

# DEVELOPMENT OF GREEN BUSINESS IN THE EU: OBSTACLES AND STATE SUPPORT

**Julia Sagaydack, Taras Shevchenko National University of Kyiv**  
**Tetiana Kharchenko, Taras Shevchenko National University of Kyiv**  
**Daria Kendus, National university of life and environmental science of**  
**Ukraine**

**Alina Proshchalykina, Bohdan Khmelnytsky National University of**  
**Cherkasy**

**Maryna Hrabar, Uzhhorod National University**  
**Lesia Chubuk, Taras Shevchenko National University of Kyiv**

## ABSTRACT

*New lifestyles, the evolution of consumer behavior and the constant changes in their preferences, combined with widespread environmental concerns, industrial heritage and sustainable development, are all factors that have led to the emergence of new niches for business. This article stressed the importance of developing "green business" in the context of sustainable development. The objectives of this article are to study important issues in the implementation of the concept of "green business" in the EU. The main methods used in this study are statistical analysis, index, analytical methods, grouping methods and comparisons. The generally accepted methods of economic research, in particular economic-statistical, economic-mathematical modeling (regression analysis) are also used.*

*The forms of realization of the concept of green business in the EU are considered, the state support of ecotourism as the main direction of "green business" in the conditions of a pandemic is also analyzed. The effectiveness of the development of "green business" in the EU was assessed using a set of indicators for the development of green growth, which concluded that the level of greening of production and intensification of the development of "green business" in the EU. The consequences of the EU's "green course" have also been characterized structural reformatting of the energy balance and reorientation to the use of alternative, renewable energy sources for production purposes. To assess the impact of green business development on GDP per capita, a regression analysis was used, which showed that the increase in R&D (Research&Development) expenditures on renewable energy research and the share of renewable energy in the overall energy balance will negatively affect GDP per capita.*

**Keywords:** Ecotourism; Sustainable development; EU policy; Green business.

**JEL:** Q01, Q2, Q5, R11, Z32

## INTRODUCTION

As the world's environmental crisis unfolds, the most promising ideology of the entire third millennium is sustainable development, which guarantees that current needs are met without compromising the ability of future generations to meet their own needs (Brandt &

Buckley, 2018). The basic idea of sustainability is to use the planet's natural resources while protecting and preserving the environment (Bran et al., 2019). Development is considered as a whole, combining economic growth with preserving and improving the environment (Negescu Oancea et al., 2019). At the present stage of development of the international economy, the issue of ensuring sustainable development is relevant, which is also represented by the promotion of "green business".

"Green business" should be interpreted as the latest concept of business management, which is based on ensuring the rational use of natural resource potential of the country with minimizing the negative impact of the operation of enterprises on the environment. At the same time, such a concept should be based on ensuring the harmonization of environmental, economic and social spheres.

Under the "green business" or "sector of environmental goods and services" means the entrepreneurial activity of a set of economic entities that offer goods and services that increase resource efficiency, improve waste management and minimize environmental damage.

One of its areas is ecotourism as a community activity worldwide is considered to be the fastest growing segment of the tourism industry (O'Rourke, 2019) and is able to improve the economy in an environmentally sustainable way (Galli et al., 2017). Ecotourism is not a fad, but a necessity of the third millennium (Honey, 2008), which can bring long-term income to both local communities and businesses or segments involved in the sustainable exploitation of these natural resources (Bran et al., 2018). Thus, the concept of "green business" in the implementation of tourism provides protection of habitats that are vulnerable to the classic tourist exploitation (Rădulescu et al., 2018).

The purpose of this article is to analyze the theoretical and practical issues of "green business" in the EU. This involves studying the peculiarities of the development of the European model of "green business", identifying a list of problems that negatively affect the development of "green business", identifying areas of state support for "green business".

## RESEARCH METHODOLOGY

To achieve the desired results, EU policies, programs and initiatives were analyzed, as well as the Organization for Economic Co-operation and Development (OECD) data set, which is formed from selected indicators of green growth monitoring to support policy making and informing the public as a whole.

The selection of this set was made after reviewing the available sources on the subject and based on the availability of data, given that statistical databases for the new Member States are not always up-to-date or complete. The definition of general trends was made based on statistical analysis as the main quantitative method of research. The main methods used in this study are statistical analysis, index, analytical methods, grouping methods, comparisons. Commonly used methods of economic research are also used, in particular economic-statistical, economic-mathematical modeling (regression analysis), etc.

## RESULTS AND DISCUSSION

Among the main forms of implementation of the concept of "green business" in the EU, it is appropriate to highlight the following:

- Formation of green clusters, the activities of which are aimed at the implementation of environmentally friendly projects through the combination of production systems with the latest technologies, science and education;
- Popularization and development of "green" energy, which aims to balance the production and consumption of energy and materials;
- Ecological modernization of the transport system, the priority of which is to minimize the harmful effects of transport on the environment, in particular, the decommissioning of obsolete cars, the promotion of electric cars or hybrid vehicles;
- Development of organic production due to reduction or abandonment of pesticides and other harmful substances used in agriculture;

Stimulating the development of ecotourism - the implementation of projects aimed at raising the level of environmental awareness among the population, the development of rural communities.

It is worth noting that the pandemic caused by the spread of Covid-19 contributed to the promotion and intensification of ecotourism in Europe, the demand for which averaged 40% of total market demand and shows a gradual increase in profitability. Ecotourism in European countries is not only one of the areas of implementation of the concept of "green business", but also is one of the areas of agricultural development.

In addition, it should be noted that in the context of a pandemic in order to ensure state support for this area, a number of measures were taken, including:

- Reimbursement of the cost of canceled tourist packages from the Tourism Guarantee Funds;
- Development and implementation of proposals to minimize financial losses associated with the work of tour operators during a pandemic;
- Formation and allocation of the state financial package for the purpose of protection of workplaces in the field of ecotourism;
- Increase of state guarantees;
- Introduction of tax benefits and tax holidays;
- State support of ecotourism through financing of domestic tourism for privileged categories of the population, etc.

The introduction of such measures has created the preconditions for minimizing and mitigating the effects of the financial crisis caused by the pandemic.

In order to study the effectiveness of the development of "green business" in the EU, we analyze the indicators of Table 1.

<b>Indicator</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2015/ 2014</b>	<b>2016/ 2015</b>	<b>2017/ 2016</b>	<b>2018/ 2017</b>
Energy-related carbon intensity of GDP, USD/kg	6.08	6.14	6.29	6.45	6.72	100.99	102,443	102.54	104.17

CO <sub>2</sub> emissions from industry, tons	3175,08	3220,51	3206,09	3214,05	3150,88	101.43	99.55	100.25	98.03
Volume of CO <sub>2</sub> emissions related to energy per capita, tons	6.26	6.33	6.29	6.29	6.16	101.12	99.37	100	97.93
Renewable energy, % of total energy supply	13.05	13.37	13.53	13.7	14.32	0.32	0.16	0.17	0.62
Renewable energy, % of total energy production	28.48	29.24	29.51	29.83	32.4	0.76	0.27	0.32	2.57
Energy consumption by industry, in % of total energy consumption	23.47	23.04	22.74	22.8	23.08	-0.43	-0.3	0.06	0.28
Renewable energy sources (except solid biofuels), % of total energy supply	7.14	7.29	7.39	7.53	8.1	0.15	0.1	0.14	0.57
Development of ecological technologies,% of all technologies	12.14	11.56	10.81	-	-	-0.58	-0.75	-10.81	0
Expenditures from the state budget for research and development of renewable energy sources, % of R&D funding for energy research	22.94	25.95	30	23.89	26.7	3.01	4.05	-6.11	2.81
Expenditures from the state budget for R&D on energy ,% of GDP	0.01	0.01	0.01	0.01	0.01	0	0	0	0
GDP per capita, USD	38026.8	38862.18	39573.58	40592,56	41384.25	835,38	711.4	1018,98	791,69

Source: summarized and calculated by the authors according to The OECD. Green Growth Indicators (2021).

According to Table 1, it is expedient to conclude that the carbon intensity of GDP related to energy during 2014-2018 continues to grow, which indicates an increase in the level of greening of production and intensification of the development of "green business" in the EU. At the same time, CO<sub>2</sub> emissions from industry remain quite high, although in 2016 and 2018 there was a decrease in this indicator. As for energy-related CO<sub>2</sub> emissions per capita, a slight increase was observed in 2015, while in 2016-2018 there was a decrease in this indicator.

There is a positive trend in the share of renewable energy in the structure of total energy supply and total energy production, which, of course, indicates the effectiveness of environmental projects and programs aimed at ensuring energy efficiency in the EU.

According to Table 1, the share of energy consumption by industry in the overall balance of energy consumption remains quite high and continues to grow.

A positive shift is the growing share of renewable energy sources in the structure of total energy supply, which, in turn, indicates the focus of EU countries on structural reformatting of the energy balance and reorientation to the use of alternative, renewable energy sources, which will inevitably have a positive impact on the environment and contribute to the conservation and rational use of exhaustible natural resources.

The share of the development of environmental technologies during 2014-2016 is low and continues to decline. At the same time, expenditures from the budget to finance R&D on energy in 2014-2018 are unchanged and amount to only 0.01% of GDP. The share of research expenditures on renewable energy sources increased in 2015-2016, a decrease was observed in 2017, while in 2018 it increased by 2.81%. In addition, it should be noted that the value of GDP per capita in 2015-2018 had a steady upward trend. Thus, the obtained results indicate positive changes in the context of "green business" development, however, the dynamics of the analyzed indicators also indicates the need to intensify research in this area, the development of environmental technologies and increase funding in this area.

-In order to assess the impact of the development of "green business" on GDP per capita, it is advisable to perform a regression analysis. The initial data and the results of the analysis are given in Tables 2 & 3.

TABLE 2 INITIAL DATA FOR REGRESSION ANALYSIS					
Years	GDP per capita, USD (y)	Expenditures from the state budget on research and development for renewable energy sources, % of R&D funding for energy research (X <sub>1</sub> )	Energy-related carbon intensity of GDP, USD/kg (X <sub>2</sub> )	Energy productivity of GDP per TRES unit, USD 2015 (X <sub>3</sub> )	Renewable energy, % of total energy production (X <sub>4</sub> )
2014	38026.8	22.94	6.08	11585.73	28.48
2015	38862.18	25.95	6.14	12429.85	29.24
2016	39573.58	30	6.29	12621.52	29.51
2017	40592,56	23.89	6.45	12802,36	29.83
2018	41384.25	26.7	6.72	13207.3	32.4

Source: systematized according to The OECD data. Green Growth Indicators (2021)

TABLE 3 THE RESULTS OF REGRESSION ANALYSIS			
<i>Regression statistics</i>			
Multiple R		1	
R-square		1	
Normalized R-square		65535	
Standard error		0	
Observations		5	
Analysis of variance			
	<i>df</i>	<i>SS</i>	<i>MS</i>
Regression	4	7150148,826	1,787,537,206

The rest		0		0		65535	
Total		4		7150148,826			
	<b>Coefficients</b>	<b>Standard error</b>	<b>t-statistics</b>	<b>Lower 95%</b>	<b>Upper 95%</b>	<b>Lower 95.0%</b>	<b>Upper 95.0%</b>
Y-intersection	6911,023	0	65535	6911,022816	6911,023	6,911,023	6,911,023
Variable X <sub>1</sub>	-28,308	0	65535	-28,30790406	-28.3079	-28.3079	-28.3079
Variable X <sub>2</sub>	4756,892	0	65535	4756,891541	4756,892	4,756,892	4,756,892
Variable X <sub>3</sub>	1,046	0	65535	1,045517412	1,045517	1,045,517	1,045,517
Variable X <sub>4</sub>	-325,485	0	65535	-325,4853411	-325,485	-325,485	-325,485

Source: calculated based on the results of the study

According to the results of the analysis, the theoretical equation of linear regression will look like this:

$$y = 6911,023 - 28,308X_1 + 4756,892X_2 + 1,046X_3 - 325,485X_4$$

Thus, from the obtained results it can be concluded that the positive dynamics of budget expenditures for R&D on renewable energy sources and the share of renewable energy in the overall energy balance will negatively affect the GDP per capita. As for other studied factors, they directly proportionally affect the value of the studied indicator. The value of the multiple correlation coefficients R indicates that the econometric model adequately describes this economic dependence.

The success of the implementation of the concept of "green business" largely depends on the priority and level of funding for such projects. In particular, in the EU the financial policy in the field of "green business" provides:

- State support for research and economies;
- Improving the investment climate by reducing taxation or exemption from taxation for investors who invest in the development of such business;
- Preferential lending for the development of "green business" (stimulation of "green banking");
- Introduction of a government guarantee system.

In addition, most business structures aimed at increasing the level of greening face a number of problems, including: limited access to financial resources aimed at developing "green business", high capital intensity and payback period of eco-technologies, high risk, which accompanies the implementation of eco business ideas, etc.

Green business can provide a higher level of employment, increase incomes, and reduce spatial disparities, mainly economic development, which is also in line with the objectives of European cohesion policy. Green business is also not only a useful tool for integration, stability and unity in Europe, but also a key tool for developing a European identity, as Diaconescu et al. (2007) also noted.

Green Business will also promote fiscal decentralization due to the creation of conditions for activating the population to self-realization through the creation of their own business, which is quite relevant for Ukraine (as noted by Lopushniak et al., 2016) and solving the problems of innovative development of Eastern European countries, which were noted by Kubiv et al. (2020).

However, green business has also been affected by COVID-19; in particular, the pandemic has had a positive impact on the environment as a whole, so it is advisable to intensify sustainable development in these conditions (Galvani et al., 2020; Higgins-Desbiolles, 2020). The question remains to determine whether this change in the environment is only a short-term shift or can lead to a long-term drop in emissions through the efforts of various stakeholders, including those related to the development of "green business". Such environmental changes require the transformation of green business initiated by COVID-19, the definition of how to respond to climate change and the carbon-neutral economy in the transition from the current pattern of high-resource consumption to clean and resource-neutral (Prideaux et al., 2020).

## CONCLUSION

In general, it can be stated that two directions characterize EU policies, programs and initiatives. On the one hand, "green business" is seen as an economic sector that requires regulation, so it must be sustainable, profitable, high quality and accessible to all social categories, and, on the other hand, it is perceived as ancillary activities as a means to achieve other additional goals. Therefore, when it comes to European structural and agricultural policy, green business and its economic consequences are one of the main innovations.

Promising areas of further research are the study of ecotourism, agritourism and rural tourism in the EU in the context of sustainable development and functioning of other areas of "green business" in the formation of the foundations of a circular economy.

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