

Environmental Responsibility in the Development of Green Entrepreneurship

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ABSTRACT

The purpose of this study is to determine the main directions of development of green entrepreneurship on the basis of environmental responsibility. The relevance of this study is due to the need to identify the main directions of green business development to solve environmental problems, based on the basic principles of environmental responsibility. It is believed that environmental responsibility is the basic basis for the formation of socially responsible green entrepreneurship, whose mission is environmental improvement on the basis of sustainable development. It is established that it is expedient to consider ecological responsibility on levels (the state, the enterprises, the public). As the experience of successful companies shows, environmental responsibility can be integrated into the value and business of the company. The analysis revealed the main tools to stimulate green entrepreneurship: environmental taxes, "green" investments, instruments of stimulating influence on green entrepreneurship. It is established that in Ukraine the main responsibility for the implementation of sustainable development lies with the state and enterprises. The research revealed shortcomings in the organization of supervision measures and control over the targeted use of funds for the implementation of environmental programs. Also the imperfection of the regulatory framework, the inefficiency of the accounting, reporting and monitoring system, the ineffectiveness of measures monitoring the results of each project within a specific program to solve environmental problems. It is established that local governments and enterprises are two important participants in the environmental management system in Ukraine. Therefore, it is important to regulate environmental responsibility at the national, including regional, and corporate levels.

Keywords: environmental responsibility, green entrepreneurship, green economy, sustainable development, greening.

JEL classification: L2, M2, Q5

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1. Introduction

1.1. Relevance of the topic and problem statement.

The concept of sustainable development, ie technological development and organizational change to harmonize the needs of both present and future generations (Cralis & Vereeck 2005) is the basis of the latest philosophy of solving existing environmental problems that threaten the ecosystem (Cohen & Winn 2007). In recent years, the idea of "circular economy" has been developing (Julian Kirchherr et al., 2017), which is based on the separation of the concept of business growth from the need for additional resources. Within the circular economy, the priority is to solve socially significant problems: renewable energy, fuel cells, green building, natural foods, carbon emissions, etc. (Dean & McMullen 2007). For large corporations and large industrial enterprises, social orientation and environmental projects are not only a duty, not just a challenge, but also an opportunity that gives a new impetus to business (Austin et al., 2006). Thus, 95% of executives of large American corporations agreed that the circular economy creates additional business opportunities. Of them, 30% actually implement a circular economy in their business, and 77% of respondents plan to successfully implement in their company for 5 years.

That is, for businesses the direction of overcoming the crisis and becoming more successful and profitable is to revise the company's strategy towards environmentally responsible production (Babenko *et al.*, 2019). Environmental responsibility is not confined to corporate social responsibility, especially when it comes to sustainable development (Timoshenkov *et al.*, 2020). It is present when a company creates products and solutions that help its customers conserve natural resources and reduce the environmental impact of their activities, when it is guided by environmental responsibility standards, when working with its suppliers, when choosing program priorities for community work or supporting its employees. implementing environmental projects (Klewitz & Hansen, 2014; Borglund et al., 2017). To solve many social problems, the transition to a green economy is proposed (Figure 1), which has been recognized as a tool for promoting sustainable development (Green economy).



Figure 1. Green business in the green transition to sustainable development

The concept of a green economy is based on the transition to sustainable development, which includes promoting investment in natural capital, solving energy problems and providing the population with environmentally friendly food, focusing on land use and optimal resource management, transition to more efficient, environmentally friendly and resource-saving technologies. to reduce pollutant emissions, stop depletion of resources, mitigate the effects of climate change, etc. (Georgeson et al., 2014; Romanenko & Chaplay, 2016).

The desire of an individual business is not always enough to address environmental issues (Global Footprint Network, 2019). For example, separate waste collection can be made more efficient only by combining the efforts of different parties - producers, processors, the state, non-profit organizations. An important aspect of addressing such collective issues is a trusting partnership and transparent decision-making mechanisms - as a necessary basis for businesses to participate in environmental projects. Business is already making serious strides today, showing interest in developing environmentally responsible approaches. But to see the effects, everyone needs to unite: business,

government, society. Everyone should be ready to contribute to the ecological way of life (Gibbs, 2009). Companies need employee engagement programs that will not only increase the level of their environmental thinking, but also allow them to see tangible results from their participation. Thus, the issue of implementation of environmental responsibility as a priority area of business development. Such a study is especially important in the post-quarantine period of the crisis for a country with an economy in transition and a low level of technological development, which is Ukraine.

Thanks to this study, the main directions of green business development on the basis of environmental responsibility were identified. The formulation of the problem answered in this study is as follows: What are the key ideas and principles of environmental responsibility that are important and that will create additional opportunities for the development of green business in the post-quarantine period of crisis? The product of this study is to improve the organizational and economic mechanism of green entrepreneurship on the basis of environmental responsibility. This mechanism is developed on the basis of the conducted analysis and the revealed problems in Ukraine through experience of the European countries concerning development of green economy and introduction of principles of sustainable development.

2. Materials and methods

2.1. The essence of environmental responsibility of business

Environmental responsibility is a means of greening (Costanza R., 1989) at all levels of the transition to sustainable development. Following the publication of the Report of the United Nations Conference on Environment and Development in 1992, the concept of sustainable development has attracted the attention of scientists and management practitioners around the world. For the first time, it has been declared that a business is responsible for ensuring that its activities do not harm the environment. The place of business in social processes as an honest environmentally responsible player is defined (Isaak, 1997). The production activities of companies, whether goods or services, significantly affect the balance of the ecosystem. The main mission of business is to meet the needs of society, and the priority is sustainable development, based on the harmonization of business development goals with the goals of society, on the basis of preventing environmental degradation and preserving the ecosystem (Beveridge & Guy, 2005).

Environmental responsibility according to Directive 2004/35/EC is the obligation of a market participant (producer) to take measures to prevent the occurrence of environmental damage or eliminate the consequences of the environmental situation to restore natural resources to their original state and cover the costs of measures taken. Restoration of natural resources is carried out by the entity that caused environmental damage, as part of a specific plan to eliminate the consequences of such damage (Borglund et al., 2017).

The environmental responsibility of some companies, in terms of the impact on water quality, land degradation, quality and air pollution, is quite obvious. However, not all manufacturers are willing to consciously reduce their impact on the environment, often refusing to take the necessary measures (Bondarenko et al., 2020). As practice shows, it is impossible to solve environmental problems only by implementing technological innovation programs. Anthropogenic pressure on the environment continues to increase. This is reflected in significant climate change, rising resource consumption and biodiversity loss, according to the World Economic Forum's 2020 Global Risk Report.

Therefore, in European countries, the rules of environmental responsibility are introduced at the level of legislation. For example, in France, the "polluter pays" principle has been implemented and a new "environmental responsibility" has been introduced for companies. The "polluter pays" principle is the responsibility of the operator (natural or legal person, private or public person) for the environment in connection with their professional activities in the event of serious damage or imminent threat of serious damage to the environment.

Environmental responsibility is an important component of corporate social responsibility (Cohen & Winn, 2007) and is closely related to the ethical norms of the business community, which complement the system of environmental norms and requirements established at the level of legislation, standards, etc. This is a conscious and motivated participation of business in various activities aimed at preventing and minimizing negative impacts on the environment, environmental management, saving raw materials and energy resources in the process of economic activity, attracting waste into economic turnover, prevention of emergencies and emergencies, support for health care, preservation of cultural and historical heritage, biodiversity and specially protected natural areas, conservation of endangered species, etc. (Cralis & Vereck, 2005)

The following principles of environmental responsibility can be distinguished:

- environmentally friendly products - products produced by the company should help consumers reduce their impact on the environment;
- minimization of the carbon footprint - the focus of activities to solve environmental problems through the minimization of production emissions, investment in alternative mechanisms for organizing the work of employees;
- awareness of employees - educational and motivational activities for the formation the awareness of employees about the environment, about environmental problems that may affect their work, encouragement to work environmentally responsibly;
- waste management - activities to reduce environmental pollution and conserve natural resources and energy;
- energy consumption management - promotion of energy efficiency, ie providing conditions so that the company's electricity costs do not exceed the ecological thresholds of the environment;
- responsible relations - spreading the principles of environmental protection in the company's business relations with its suppliers, customers, including all stakeholders;
- updating and compliance - continuous improvement of the company's environmental performance, health and safety at work, training of its employees on these issues, periodic review of the principles of social and environmental responsibility to assess progress and ability to further improve;
- compliance with social and environmental laws and regulations in all places where it conducts business.

Therefore, the company must pursue a strict environmental policy to constantly seek to reduce the negative impact on the environment. We are talking about reducing waste and better sorting, reducing energy or water consumption and reducing air or water pollution. Thus, environmental responsibility requires more than voluntary policy, it requires constant effort. There are many drivers that explain why companies should include environmental issues in their strategic decision-making. Reasons are a set of incentives and risks directed at a company to improve standards. One of the most significant and influential factors concerning environmental companies is regulation and public policy. States are often affected by the revitalization of civil society organizations and environmental non-governmental organizations. Subsidies, tariffs and taxes contribute to this policy.

In addition, in the context of the information revolution in the world there are business practices that affect the company's reputation. Thus, the company is increasingly evaluated by its environmental management. Consumers, shareholders, employees and partners are increasingly demanding that organizations be more environmentally and socially responsible. They also want more transparency from companies. This means that companies will benefit from corporate social responsibility and environmental management (Tamayo-Orbegozo et al., 2017).

All of these drivers motivate or compel companies to integrate environmental concerns into their business strategy. Advantages of corporate environmental responsibility:

- Brand image: the allocation of green corporate business can improve the company's business reputation in the market.
- Customer loyalty: people prefer brands that are focused on solving environmental problems,

and tend to buy products from such manufacturers in the future.

- **Differentiation:** in the face of increasingly demanding customers and aware of environmental issues, gaining a green reputation can help stand out from the competition.

A growing number of companies have shown competitive advantages from taking environmental initiatives in many areas, such as pollution prevention, energy efficiency, environmentally friendly design, supply chain management and industrial ecology. For example, since 1996 KPMG (international network of independent firms providing audit, tax and consulting services) focuses its efforts on corporate environmental responsibility. It is currently preparing for the ISO 14001 environmental management standard. All of their environmental programs are integrated into core operations to ensure sustainability. KPMG, as a company, affects the environment in five areas: water, waste, paper, energy and transport. The environmental management program currently saves £ 250,000 a year. In addition, the savings achieved by switching to clean energy suppliers amount to another 600,000 pounds.

Levi's (a well-known manufacturer of branded clothing) is another company that is actively involved in environmental programs. Its approach is to reduce the ecological footprint. Levi's has protected the trademark of its "Less Water" campaign by using less water in its products. The company has already saved more than a billion liters with this program, and hopes to further improve its production process.

Thus, environmental responsibility is the basic basis for the formation of socially responsible green entrepreneurship, whose mission is to improve the environment on the basis of sustainable development for the benefit of future generations (Kirkwood, 2014). Making a profit, creating wealth become part of the model, a means to an end, not an end in itself. That is, green entrepreneurs seek to create appropriate and improving conditions for sustainable development and environmental impact.

3. Methodology

The theoretical and methodological basis of the study are the main provisions a systematic approach to understanding the process of greening, the formation of the foundations of the "green economy" on the basis of sustainable development. During the writing of the article the following methods were used: system-analytical method - for generalization of scientific concepts on issues regularities, factors and indicators of ecological entrepreneurship development; abstract-logical approach, methods of induction and deduction, analogy and comparison - for theoretical and methodological generalization of mechanisms of development of green entrepreneurship; methods of empirical research (online survey) - to identify the state of readiness of entrepreneurs for environmental responsibility and green development; methods of statistical processing - to identify trends and patterns of development of the green economy.

Based on the analytical study of greening assessment systems, the systems are presented evaluation of the implementation of the idea of building a green economy. The global tendencies are considered, the basic laws, leaders in processes of development of sustainable economy are allocated (Podgorna et al., 2020). The study was conducted on the example of Ukraine. The world experience was considered, on the basis of which the main shortcomings and problems concerning the development of green entrepreneurship in Ukraine were revealed. An organizational and economic mechanism for ensuring the development of green entrepreneurship with the identification of environmental responsibility as a methodological tool has been developed.

4. Results

4.1. Assessment of business readiness in Ukraine for environmental responsibility

According to the results of sociological research, a description of the level of readiness of Ukrainian business for conscious green entrepreneurship on the basis of environmental responsibility. This study used the results of several thematic opinion polls (Ecological portrait of a citizen of Ukraine;

Environmental responsibility).

According to the results of a study of environmental responsibility, 92% of residents of the city of Kyiv identified a very high level of relevance of environmental issues and combating climate change. The importance of these issues is growing dynamically: 63% have changed their attitude to it over the past 2-3 years. The ecological consciousness and personal responsibility of people, their activity to join the decision of ecological problems grows. Thus, 30% of respondents showed a high level of readiness to participate in environmental activities (Figure 2).

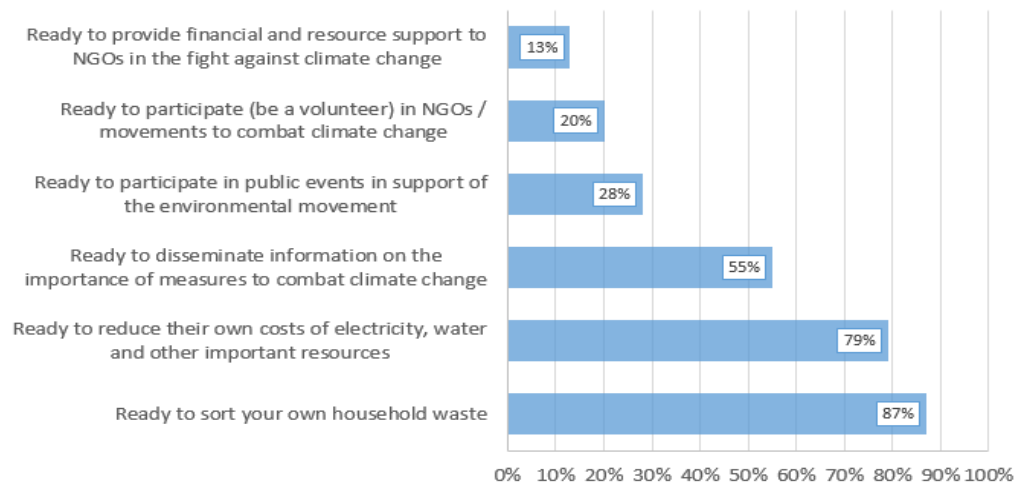


Figure 2. The level of readiness of Kyiv residents to join in solving environmental problems

At the same time, the respondents assessed the actions of the Kyiv and state authorities of Ukraine in matters of environmental protection. The actions of the authorities are assessed as insufficient, and the level of their reputation in solving environmental problems is defined as rather low. Thus, a low assessment of the effectiveness of Kyiv city authorities in improving the environment and preventing climate change was given - 77% of respondents rated them as unsatisfactory and extremely unsatisfactory. Only 14% of Kyivites and 13% of experts rated such actions as moderately satisfactory. Kyivites and experts assessed the activities of the state even more categorically: 84% and 82%, respectively, consider it inattentive to the environmental situation and ineffective in combating climate change.

Regarding the distribution of responsibility of stakeholders for the environmental situation and combating climate change, Kyiv residents and experts noted that the responsibility lies with: the President of Ukraine, the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, the State Energy Efficiency Agency, enterprises, local governments and the public. The level of readiness of Ukrainian enterprises for green growth is reflected in the dynamics of statistical indicators on technology and innovation. Figure 3 shows the innovative activity of industrial enterprises in Ukraine by level of implementation in the production of new technological processes, including new or significantly improved low-waste, resource-saving technological processes for the period 2000-2019 years. In Ukraine, the innovation activity of industrial enterprises is very low. Thus, the highest share of innovation-active, among industrial enterprises, was in 2016 (16.6%). The rate of introduction of new low-waste, resource-saving processes has the same downward trend in recent years, as can be seen from Figure 3.

Environmental responsibility in the development of green entrepreneurship

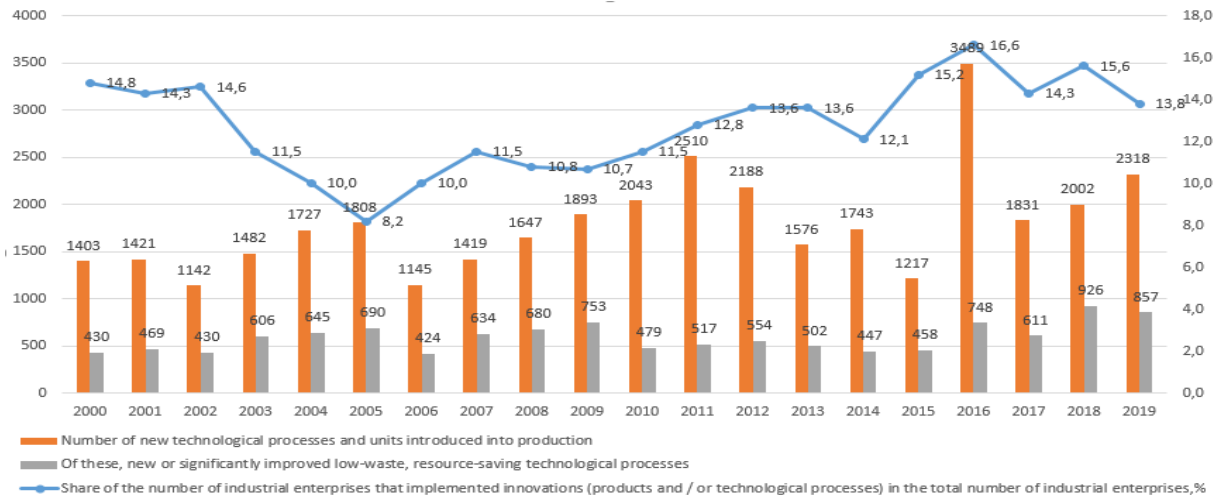


Figure 3. Dynamics of innovation activity of industrial enterprises in Ukraine for the introduction of low-waste, resource-saving technological processes, units (State Statistics Service of Ukraine)

Data on sources of financing of innovative activity of industrial enterprises of Ukraine are presented in Figure 4.

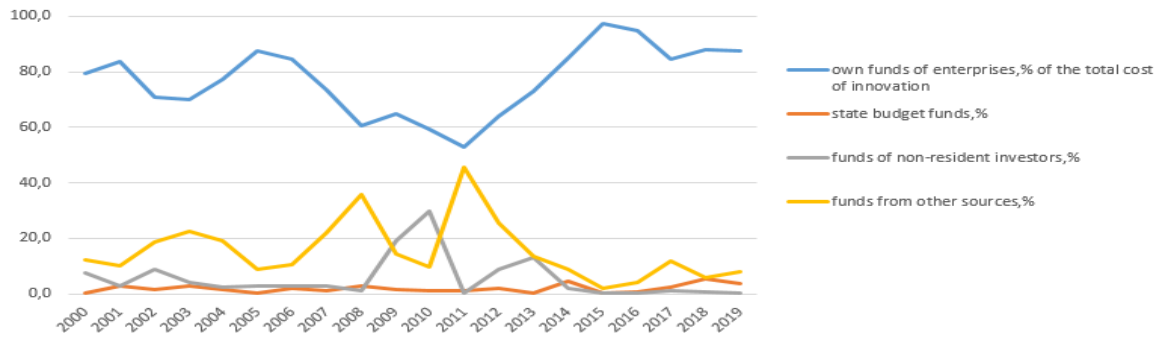


Figure 4. Sources of financing of innovative activity of industrial enterprises, % (State Statistics Service of Ukraine)

According to the presented data, the industrial enterprises of Ukraine financed innovative activity mainly at their own expense. At the same time, the world experience of financing innovation shows that the innovation process can be successfully developed through both private and public funding. Responsible investment is an approach to investing that seeks to include environmental, social and management factors (ESGs) in the investment decision-making process for better risk management and sustainable and long-term return on investment. About half of all managed global assets are responsible investment assets (Figure 5). As shown in Figure 5, as of the beginning of 2018, global sustainable investment assets amounted to \$ 30.7 trillion, which is 34% more than in 2016. Almost half of global green investment is in Europe.

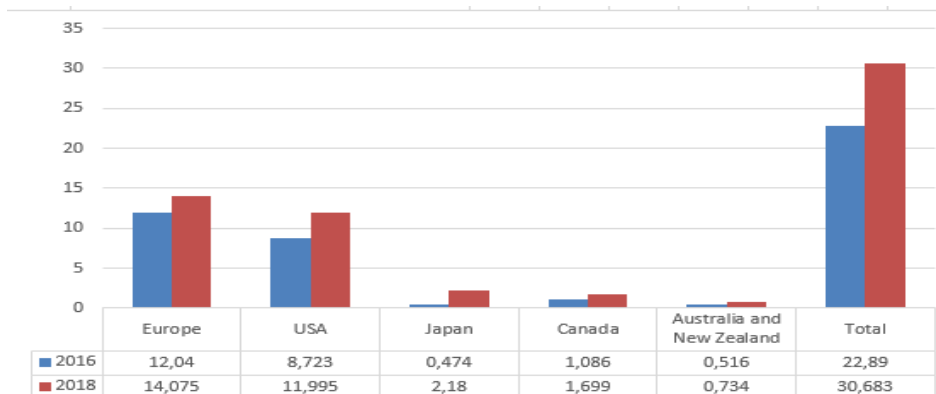


Figure 5. Global green investment, \$ trillion

However, their share in 2018 in total decreased from 53% to 46% compared to 2016. The highest growth rates of "green" investments are observed in Japan - the growth was more than 4 times in 2016-2018 years.

In order to finance green entrepreneurship in the world practice, a financial instrument is used - credit lines. According to statistics, the total amount of issued green loans is about \$ 60 billion in 2018, which is 30% more than in 2017 (Figure 6). The largest number of green loans (over 40% of the world's volume) falls on the following countries: USA, Great Britain, Spain, India. Moreover, about 75% of outstanding green loans are directed to the sectors of renewable energy and electricity generation. The average maturity of such green loans is 15 years. In addition, grants are an important tool for raising funds for long-term financing of green business financing projects. The world's largest sponsor of environmental projects is the Global Ecological Facility (GEF), which has received more than \$ 19.2 billion in grants, co-financed more than 4,700 projects in 170 countries, an additional \$ 101.4 billion, funded 23,991 projects in 128 countries (GEF, 2019).

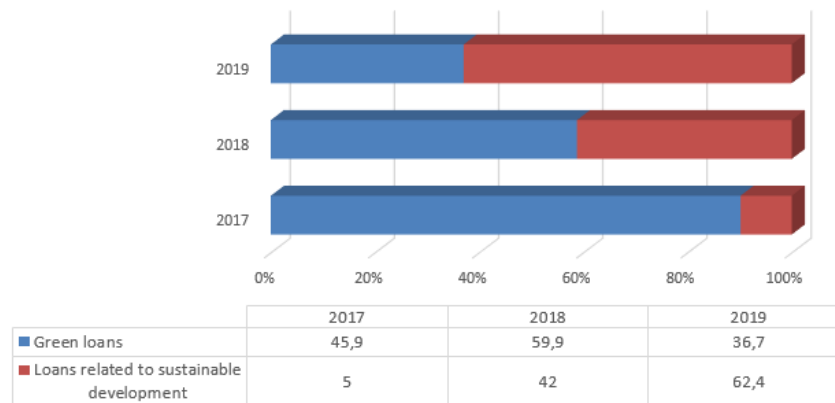


Figure 6. Dynamics of global green loans, \$ billion (Sustainable Finance in Focus, 2019)

The results of the analysis indicate a low level of motivation of Ukrainian enterprises for innovation and the introduction of green technologies, including due to funding problems. The general picture indicates that currently industrial enterprises are not interested in implementing environmental innovations. That is, in Ukraine there are no mechanisms to stimulate enterprises to green their production and implement environmental innovations. At the same time, the public demonstrates the need to change the attitude of local and state authorities to environmental issues and expects the formation of an action plan to create the necessary infrastructure. At the same time, the public in Ukraine demonstrates a high level of readiness to participate in environmental activities, ranging from their own household activities to participation in large-scale projects.

4.2. Green entrepreneurship: trends, problems

The development of green entrepreneurship is an important area of modern business (Table 1).

The largest percentage of greening is in the energy sector - more than half. A high percentage of greening is characteristic of the food industry, agriculture and water management, transport. The purpose of ecological business is not only to make a profit, but also to improve the health of the planet. There is a fairly high demand for green products. That is, profitability and development prospects, benefits to the environment, society, the planet - the main reasons for opening an eco-business or reorienting the existing business in the "eco" format. Propaganda to use less plastic, the principle of zero waste, the principle of ugly fruits - are already a trend in the world. Among entrepreneurs, eco-trends are also reducing waste, more efficient use of resources, reducing the amount of plastic and its derivatives, and so on.

Green business in the world is supported by the state. An effective tool for the development of environmental entrepreneurship are environmental ("green") taxes.

Table 1. Current trends in green entrepreneurship

Activity	Characteristic
Eco-building	<ul style="list-style-type: none"> -design and construction of energy efficient buildings; - eco-sewerage, installation of biological treatment systems; - recycling and safe waste management; - development of renewable energy; - wastewater treatment.
Ecological repair	<ul style="list-style-type: none"> - use of ecological materials in repair and finishing works (clay plasters, safe casein and clay paints, etc.); -offer to a traditional brick house clay floors and roofing of natural materials (hemp, reeds, straw); -creation of a green roof (landscaping services - on the roof of an office or high-rise mini-square, lawns, flower beds, trees).
Ecological cleaning	<ul style="list-style-type: none"> -cleaning with the use of safe detergents that are not able to cause any allergies in humans; -recycling of packaging material without harming the environment
Collection, sorting and recycling of household waste	<ul style="list-style-type: none"> -creation of convenient containers for waste collection in homes; - sorting plant, waste processing
Creating a "green" office	<ul style="list-style-type: none"> -selection of energy saving equipment; -creation of comfortable space, landscaping, selection of plants, care for them; -management of "garbage flows"; -selection of ecological office goods
Ecodesign	<ul style="list-style-type: none"> - interior design using natural materials (wood, stone, clay), recycled materials (recycling) - for example, corrugated cardboard, plants; -design of "environmental" products and goods, development of models in the "natural" style, etc.
Energy saving	<ul style="list-style-type: none"> - installation of solar panels and collectors, wind generators, heat pumps; -solving problems in obtaining funding for energy efficiency measures
Eco product	<ul style="list-style-type: none"> - production, supply and sale of certified organic food, natural "living" clothes, toys made of natural materials; - services of consultants in nutrition, healthy eating; - organic SPA, care products, organic cosmetics
Ecological transport	<ul style="list-style-type: none"> - use of electric vehicles (both private and public), bicycle rental and repair services; - production of electric vehicles
Ecotourism, eco-recreation	<ul style="list-style-type: none"> -green farmsteads of rural tourism, country eco-farmsteads, luxury eco-hotel, eco-recreation centers
Eco-education	<ul style="list-style-type: none"> -training, lectures, seminars, round tables, forums, eco-schools, eco-festivals and eco-hackathons for different segments of the population on the formation of environmental awareness and environmental advocacy

In EU member states, "green taxes" are divided into 4 categories relating to energy, transport, pollution and resources, and includes replacement taxes and fees. Eurostat (2018) on environmental taxes (Figure 7).

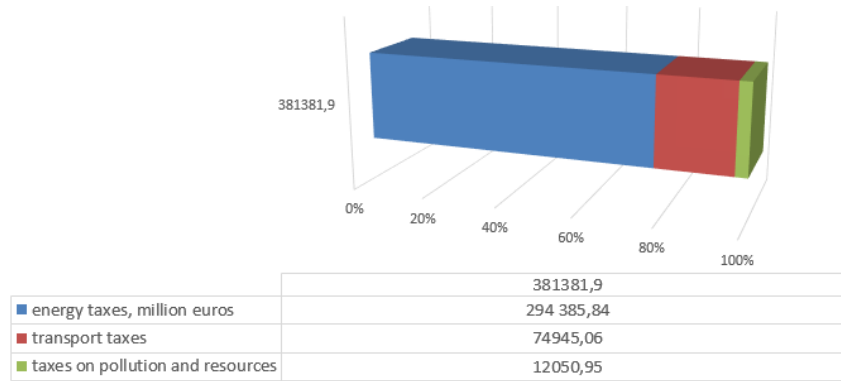


Figure 7. Green taxes in the EU in 2018, million euros (Eurostat)

According to Eurostat (2018), revenues from the green tax in the EU amounted to 381.38 billion euros, which is 2.4% of gross domestic product of the EU and 6.12% of total EU tax revenue. The share of green tax revenues in GDP (2006 - 2018 years) varied from 2.29 to 2.46%, and in total tax revenues from 6.05 to 6.39% (Figure 8).

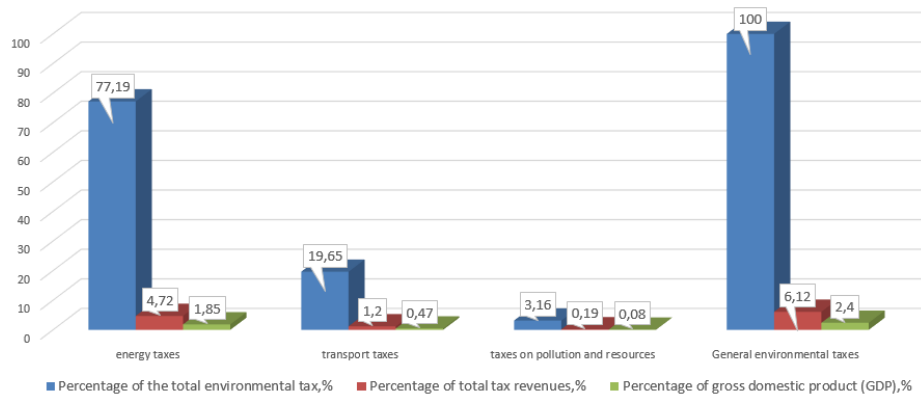


Figure 8. Green taxes in the filling of the EU budget, 2018,% (Eurostat)

In the structure of the green tax in the EU countries, the largest share falls on energy taxes - 77.19%, transport is 19.65%, taxes on pollution and resources -3.16% (Eurostat). Ukraine ranks 109th among 180 countries in the world according to the Environmental Performance Index 2018 (The Environmental Performance Index 2018). In Ukraine, the environmental tax is a national mandatory payment paid by entities that pollute the environment - air, water resources, dispose of and generate waste (including radioactive). Revenues of the environmental tax in Ukraine (2015-2019) are shown in Figure 9.

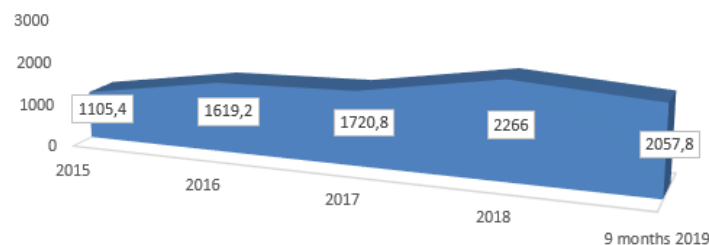


Figure 9. Environmental tax in Ukraine, 2015-2019, UAH million

According to Figure 9, in Ukraine, with the constant growth of environmental tax rates, the share of revenues from this tax to the state budget remains insignificant and is insufficient to finance the necessary environmental measures. In 2018, the environmental tax of 6.3 billion is 0.2% of GDP. For comparison, the EU average is environmental taxes and fees are 2.4% of GDP. That is, we can say that the tax in Ukraine is extremely low.

In European countries, the environmental tax performs both a compensatory function (tax

revenues are several times higher than government spending on environmental measures, for example, in Germany and the UK more than 3 times, Poland - 6 times and fiscal up to 10% tax revenues, in Bulgaria about 10%, in Poland 8% and in the UK 7%). A significant share in the revenues of the environmental tax to the state budget is the tax on such objects as the volume of waste and radioactive waste (68.5% in 2017 and 55.7% in 2018). Today, according to the current Tax Code of Ukraine, the environmental tax is distributed between the budgets of different levels in the following proportions: local budgets - 55%; state budget - 45%. A regional study from 2017 found that most regions use no more than 10% of the environmental tax. That is, regional authorities are not able to properly dispose of environmental tax revenues. The funds are used for the reconstruction of sewers, the fight against quarantine plants, the reconstruction of city parks or simply transferred to a deposit in a bank to receive interest. The European experience is somewhat different: there are a number of instruments in the EU based on environmental taxes that allow the financing of environmental measures. Proceeds from the environmental tax are directed to the issuance of environmental grants and soft loans; tax rebates and specialized funds are created.

The Ukraine lacks quality financial instruments for environmental incentives. The business implements environmental projects exclusively from its own very limited funds, sometimes to the detriment of development projects. Increasing the environmental tax reduces the amount of free funds of enterprises: these funds could be used for the implementation of environmental programs and development projects.

Today, Ukraine remains one of the few countries in Europe that does not have a nationwide targeted environmental waste management program. Failure to ensure effective control leads to the mass formation of unauthorized landfills and numerous violations of legislation in the field of waste management. The main reason for this situation is the imperfection of the regulatory framework, the inefficiency of the system of accounting, reporting and monitoring, the ineffectiveness of measures to monitor the results of each project within a specific program to address environmental problems. Environmental responsibility must be ensured at all levels: the state, business, public organizations, society.

The organizational and economic mechanism for ensuring the development of green entrepreneurship on the basis of environmental responsibility is presented in Figure 10. In fact, local governments and enterprises are two important players in Ukraine's environmental management system.

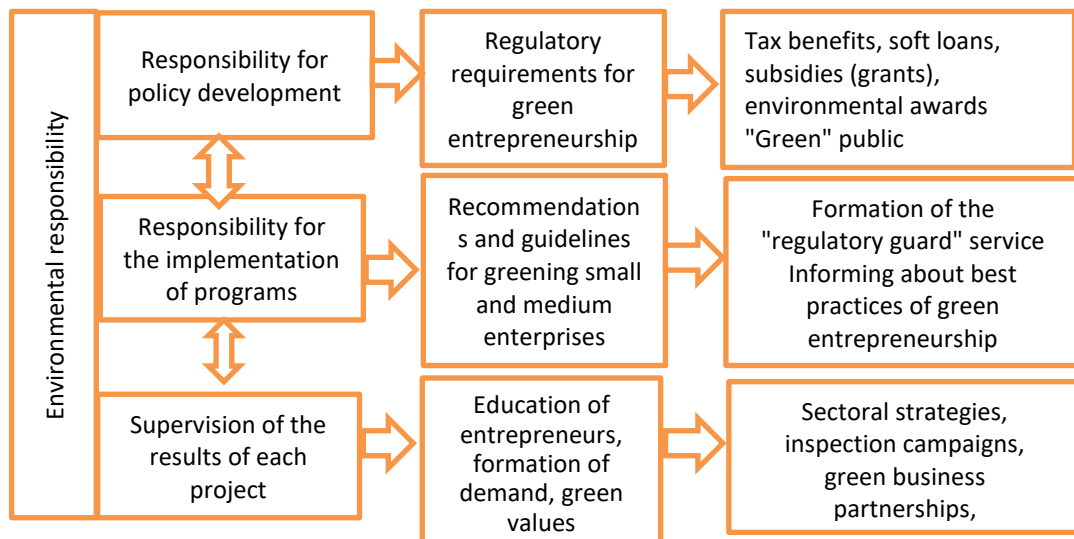


Figure 10. Organizational and economic mechanism of green entrepreneurship development on the basis of environmental responsibility

Therefore, understanding the nature and nature of the interaction between corporate environmental responsibility and state environmental responsibility will enhance cooperation between corporations and government, create an appropriate environmental management system,

and promote sustainable development. In this regard, environmental responsibility should be divided into:

- responsibility for policy development;
- responsibility for the implementation of major activities in the form of specific programs;
- responsibility for overseeing the results of each project within a specific program to solve environmental problems.

The effectiveness of the implementation of green projects within the state program of sustainable development is assessed depending on the values of the degree of implementation of the project / program:

$$EI_{sp} = 0,5 \cdot W_{sp} + 0,5 \cdot \sum EI_{pp} \cdot \frac{k_j}{j} \quad (1)$$

where EI_{sp} - the effectiveness of the implementation of the state program;

W_{sp} - degree of implementation of the state program;

EI_{pp} - subprogramme / project implementation efficiency;

k_j - the coefficient of significance of the subprogram / project to achieve the goals of public administration.

It is determined by the formula:

$$k_j = \frac{F_j}{F} \quad (2)$$

F_j - actual expenditures from the budget for the implementation of the j-th subprogram / project in the reporting year;

F - the amount of actual expenditures from the budget for the implementation of the state program / project;

j - number of subprograms / projects.

The method of evaluation "plan-result" is acceptable for monitoring the effectiveness of green projects at the state or regional level, according to the implementation of environmental programs. Studies have shown that Ukraine has a high potential in this direction of economic transformation and a high level of public readiness for such changes.

5. Conclusion

In this study the main aspects and organizational and economic tools of green entrepreneurship development on the basis of environmental responsibility are considered. The global trends of development of "green" economy on the example of the best world practices are considered, the basic laws, leaders in processes of development of sustainable economy are allocated. As world experience shows, the basic basis of green entrepreneurship is environmental responsibility, which should be considered at the levels (state, enterprises, public). The analysis revealed the main tools to stimulate green entrepreneurship: environmental taxes, "green" investments, instruments of stimulating influence on green entrepreneurship. Innovative activity is highlighted by the indicator of readiness of enterprises for the process of greening. Studies have shown low innovation activity of industrial enterprises of Ukraine, a low percentage of green innovation. At the same time, the sources of funding are mainly the own funds of enterprises, the deficit of which is particularly acute during the crisis. At the heart of the organizational and economic mechanism to ensure the development of green entrepreneurship is environmental responsibility. It is established that local governments and enterprises are two important participants in the environmental management system in Ukraine. Therefore, understanding the nature and nature of the interaction between corporate environmental responsibility and state environmental responsibility will enhance cooperation between corporations

and government, create an appropriate environmental management system, and promote sustainable development. It is proposed to divide environmental responsibility into the following levels: responsibility for policy development; responsibility for the implementation of major activities in the form of specific programs; responsibility for overseeing the results of each project within a specific program to solve environmental problems. The main organizational measures and tools for the development of green entrepreneurship are considered.

Mechanisms for regulating environmental responsibility at the national and corporate levels - the direction of further research.

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