities of both the state and society. Issues of survival, security, and humanitarian aid have come to the fore. The environmental agenda, which was previously actively discussed and developed, has receded into the background. Citizens, businesses, and the government of Ukraine are focused on the daily struggle for survival, rebuilding destroyed cities,

helping displaced people, and supporting the army. While environmental issues remain important in the long run, they are not currently a priority. This shift in focus is leading to a decline in public and political attention to green initiatives, which is also hampering their development.

Despite all the above challenges, Ukraine's post-war reconstruction is not just a need to rebuild what was destroyed, but a unique chance for a green leap. It is an opportunity to modernize the economy on new, sustainable principles, abandoning outdated technologies and practices. Instead of restoring old coal-fired power plants, modern renewable energy facilities that meet European standards can be built. Instead of outdated engineering networks, energy-efficient solutions can be implemented. This approach will allow Ukraine not only to solve the problem of post-war reconstruction, but also to accelerate integration into the EU, since the green transformation is the cornerstone of the European Green Deal [2; 5].

Therefore, public administration in Ukraine is faced with the task of not just responding to challenges, but using them as a catalyst for creating a new, sustainable and competitive economy.

In light of the above, it is believed that improving the mechanism of financial and economic instruments of the green transformation in Ukraine's public administration should be based on a systemic approach. Based on an analysis of the prevailing problems and challenges of the post-war period, a series of recommendations can be formulated to improve policy effectiveness and support conditions conducive to sustainable recovery.

The first recommendation is that the systemic approach improvement should occur by creating a comprehensive strategy that will overcome the above-mentioned challenges, such as, for example, policy fragmentation, functional overlap, etc. Instead of disparate initiatives, a single, coordinated document is needed that will integrate environmental, economic, and social aspects. Moreover, the strategy should contain the following key elements:

- a unified concept and vision – the strategy should clearly define the goals, priorities and timeframes of the green transformation, and take into account both the needs of post-war reconstruction and the requirements of European integration. This will create a common vision for all stakeholders – from government and businesses to the public;
- policy integration – it is necessary to ensure the interconnection between environmental, energy supply, industrial and financial policies (for example, energy efficiency policies should be coordinated with funding programs, and the restoration of industrial facilities should be coordinated with the implementation of green technologies);

- a clear demarcation of powers – the strategy should clearly define the roles and responsibilities of various ministries and departments, which will help avoid functional overlap and increase the efficiency of the state apparatus (for example, the creation of a coordination center or interdepartmental commission can be an effective mechanism for ensuring consistency of actions);

- transparency and accountability – the strategy should include mechanisms for monitoring and evaluating its implementation, as well as ensure the availability of information to the public, which will help reduce corruption risks and increase investor confidence.

Such a systemic approach will allow Ukraine not only to rebuild the destroyed infrastructure, but to do so on a new, more sustainable and environmentally friendly basis. This is not only the path to sustainable development, but also one of the key elements of European integration.

The second recommendation is to reform fiscal policy in Ukraine, especially in the context of the green transformation, which involves the transition to environmental taxation. This approach means changing the focus of the tax system from traditional objects (income, profit) to those that have a negative impact on the environment. The main goal is not only to generate revenue for the budget, but also to economically stimulate environmentally responsible behavior of businesses and citizens.

In order to achieve this, it is necessary to:

- expand the tax base by introducing or increasing taxes on greenhouse gas emissions, water and soil pollution, and the use of non-renewable resources (i.e. increase environmental tax rates or introduce new fees for waste generation);

- stimulate green investments by providing tax incentives for companies that implement energy-efficient technologies, use renewable energy sources or invest in green infrastructure (i.e. income tax breaks or reduced VAT rates for green goods and services may be introduced);

- introduce the “polluter pays” mechanism. This principle is the basis of environmental taxation. It provides that those who cause damage to the environment should bear financial responsibility for it. This stimulates businesses to look for ways to minimize their negative impact;

- create a green fund. Revenues generated from environmental taxes may be channeled into a dedicated fund, the proceeds of which will be used to finance projects on the environment restoration, infrastructure modernization, and green initiatives support.

In the context of post-war reconstruction, fiscal policy reform becomes even more relevant. On the one hand, it can become a source of financing for

the restoration of destroyed infrastructure according to new, green standards. On the other hand, there is a risk of increasing the financial burden on businesses, which can slow down economic recovery. Therefore, the transition should be gradual and balanced. It is important to ensure transparency in the use of funds received, a smooth transition for industrial enterprises, and clear and predictable rules of the game for investors. An effectively reformed fiscal policy can become a powerful tool for accelerating Ukraine's green transformation and its integration into European environmental standards.

The third recommendation emphasizes that attracting private and international investment is crucial for Ukraine's successful post-war reconstruction and green transformation.

Public-private partnership (hereinafter referred to as PPP) is an effective mechanism for attracting private investment for projects that have public value. This allows combining financial resources and experience of the private sector with state guarantees and stability. In the context of the green transformation, PPP can be used for the construction and modernization of renewable energy facilities (solar, wind power plants); creation of modern infrastructure for waste management, including sorting and processing plants; and implementation of energy efficiency projects in the housing and communal sector and public buildings.

In conditions of martial law and high risks, attracting investors requires reliable protection mechanisms. Especially important are state guarantees that can cover part of the investment in case of their loss, and development of insurance instruments against military risks. This may be a special state fund or a program operating in cooperation with international partners and insurance companies. Such mechanisms will give investors confidence in the protection of their capital and will stimulate them to invest in the Ukrainian economy, even with the existing risks.

The market for green bonds also needs to be developed, which is a financial instrument that allows raising funds from a wide range of investors (both institutional and private) to finance projects aimed at protecting the environment and combating climate change. The development of this market in Ukraine will allow diversifying sources of financing for green projects, reducing dependence on budget funds and grants, as well as attracting investors looking for opportunities for sustainable and socially responsible investments.

All these measures taken together will create a favorable investment environment that is the basis for a successful green transformation and sustainable recovery of Ukraine.

The fourth recommendation includes institu-

tional changes aimed at increasing transparency and efficiency of governance and is very important for the success of the green transformation, because even the most effective strategies and financial instruments cannot succeed within an inefficient and corrupt state apparatus.

To overcome corruption and bureaucracy, it is necessary to implement a number of institutional reforms, in particular, digitalization of administrative services (the introduction of electronic platforms and services, such as electronic permits and tenders, will significantly reduce opportunities for corruption, which will make the processes of obtaining permits for green projects faster, more transparent and more accessible); open registers and databases (the creation and publication of open registers of investment projects, financing, public procurement and environmental information will allow the public and business to exercise control); independent monitoring (involving independent auditors and international organizations to monitor the implementation of green projects and the use of public funds will help increase accountability).

To increase the efficiency of management in the field of green transformation in Ukraine, a single coordination center should be created. Instead of disparate ministries competing with each other, a single body is needed that will coordinate all policies in the field of green transformation. This may be a special agency or an interdepartmental commission endowed with relevant powers.

It is also advisable to introduce the principle of a "single window". This mechanism will simplify the interaction of investors and businesses with state authorities, as all necessary documents and permits will be obtained in one place, which will significantly reduce the time and costs of bureaucratic procedures.

At the same time, the development of human resources is considered very effective. Training and attracting qualified specialists in the field of green economy and environmental management is key, as this will allow developing and implementing effective policies that meet international standards.

Such institutional changes are the basis for successful implementation of all other recommendations. They will create a solid foundation on which a sustainable and prosperous green economy of Ukraine can be built.

Conclusions. Thus, improving the mechanism of financial and economic instruments of the green transformation in Ukraine's public administration should be based on a systemic approach. Despite the fact that public administration is a key actor in this process, before and after the full-scale invasion, Ukraine has faced a number of fundamental problems that hinder systemic progress (fragmentation of

policy, insufficient financial support, and weakness of the institutional environment).

The full-scale war added new, unprecedented challenges for Ukraine (destruction of infrastructure, redistribution of budgetary resources, mine hazard and contamination of territories), which radically changed the context of the green transformation. At the same time, the war created a unique chance for a green leap. Post-war recovery provides an opportunity to modernize the economy on new, sustainable principles, abandoning outdated technologies.

Thus, the effective use of financial and economic instruments of green transformation is key to

the reconstruction of Ukraine. These measures will not only address pressing problems, but also build a sustainable and competitive economy that meets European standards. It is substantiated that the environmental component of the implementation of the European Green Deal is determined in the policy of sustainable development of Ukraine and includes the following areas of implementation: reducing emissions, increasing the share of renewable energy sources, improving environmental quality.

Further research could focus on the effectiveness of financial instruments in war and recovery situations.

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Економічні, екологічні та соціальні виміри зеленої трансформації в Україні: аспекти управління в умовах війни та повоєнної відбудови

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Метою статті є аналіз та оцінка ефективності існуючих фінансово-економічних інструментів зеленої трансформації в державному управлінні України, а також обґрунтування потреб у вдосконаленні окремих сфер у контексті післявоєнної відбудови. Дослідження базується на системному та порівняльному аналізі нормативно-правової бази, політичних документів та статистичних даних, пов'язаних із зеленою трансформацією України. Для виявлення перешкод для ефективного впровадження політики було використано якісні та аналітичні методи, тоді як порівняльна оцінка дозволила оцінити механізми України в контексті екологічної та фінансової практики ЄС. Дослідження також включає експертні оцінки та вторинні дані міжнародних організацій, таких як ОЕСР, Світовий банк та ЮНЕП. Результати дослідження. Аналіз виявив кілька структурних бар'єрів, що перешкоджають ефективності фінансово-економічних інструментів для зеленого переходу. До них належать фрагментація політики, відсутність інтегрованої національної стратегії, дублювання відомчих функцій та високі корупційні ризики. Вплив повномасштабної війни суттєво змінив пріоритети державного управління, перенаправивши фінансові ресурси на оборону, збільшивши руйнування інфраструктури та уповільнивши зелені інвестиції. Тим не менш, період післявоєнного відновлення надає можливості для інтеграції принципів сталого розвитку в процес відбудови. Ключові принципи досягнення цілей сталого розвитку визначаються економічною, екологічною та соціальною складовими. Встановлено критерії їх вимірювання: економічні критерії показують, наскільки ефективно використовуються фінансові ресурси для досягнення зелених цілей. Екологічні критерії безпосередньо вимірюють вплив механізму на стан навколишнього середовища. Соціальні та інституційні критерії відображають вплив механізму на суспільство та ефективність державного управління. Застосування цих критеріїв дозволить не лише констатувати факт реалізації зеленої політики, але й об'єктивно оцінити її ефективність, виявити слабкі сторони та обґрунтувати рекомендації щодо її вдосконалення. У дослідженні робиться висновок, що післявоєнне відновлення України є унікальною можливістю для «зеленого стрибка», що дозволяє структурну модернізацію національної економіки відповідно до принципів сталого розвитку. Ефективне впровадження фінансових та інституційних реформ у поєднанні з підвищеною прозорістю та публічною підзвітністю може пришвидшити інтеграцію України до Європейського зеленого курсу та глобальних структур сталого розвитку.

Ключові слова: *зелена трансформація, екологічна політика, Європейський зелений курс, економічні механізми, державне управління, сталий розвиток, інвестиційна політика, інституційні зміни, післявоєнне відновлення, навколишнє середовище.*

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