Ministry of Education and Science of Ukraine
Sumy State University
Kaunas University of Technology, School of Economics and Business
University of Bradford, School of Management
Riga Technical University
Czech University of Life Sciences Prague
University of New Brunswick
International Centre for Enterprise and Sustainable Development (ICED), Accra, Ghana

"ECONOMICS FOR ECOLOGY"

Materials
International scientific-practical conference
(Ukraine, Sumy, May - June 31- 01, 2022)

Sumy
Sumy State University
2022

УДК: 330.36.012

Авторський знак: S70

Editor-in-Chief Prof., Dr. Karintseva Oleksandra, Head of the Department of Economics, Entrepreneurship and Business Administration, Sumy State University

Approved by the Academic Council of Sumy State University (order № 0547-I, 12 September, 2022)

Economics for Ecology : Proceedings of the International Scientific and Practical Conference, Sumy, 31 May – 01 June, 2022 / edited by Karintseva Oleksandra and Kubatko Oleksandr . – Sumy : Sumy State University, 2022. – 93 p. ***(electronic edition)***

For scientists, scientists, students, graduate students, representatives of business and public organizations and higher education institutions and a wide range of readers.

© Sumy State University, 2022

ENVIRONMENT AND INTERNATIONAL TRADE

Oleksandra Kubatko, *PHD in Economics, As., Prof.,*
Yurii Mazin, *PHD in Economics, As., Prof.,*
Yevheniia Stepanenko, *student*
Sumy State University, Ukraine

Activities aimed at sustainable development, of course, are increasingly affecting companies' image and directly the purchasing decisions made by consumers. The more customers know about sustainable development methods, the more consciously they choose and the more they become attached to the manufacturer, brand, or the entire network.

The idea of a European green agreement fits in quite well with the social sentiments observed among EU citizens and not only. Phenomena related to environmental protection, sustainable development, and caring for the planet have been further reinforced by the COVID-19 pandemic, which has highlighted the need for global action for a better tomorrow. This is also evident in the surveys conducted among citizens of 27 countries of the European Union in the period from March 15 to April 14, 2021, among almost 27 thousand residents of the European Union.[1]

Global planning for activities aimed at reducing the adverse effects of development began many years ago at the international level. One of the effects of this work was the development of a global strategy, "Sustainable Development Goals", established in 2015 by the United Nations (UN) under the initiative "Agenda for Sustainable Development to 2030"[2]. As a result of negotiations, more than 100 heads of state were developed 17 key goals to implement this idea effectively. It is a series of global activities covering aspects such as combating hunger and poverty, equalizing opportunities between regions, combating climate change, protecting natural resources or equality, and education.

With each passing day, sustainable development is gaining more and more popularity, and people are beginning to be interested and learn what it is[6,7,9,10,11,12,14,15,16,17,18,19,20,]. Companies have taken a similar interest in protecting the environment as well. As the world started to talk about it, some companies began to produce environmentally friendly products, thereby becoming less polluting and meeting consumers' demand who are also interests in it. But not all companies have been able to minimize environmental pollution because then the cost of production increases well.

There is an opportunity to buy so-called "environmentally dirty" goods abroad in large, economically developed countries. These are products that produce a lot of CO2 emissions and are very polluting. Countries such as Ukraine have non-environmental goods to their detriment to improve the country's economy by trading with more developed countries.

And the establishment of new forms of trade and economic cooperation between Ukraine and the EU should take place on a parity and partnership basis, balancing the potential environmental losses that may be due to: increasing man-made load in the process of economic growth; intensification of competition; introduction of environmental taxes, fees; development of ecological market infrastructure; greening of production and entrepreneurship, etc[3,4,5,8,13]. The potential for the development of foreign trade relations in the EU is already characterized by a competitive environmental industry, which demonstrates horizontal and vertical diversification of the range, increasing sales.

If talking about environmental taxes that may be levied in EU countries, it coincides in part with the components of the environmental tax in Ukraine: for example, pollution taxes and partly energy taxes in the EU and features of the environmental tax in Ukraine such as air pollution tax, discharges of pollutants into water facilities, waste disposal, tax on the amount of electricity generated by operating organizations of nuclear installations (nuclear power plants).

At the same time, EU environmental taxes include the following types of taxes that exist in Ukraine separately from environmental taxes: namely, transport taxes and resource taxes in the EU and rent for special use of forest resources, water, subsoil use in Ukraine.

Intensifying participation in international trade is also very important for Ukraine. The country has not been able to regain its potential since the 1990s. The decline in foreign trading has become a disappointing trend in recent years. Recognition of the relationship between the dynamics of the country's development and its participation in international trade, the impact of trading on sustainable development, and establishing ways to intensify foreign and international trading in global instability, of course, is an important task of economic research.

References

1. Eurobarometer: Climate Change. Retrieved from https://europa.eu/eurobarometer/surveys/detail/2273
2. Resolution adopted by the General Assembly on 25 September 2015 : “Transforming our world: the 2030 Agenda for Sustainable Development”. Retrieved from https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf
3. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09. https://essuir.sumdu.edu.ua/handle/123456789/80687

4. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). C. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

5. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. C. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

6. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. C. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

7. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. C. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

8. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. C. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

9. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. C. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

10. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. C. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

11. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. C. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

12. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. C.

117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

13. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. C. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

14. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. C. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

15. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. C. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

16. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. C. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

17. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

18. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

19. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

20. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

THE AGRICULTURAL SECTOR DEVELOPMENT IN CONDITIONS OF ECONOMIC AND ENVIRONMENTAL FLUCTUATIONS

Oleksandra Karintseva, *Dr.Sc., Prof.,*
Oleksandra Kubatko, *PhD., Ass. Prof.,*
Vlad Piven*, student,*
Sumy State University, Ukraine

The enterprises of the agro-industrial complex traditionally play an important role in the economy of Ukraine. Soil and climatic conditions, natural resource potential and labor resources do allow to create effective internationally competitive agriculture sector. The world experience shows that the agribusiness sector is always attractive for investment, because there is always a steady demand for agricultural products, which does not tend to decrease. Agriculture can be a source of growth for the national economy. According to World Bank estimates based on a comparison of a number of countries, GDP growth driven by agricultural growth is at least twice as effective at reducing poverty as GDP growth from other industries. The main problems of the industry are:

low competitiveness of products and their non-compliance with international quality and safety standards;

low level of investment and growing dependence on public funding;

low economic efficiency of agricultural production compared to other countries, the use of outdated technologies;

dominance in the structure of exports of products with a low level of processing;

reducing soil fertility and increasing their erosion.

The projected increase in precipitation fluctuations and climat and economic fluctuations do predict longer periods of drought, and will therefore increase the need for irrigation and the development of appropriate adaptation measures [1-2]. Given the unsatisfactory technical condition and low level of operation of reclamation networks in the agro-industrial complex of Ukraine.

According to environmentalists, climate fluctuations will affect crops. Among the results of recent efforts of breeders to improve crops that help farmers cope with the changing weather, we can name: drought-resistant rice for Africa, flood-resistant rice, drought-tolerant beans, etc. The development of adapted plant varieties is relevant, so investing in various breeding programs should be one of the promising areas. Another important aspect is investment in integrated disease control and pest spread.

Reducing the vulnerability of agricultural systems to climate change also requires a shift in land use, which includes measures to preserve agriculture, which

are based on minimal soil disturbance (reduction of cultivation, or no cultivation at all), in combination with organic farming, organic matter (return of plant residues to the soil) and various crop rotations, microdosing.

Since the 90s of the twentieth century, many countries around the world are forming markets for organic products, the volume of which is growing rapidly today, due to: increasing environmental disasters, conflicts over food at the state level, increasing consumer awareness of their own future and the future of their children, the environment. In agriculture, the implementation of the principles of sustainable development is also becoming especially important[6,7,9,10,11,12,14,16,17,18,20]. Based on the principles of sustainable development, Ukraine's agriculture should provide a steady increase in agricultural production to ensure food security and expand the export potential of the industry, should provide the population with affordable high-quality food, be profitable,

Thus, the priority measures for the revival of the agricultural sector should be to improve the financing and lending of the agro-industrial complex and to identify promising areas of investment in conditions of economic and environmental fluctuations[3,4,5,8,13,15,19]. Among the strategic areas of investment in agriculture are: the development of breeding programs for adapted plants, pest and disease control of plants and livestock, organic agriculture.

References

1. Kubatko O. V. Duality of Fluctuations in Economic Systems Development. *Механізм регулювання економіки*. 2013. № 2. С. 18–23.

2. Kubatko O. V. Pimonenko T. V. DCFTA implementation in condition of macroeconomic fluctuations in Ukraine. *Механізм регулювання економіки*. 2015. № 4. С. 108–117.

3. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

4. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

5. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of “Change” as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

6. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

7. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

8. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

9. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

10. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

11. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

12. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

13. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02.
https://essuir.sumdu.edu.ua/handle/123456789/83750

14. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм*

регулювання економіки. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

15. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

16. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

17. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

18. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

19. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

20. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

DEVELOPMENT OF COMPETITIVE GROWTH STRATEGY AND IMPLEMENTATION OF INDUSTRY 4.0 MODEL AT THE ENTERPRISE

Oleksandra Karintseva, *Dr.(Economics), Prof.*
Mukola Kharchenko*, PhD, As. Prof.,*
Diana Kharchenko, *student,*
Sumy State University, Ukraine

Determining the right strategic course is the most important task company, as this is the priority of its relatively long-term activities. Therefore, for the company's management is especially particularly internal and external factors and focus on many others in the formulation process and strategy implementation. Each organization in its activities adheres to a certain strategy of behavior, regardless of when and under what conditions it operates.

Strategic management has several definitions of different authors [1]:

- The process of identifying and establishing an organization's (enterprise's) relationship with the environment, including the implementation of selected goals and efforts to achieve the desired state of relationship with the environment by allocating resources to make the organization and departments effective (D. Schendel, K. Hatten).

- The process of managing the implementation of an organization's mission through the interaction of company management with the environment (J. Hittenson).

- A set of decisions and actions used to formulate and implement strategies to achieve company goals (J. Leroy, R. Robertson).

Strategic management gives an idea of what the organization should look like the future: in what environment she needs to work, what position she occupies in the market, what is the competitive advantage and what changes should the organization make.

Often, strategies are developed over the next few years, specified in various projects, programs, practical activities and implemented at runtime.

In general, strategic management covers the following stages:

• Define the mission and goals of the organization.
• Strategic Analysis.
• Choice of development strategy.
• Implementation of the strategy.
• Control and evaluation of strategy implementation.

In turn, the strategic management process has the following stages [2]:

- The first phase involves understanding the problems facing the organization and developing the strategic vision and mission of the organization.

- The second stage involves the assessment and analysis of the organization's potential, position and competitive advantage.

- The third stage consists of creating a list of alternative and basic strategies and choosing the best strategy for a given situation.

- The fourth stage consists of organizational actions to implement the selected strategy: project development and planning, restructuring, including alignment of the organization with the strategy.

- The fifth stage involves the implementation of the strategic control process, the implementation of the adjustment strategy.

The strategic management process includes feedback that exists between steps to be able to improve and revise the results of previous stages.

In the qualification work, we developed a competitive strategy for the company LLC "Invert".

The company specializes in a wide range of cookies, which is made with the latest technology.

Consumers of confectionery are all age groups. The main consumers are in large cities of Ukraine and surrounding areas. The products are also exported to Latvia, Romania, Bulgaria, Iran, the Czech Republic, Israel, Azerbaijan and other countries.

Currently, about 800 companies operate in the confectionery market. LLC "Invert" owns 10-15% of the market share. The status of the organization is quite high, company has a competitive advantage in the Ukrainian market, which determines the desire of the company's management to rise to new heights and gain an advantage in the international market.

The main goal of the company is to win more market share (2 times), but for many years it failed.

According to the SWOT analysis, the company's weaknesses were identified, namely insufficiently effective promotion of goods and ways to enter new segments of this market.

Therefore, a marketing strategy was proposed that includes:

1) Development of new packaging for different consumer segments.

2) Advertising campaign on television and social networks (Instagram, Facebook).

As of January 2021, there were 4.66 billion active people in the world Internet users, which is 59.5% of the world's population. From, the number active Internet users 4.32 billion people, which is 92.6% of the total number of users are active mobile users Internet, 4.2 billion people are active users of social media and 4.15 billion people use mobile devices to log into social networks.

In view of this, the presence becomes especially relevant LLC "Invert"

in a virtual Internet environment and implementation of measures to promote the company and set up communication with consumers, suppliers and others

stakeholders using such digital tools marketing as a website, social networks, search engine marketing media and contextual advertising, targeted advertising, etc.

3) Opening of a retail store in Poltava.

4) Sales of products in a new market, Poland.

Currently, the introduction of Industry 4.0 is a necessity. The pandemic and the war made their adjustments in life. At the current stage of the market, the development of the innovative potential of the confectionery industry of Ukraine is an important condition for ensuring efficient production and meeting the needs of consumers in Ukraine.

Examples of national and regional digitization improvement programs, industrial production can also serve initiatives launched by various European countries: in Sweden it is "Produktion 2030 "; in Spain - "Industry 4.0"; in France, the Industrie du Futur; in Italy - Italy's National Industrial Plan and etc.

According to the latest data from the State Statistics Service of Ukraine, a gradual decrease in the number of confectionery industry enterprises that implemented innovations (products or technological processes) during the year can be observed.

Only 1% of confectionery enterprises introduce innovations in their activities and improve the efficiency of enterprises.

One of the most important factors is state support, as an effective strategy to stimulate confectionery innovation in all regions of Ukraine has not yet been developed, which would allow companies to approve projects and implement them faster with state support.

Thus, in order to ensure the innovative development of the enterprise it is necessary to form or improve the state of development of the innovative potential of the confectionery industry in Ukraine, which must clearly correspond to the development strategy of the enterprise, its objectives and goals.

Invert LLC already uses automated lines, which have not even been implemented in Europe. One of the other priorities for the future implementation of Industry 4.0 in the enterprise is the use of robotics, information systems, cybernetics, artificial intelligence in forecasting demand for products[3-20]. The focus of Industry 4.0 is based on namely process optimization, energy efficiency, remote monitoring, consumer chain optimization, data analytics.

The above measures will help to attract more attention to its products, which will allow the company to increase market share and thus increase profits.

References

1. V. Dykan. Strategic management: the concept of strategic management. - 1.4. – 2015.

2. M. Zagirnyaka, P. Breaks, O. Maslak. Enterprise economics: strategic management of the enterprise. 2015. - 736 p.

3. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

4. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

5. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

6. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

7. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

8. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

9. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

10. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

11. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

12. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

13. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

14. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

15. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

16. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

17. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

18. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

19. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

20. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

MODERN ONLINE BUSINESS TECHNOLOGIES - AS AN ENVIRONMENTAL OPPORTUNITY TO IMPROVE CUSTOMER BASE MANAGEMENT

Kordas A. R., *Student*
Sumy State University, Ukraine
Karintseva O. I, *Dr.(Economics),*
Prof. Sumy State University, Ukraine

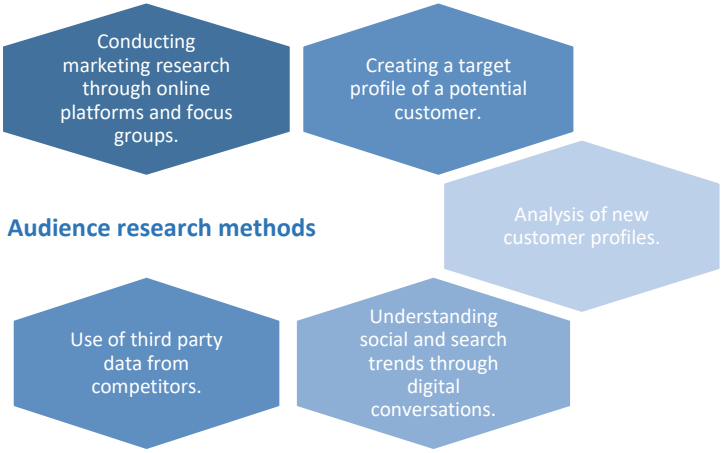
The effective functioning of entrepreneurship is possible only if its subjects follow the global development trends associated with further globalization and digitalization, activities in line with the industrial revolutions "Industry 3.0" and "Industry 4.0"[2,3,4,5,9,10,11,12,14,17,18]. It is the development of online entrepreneurship that meets these trends, because such services meet the goals of environmentally friendly sustainable development [6,7,8,13,15,16,19]. The impact of online entrepreneurship on the environment was especially evident in the pandemic, when most companies switched to online. According to an article published in the journal npj Urban Sustainability: «By intensifying teleworking to 2, 3, and 4 days a week, averaged NO2 concentrations are reduced by 4% (−1.5 μg m−3), 8% (−3 μg m−3), and 10% (−6 μg m−3), respectively, while O3 increases moderately (up to 3 μg m−3)»[1]

At the same time, the dynamic development of the online market in Ukraine and the intensification of competition in it forces entrepreneurs to reconsider the company's approaches and modernize the strategy to increase efficiency. At the same time, paying attention to current circumstances, the issue of maintaining a stable emotional state and relaxing the nervous system against the background of stressful and traumatic events is especially relevant for Ukrainians, which raises niches in the market's internal state.

Nevertheless, domestic entrepreneurs are losing a significant number of customers, largely due to imperfect and outdated customer base management policies, as well as the rejection of modern tools and trends in online space.

The problem with many companies is that they have an outdated strategy for attracting customers. It's easy to keep doing what you think works; however, this often results in too little money being invested in high-performance channels or, on the other hand, losing channels where potential customers are located.

At the same time, modern technologies significantly simplify and expand the possibilities of determining the audience, the brand can use different methods, including those shown in drawing 1.1.



Drawing 1.1 – Audience research methods

And instead of traditional advertising, which requires large volumes of paper, the following channels of attracting customers are becoming popular:

- Instagram: visually appealing posts and short videos.
- Facebook: live video streaming, one-on-one messaging, advertising.
- YouTube: Longer, more informative and entertaining video.
- SEO: written, long content, search engine optimized.
- Paid social advertising: short, bright ads with attractive visual elements.

But the use of modern platforms requires knowledge of trends on them, so we can point out that in paid social advertising more popular competitors use only quality photos, mostly with their own image, and test several creative options that are adapted to different sizes of advertising.

And on the examples of representatives of online schools of meditation in the Eastern European market, you can see the rules of design of site pages and the construction of its blocks:

1. Main banner:

- Name of the course;
- Start date of the course (if the course is not recorded);
- Buy button.

2. Points A and B of the audience
3. Course program
4. Tariffs

+ Reviews and a block about the author.

At the same time, Western Europe is actively using e-mails to capture the attention of customers.

Thus, online business significantly reduces air emissions and has a positive impact on the environment. And modern technologies and trends in online space allow you to more effectively build strategies to attract customers and facilitate the management and analysis of the customer base.

References

1. npj Urban Sustainability. A take-home message from COVID-19 on urban air pollution reduction through mobility limitations and teleworking URL: https://www.nature.com/articles/s42949-021-00037-7

2. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09. https://essuir.sumdu.edu.ua/handle/123456789/80687

3. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

4. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of “Change” as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

5. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

6. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI:

doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

7. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

8. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

9. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

10. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

11. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

12. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02.
https://essuir.sumdu.edu.ua/handle/123456789/83750

13. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07.
https://essuir.sumdu.edu.ua/handle/123456789/87533

14. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05.
https://essuir.sumdu.edu.ua/handle/123456789/80477

15. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI:

https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

16. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

17. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04.
https://essuir.sumdu.edu.ua/handle/123456789/85156

18. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13.
https://essuir.sumdu.edu.ua/handle/123456789/87514

19. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81759

ASSESSMENT OF COMPLEX EFFECTS OF GREEN ENERGY BUSINESS PROJECTS

Iryna Sotnyk, *Dr. Sc. (Econ.), Prof.,*
Artem Martymianov*, student*
Mariana Maslii*, student,*
Sumy State University, Ukraine

Renewable energy (RE) projects have a complex impact on economic entities and regional and national economies. It is expressed in improving the territories' economic, social, environmental, and political performance. However, due to the complexity of the green energy impact on local development, sometimes it is challenging to identify specific effects associated with the RE impact. Therefore, studying and classifying the various impacts of implementing green energy business projects is expedient. It helps strengthen the validity of introducing RE projects.

Table 1 presents the systematization of such effects (Perevozova et al., 2019; Prospects, 2018).

Table 1 – Systematization of complex effects emerging during the implementation of green energy business projects (developed by the authors based on (Ababa, 2014; Perevozova et al., 2019; Prospects, 2018; The impact, 2021))

Qualitative indicators	Economic measurement of quality indicators
1	2
Creation of additional jobs for constructing and further operating RE plants. Growth of employment in other sectors related to RE development (R&D, construction, machine building, transport, etc.)	Reduction in the level and duration of unemployment due to creating new jobs. As a result, state savings in paying unemployment benefits
Tax revenues to the budgets of different levels and deductions for social needs from the operation of RE facilities and related industries	Growth in tax revenues and deductions for social needs to the budgets of various management levels and special state non-budgetary funds
Development of human resources potential through the strengthening of cooperation with specialized educational institutions, creating laboratories, and demonstration sites for RE facilities	Increase in the share of qualified personnel in the structure of enterprises' personnel, growth in labor productivity, reduction in labor intensity of energy generation and production of equipment for RE, which leads to rising profits of economic entities
Improvement in the population's well-being leading to increased effective demand	Increasing per capita income
Independence of settlements developing RE facilities from centralized energy grids and increasing level of reliability of energy supply	No costs for connection to the centralized power grid
Growth of the competitiveness of various economic entities that involve local fuel and energy resources in production activities	Increase in enterprises' profits due to reducing production cost

Continuation of Table 1

1	2
International cooperation on RE development programs that positively affect the investment climate and the image of the region	The inflow of foreign and domestic investments in the region
Improving environment quality, reducing the morbidity of the population	Reduction in the environmental protection cost, the cost of the population treatment

Under the crisis conditions and the deficit of its energy sources, Ukraine's economic development largely depends on the provision of cheap and affordable energy. Russia's war in Ukraine in 2022 has clearly shown how critical the country's dependence on energy imports can be. Focus on RE will increase Ukraine's energy security, promote its economic development, and improve the population's living conditions. The impact of green energy deployment presented in Table 1 directly or indirectly affects the state and trends in RE use at the national and regional levels. However, it needs clarification regarding the municipal sphere. The state and political factors should be identified to determine the priorities of RE advancement at the municipal level (Timoshenko & Dementieva, 2016).

The environmental effects of implementing RE are the rational use of non-renewable natural resources (oil, gas, coal) and conservation of their reserves, reduction of specific emissions and discharges of pollutants per unit of energy, and a decline in the number of wastes. RE does not generate environmental externalities associated with extracting, processing, and transporting fossil fuels. In most cases, this type of effect is calculated in natural units. However, while implementing the principles of a green economy and introducing RE for energy saving, in our opinion, the emphasis should be placed not only on economic and environmental indicators.

The resulting social effect of green energy use can be a significant stimulus for promoting and intensifying energy efficiency policy (Perevozova et al., 2019; The impact, 2021). It can include increasing workers' comfort in the workplace and living conditions in the housing sector, reducing the number of unemployed who got new jobs through their creation in the RE industry, reducing morbidity due to stabilizing the environment quality and reducing pollution, and increasing life satisfaction, etc[6-23].

The mentioned effects at different management levels are essential to consider when determining the economic competitiveness of green energy business projects. Using the effects, it is possible to objectively assess RE's advantages over traditional energy technologies and make a substantiated decision in favor of green energy development.

This research was funded by the grant from the state budget of Ukraine "Fundamentals of the phase transition to the additive economy: from disruptive technologies to institutional sociologization of decisions" (No. 0121U109557).

References

1. Perevozova, I.V., Shilovtseva, N.V., & Maksymenko, T.O. (2019). Estimation of social efficiency component of transition to alternative energy sources. *Visnyk of Kharkiv National University named after V.N. Karazin. Series: International Relations. Economy. Local lore. Tourism, 10,* 167-174. http://nbuv.gov.ua/UJRN/VKhMv_2019_10_19

2. Prospects for the development of a green economy in Ukraine: opportunities for greening the energy sector (2018). http://www.green-economies-eap.org/ru/resources/Ukraine%20Energy%20UKR%2027%20Jun.pdf

3. The impact of a solar power plant on the environment, atmosphere and ecology: myth or reality (2021). https://solarsystem.com.ua/ru/blog/vplyv-sonyachnoyi-elektrostantsiyi-na-navkolyshnye-seredovyshhe-atmosferu-ta-ekologiyu-mif-chy-realnist/

4. Ababa, A. (2014). A green economy in the context of sustainable development and poverty eradication. *Journal of Economics and Sustainable Development, 5(3)*. https://core.ac.uk/download/pdf/234646252.pdf

5. Timoshenko, L. V., & Dementieva, N. V. (2016). Ecological and economic substantiation of the renewable energy sources use at municipal facilities. *Economic Bulletin, 3,* 171-180. https://ev.nmu.org.ua/docs/2016/3/EV20163_171-180.pdf

6. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09. https://essuir.sumdu.edu.ua/handle/123456789/80687

7. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

8. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

9. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies

implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

10. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03. https://essuir.sumdu.edu.ua/handle/123456789/82241

11. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08. https://essuir.sumdu.edu.ua/handle/123456789/84026

12. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02. https://essuir.sumdu.edu.ua/handle/123456789/77238

13. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03. https://essuir.sumdu.edu.ua/handle/123456789/80473

14. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

15. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

16. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

17. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

18. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

19. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

20. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

21. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

22. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

23. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

ENSURING THE STABILITY OF THE ECONOMY THROUGH ENVIRONMENTAL PROTECTION AND MODELING FOR EFFECTIVE DECISION MAKING*

Vira Shvydka, *student of ARI BiEM,*
Voronenko Viacheslav*, PhD, As. Prof.,*
Sumy State University, Ukraine

Ensuring the macroeconomic stability of the country is the main task of the functioning of the system of socio-economic relations within the state. Achieving the global stability and stability of the national economy is a very important issue today, which must be addressed as a matter of priority. Therefore, it is necessary to study the nature of the economic growth of national economies through the formation and optimization of complex systems of factors for effective decision-making.

Environmental protection is prioritized by most governments; public authorities are encouraged to use environmental criteria in procure- ment. In some countries provisions for this are embedded in public procurement regulations. In others, there is no formal requirement to do so but public authorities may still adhere to green procurement, aligning their procurement practices with the government priorities, or responding to the pressure from other institutions (values, goodwill, desire to be seen as a keen government supporter are among factors potentially contributing to such an alignment), (Elena V. Shadrina Dmitri V. Vinogradov Dmitry V. Kashin, 2022).

Having analyzed the relevant efficiency factors for the national economy, we can conclude that in our economic system there is no uniform, clear for all conceptual approaches rules. Thus, Ukraine's economy is significantly destroyed, because the adoption of a significant number of unsystematic political decisions leads to an increase in external debt and reduced financial resources of the country (Ruska, Ivashchuk, 2014).

One of the main components that determine the manifestation and specificity of the development of institutions in the general system of the main factors managing the efficiency of the national economy is the level of democracy in society. Therefore, let's build a model of effective decision-making in the field of monetary, fiscal policy, and open economy, taking into account the level of democracy as a political regime that forms the appropriate direction of these policies, which can be determined by equations (Lyulyov O. V., Pimonenko T. V. Liulova L., 2018):

$$Mon_{it} = c + \alpha DEMit + Vt + \omega it \quad (1)$$

$$SB_{it} = c + \beta DEMit + Vt + \theta it \quad (2)$$

$$Ouv_{it} = c + \gamma DEMit + Vt + \varphi it \quad (3)$$

Mon_{it} — the logarithm of the growth rate of money supply (assessment of monetary policy), ("Towards a green economy in Europe – EU environmental policy targets and objectives 2010–2050", 2013);

SB_{it} — fiscal balance to GDP (assessment of fiscal policy);

$Ouvit$ — openness of trade;

DEM_{it} — level of democracy in the period (calculated according to the ratings of «The Economist Intelligence Unit», «Nations in Transit», «Voice and accountability», ("Towards a green economy in Europe – EU environmental policy targets and objectives 2010–2050", 2013);

V_t — corresponds to temporarily fixed effects;

ω_{it}, , φ_{it} — stochastic error;

c, α , β , γ — constant.

If the level of democracy increases and the control over the creation of money becomes more difficult, then the coefficient in the Democracy Index becomes positive for equation (1). Instead, with the emergence of difficulties in the liberalization of trade and the establishment of sound fiscal policy in equations (2) — (3) we will have negative values of the coefficients (Lyulyov O. V., Pimonenko T. V. Liulova L., 2018).

Thus, by creating macroeconomic models, it is possible to develop approaches to the formation of multi-purpose programs for the macroeconomic growth of the state. One of the main factors of positive impact on the country's macroeconomic efficiency should be the implementation of reforms to promote democracy.

Along with the above, the implementation of effective mechanisms of innovation policy is also a key factor in the stability and sustainability of the country[7,8,13,14,15,16,17,18,21,23,24,27]. The Ukrainian capital is the most accessible source of funds for intensifying innovation activity within the country. Thus, an important step in this direction is to create a mechanism for the development of innovation within the country (Ruska, Ivashchuk, 2014).

To sum up, despite no regulatory requirement to do so, a significant fraction of organizations in our sample use environmental criteria in procurement, and use them repeatedly, yet organizations funded from the Federal budget (which are supposed to have stronger incentives to demonstrate compliance with government objectives) are less likely to act pro-environmentally than other types of institutions and enterprises. This suggests strong implicit incentives to behave pro-environmentally stem from informal institutions like culture, habits and shared values, rather than from the willingness to align with the declared priorities of the government. Still, public bodies standing high in the power hierarchy exhibit more pro-environmentalism in their procurement practices, potentially attributable to

reduced caution du to better connectedness and administrative power (Elena V. Shadrina Dmitri V. Vinogradov Dmitry V. Kashin, 2022).

Thus, to solve the problem of achieving stability and stability of the national economy, a model was proposed to assess and build effective solutions in the field of monetary, fiscal policy, and openness of the economy through the level of democracy and developed a model for a progressive national economy through innovation[5,610,11,12,19,20,22,25,26].

Overall, organizations subject to a more rigid procurement regulation, even if only in some part of their procurement activities, demonstrate less GPP than organizations under more flexible regulations. From a policy perspective, clear guidance on how to implement environmental procurement and less rigidity in regulation would help towards more GPP through pressure from informal institutions. A managerial implication from our study is that investments in improvement of environmental awareness of staff alone may be insufficient to promote GPP. On top of that, establishing internal GPP strategies and regular GPP training would help reduce the caution factor, as would do the improved communication with other procurement entities on approaches and experiences with GPP (Elena V. Shadrina Dmitri V. Vinogradov Dmitry V. Kashin, 2022).

References

1. Ruska, Ivashchuk. (2014). Methods of economic and statistical research. Ministry of Education and Science of Ukraine Ternopil National Economic University, 190.

2. Lyulyov O. V., Pimonenko T. V. Liulova L. (2018). Between macroeconomic stability and democracy. Yu Empirical Linkages. URL: http://mer.fem.sumdu.edu.ua/content/acticles/issue_36/Alexey_V_Lyulyov_Tetiana_V_Pimonenko_Lilia_Yu_LyulovaEmpirical_Linkages_Between_Macroeconomic_Stability_and_Democracy.pdf.

3. Towards a green economy in Europe – EU environmental policy targets and objectives 2010–2050. (2013). European Environment Agency. URL: https://www.eea.europa.eu./publications/towards-a-green-economy-in-europe.

4. Elena V. Shadrina Dmitri V. Vinogradov Dmitry V. Kashin. (2022). Implicit incentives in green public procurement: Good intentions versus rigid regulations. Ecological Economics, 198.

5. Pavlo Hrytsenko, Viacheslav Voronenko, Yevhen Kovalenko, Tetiana Kurman and Vitalii Omelianenko (2021). Assessment of the development of innovation activities in the regions: Case of Ukraine. Problems and Perspectives in Management, 19(4), 77-88. DOI: 10.21511/ppm.19(4).2021.07.

6. Kovalov, B., Burlakova, I., and Voronenko, V. (2017). Evaluation of Tourism Competitiveness of Ukraine's Regions. Journal of Environmental Management and Tourism, 8(2), 460-466. DOI: 10.14505//jemt.v8.2(18).19.

7. Voronenko, V., Kovalov, B., Horobchenko, D., and Hrycenko P. (2017). The Effects of the Management of Natural Energy Resources in the European Union. Journal of Environmental Management and Tourism, 8(7), 1410-1419. DOI: 10.14505//jemt.v8.7(23).10.

8. Horobchenko, D., Voronenko, V. (2018). Approaches to the Formation of a Theoretical Model for the Analysis of Environmental and Economic Development. Journal of Environmental Management and Tourism, 9(5), 1108-1119. DOI: 10.14505//jemt.v9.5(29).24.

9. Babenko, V., Matsenko, O., Voronenko, V., Nikolaiev, S., Kazak, D. (2020). Economic prospects for cooperation the European Union and Ukraine in the use of blockchain technologies. Вісник Харківського національного університету імені В. Н. Каразіна. Серія «Міжнародні відносини. Економіка. Країнознавство. Туризм», 12, 8-17. DOI: 10.26565/2310-9513-2020-12-01.

10. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. (2021). Analysis of the Definition of "Change" as an Economic Category. Механізм регулювання економіки, 1, 92-98. DOI: 10.21272/mer.2021.91.07.

11. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

12. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

13. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

14. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

15. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the

Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

16. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

17. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

18. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

19. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

20. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02.
https://essuir.sumdu.edu.ua/handle/123456789/83750

21. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07.
https://essuir.sumdu.edu.ua/handle/123456789/87533

22. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05.
https://essuir.sumdu.edu.ua/handle/123456789/80477

23. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

24. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome

them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

25. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

26. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

27. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

**The paper is prepared within the scientific research project "Sustainable development and resource security: from disruptive technologies to digital transformation of Ukrainian economy" (№ 0121U100470).*

ESSENCE AND MAIN TASKS OF ECOLOGICAL AND ECONOMIC ANALYSIS OF ENTERPRISE ACTIVITY*

***Sahnenko Tetiana**, student of ARI BiEM,*
***Voronenko Viacheslav**, PhD, As. Prof.,*
***Oleksandr Derykolenko,** PHD in Economics, As., Prof.,*
Sumy State University, Ukraine

Ecological and economic system has two major subsystems that combine with each other and in harmony and integrity. Extraction of mineral and biological resources provides opportunities to ensure the existence of the economic system. With proper use, you can analyze the level of environmental efficiency of the region, state, territory.

Each company aims at a complete analysis to identify strengths and weaknesses. The environmental factor is not an exception. Growing concerns about the quality of this factor have focused producers' attention on the possible

environmental consequences of their activities[2-26]. Businesses need to analyze these impacts and identify problems to eliminate the negative result. That is why it is mandatory to conduct an environmental and economic analysis of the enterprise, which includes this analysis in the list of complete analysis of the enterprise.

Ecological and economic analysis of the enterprise is a comprehensive study of the economic activity of the enterprise considering the impact of environmental factors to implement long-term plans of enterprises in the context of sustainable development strategy (Balanenko et al., 2017).

Economic analysis of the enterprise must comply with the following principles: scientific, cost minimization, efficiency, effectiveness, planning, systematic, government approach, accuracy and reality.

The separation of indicators and factors to reflect provides a system of opportunities and organize the study of the enterprise. But, so far, domestic production does not differ in environmental and economic analysis, not taking into account the urgency of environmental problems. This analysis can be found mainly in leading companies, which reduces the level of environmental awareness of production and can have dire consequences for the environment. If environmental analysis is present, it is more often considered by the analysis of volumes of pollution of the enterprises and the analysis of the corresponding ecological landmarks. As it is necessary, it is necessary to actualize the concept of ecological condition of the enterprise. A more detailed economic analysis of enterprises, which can be seen in table 1.

Without the relationship of the enterprise with the outside world it is impossible to achieve the main tasks of economic analysis. The environmental factor allows to reduce enterprises to one base and make a reliable assessment of their activities, which in turn is important for internal and external impact on enterprises. The impact of connecting the environmental factor to the system will contribute to the effective and efficient solution of problems, as well as improving the environmental situation in the country.

Table 1 – Types of economic analysis of enterprises (Hrytsyshen)

Financial and economic	Administrative	Ecological
- Analysis of financial performance and profitability - Analysis of financial condition - Analysis of investment activities - Diagnosis of the risk of bankruptcy and the impact of inflation on the company - Analysis of the market value of the enterprise	- Analysis of production - Analysis of product sales and marketing activities - Analysis of the use of production resources and organizational and technical level of the enterprise - Analysis of production costs and production costs - Analysis of foreign economic activity	- Analysis of environmental risks - Compilation of environmental balance sheets (production, products, locations) - ABC analysis - Assessment of the environmental consequences of the application of technology

References

1. Balanenko O. H., Stoikova T. M., Stoikova I. M. (2017). Sutnist ta osnovni zavdannia ekoloho-ekonomichnoho analizu diialnosti pidpryiemstva, 1, 535 – 539.

2. Hrytsyshen D. O. Ekoloho-ekonomichnyi analiz v zabezpechenni staloho rozvytku yak priorytetnoho napriamu derzhavnoi polityky. Governance, Zhytomyr.

3. Pavlo Hrytsenko, Viacheslav Voronenko, Yevhen Kovalenko, Tetiana Kurman and Vitalii Omelianenko (2021). Assessment of the development of innovation activities in the regions: Case of Ukraine. Problems and Perspectives in Management, 19(4), 77-88. DOI: 10.21511/ppm.19(4).2021.07.

4. Kovalov, B., Burlakova, I., and Voronenko, V. (2017). Evaluation of Tourism Competitiveness of Ukraine's Regions. Journal of Environmental Management and Tourism, 8(2), 460-466. DOI: 10.14505//jemt.v8.2(18).19.

5. Voronenko, V., Kovalov, B., Horobchenko, D., and Hrycenko P. (2017). The Effects of the Management of Natural Energy Resources in the European Union. Journal of Environmental Management and Tourism, 8(7), 1410-1419. DOI: 10.14505//jemt.v8.7(23).10.

6. Horobchenko, D., Voronenko, V. (2018). Approaches to the Formation of a Theoretical Model for the Analysis of Environmental and Economic Development.

Journal of Environmental Management and Tourism, 9(5), 1108-1119. DOI: 10.14505//jemt.v9.5(29).24.

7. Babenko, V., Matsenko, O., Voronenko, V., Nikolaiev, S., Kazak, D. (2020). Economic prospects for cooperation the European Union and Ukraine in the use of blockchain technologies. Вісник Харківського національного університету імені В. Н. Каразіна. Серія «Міжнародні відносини. Економіка. Країнознавство. Туризм», 12, 8-17. DOI: 10.26565/2310-9513-2020-12-01.

8. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. (2021). Analysis of the Definition of "Change" as an Economic Category. Механізм регулювання економіки, 1, 92-98. DOI: 10.21272/mer.2021.91.07.

9. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

10. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

11. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

12. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

13. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

14. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

15. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. C. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

16. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. C. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

17. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. C. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

18. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. C. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

19. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. C. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02.
https://essuir.sumdu.edu.ua/handle/123456789/83750

20. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. C. 82-90. DOI: 10.21272/mer.2021.93.07.
https://essuir.sumdu.edu.ua/handle/123456789/87533

21. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. C. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05.
https://essuir.sumdu.edu.ua/handle/123456789/80477

22. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. C. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

23. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

24. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

25. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

26. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

**The paper is prepared within the scientific research project "Sustainable development and resource security: from disruptive technologies to digital transformation of Ukrainian economy" (№ 0121U100470).*

ENVIRONMENTAL, SOCIAL AND GOVERNANCE INVESTING: SHIFTS DURING THE WAR

Sergiy Pysarenko, *PhD in Econ., Ass. Prof. Finance,*
Cape Breton University, Canada

ESG investing has been on an exponential rise at least until the Russian invasion of Ukraine in February 2022. To understand how the new stage of the Russian-Ukrainian war will affect the capital allocation via ESG channels, I analyze the driving forces of ESG investing, their linkages, and how the war will affect each approach of ESG investing and ESG investing overall. Specifically, I suggest that western companies that exited Russia, and those that stayed in Russia will have opposite incentives regarding ESG metrics in the international operations: companies that stayed in Russia will need to put more efforts towards ESG internationally, and companies that exited Russia might need to put more effort on financial indicators at, perhaps, a cost of ESG.

Exiting business in Russia in a rapid manner has a negative immediate effect

on the western business, however, decreases risks or even adds to ESG appeal in Western markets. Most likely companies that stayed in Russia might have lowered ESG scores as they are at higher risk of controversies related to financing the invasion through taxes. Customers might shy away from the companies that violate ESG principles or that stay in Russia. The companies that exited made a choice of preserving and potentially expanding their customer base in international markets with the cost of losing Russian customers. However, abrupt exit had an immediate negative effect on financial performance. So, in a way, these companies now have somewhat higher ESG, with somewhat lower financial indicators. Russian policy on import substitution will create some new competition in the industry. Companies that exited Russia are affected more by this change in the long run.

For companies that stayed, they did not have as big of an effect of the war on their financial indicators, they face an array of higher risks beyond the customer's attitudes governments might put pressure or additional legislative measures/sanctions to affect the course of action of companies if these companies become too controversial. Also, a stronger Russian Ruble makes their incomes smaller in USD-denominated financial reports.

To summarize, I suggest, testing the difference between businesses that stayed in Russia and those that exited. Exciters are likely to have lower profitability in the short run, but lower risks (variance, expected shortfall) in the long run. They are also expected to have higher S- and G- scores, while those that stayed will likely have higher incentive to improve their E-scores At this point, it is impossible to test this hypothesis and should be tested when financial results from 2022, 2023, and 2024 are announced.

ECOLOGIZATION OF ECONOMY AND ECOLOGICAL PRODUCTION IN UKRAINE*

***Maryna Nikulina**, student of ARI BiEM*
***Voronenko Viacheslav,** PhD, As. Prof.,*
Sumy State University, Ukraine
***Zabolotna Elizaveta**, high school student,*
Bilopillya Lyceum №2 named after S.M. Gordienko, Ukraine

Man, being the main business entity, has a destabilizing effect on the environment. With the development of the technological process, people began to use natural resources on a larger scale, which leads to their depletion and pollution. These effects of nature management have led to global climate change on our planet, and therefore the task of combating pollution and climate change.

The causes of environmental problems in Ukraine are:

- long-term, uncontrolled and not always justified use of natural resources (mining, industrial deforestation, etc.);

- industrialization of the economy (the emergence of a large number of industries that emit harmful substances into the environment).

The managerial problem of greening production and technology in Ukraine is primarily that the domestic economy is focused on traditional production and the traditional market, which in their technological requirements do not take into account the environmental factor. The way out of this situation is the greening of the economy and society.

Greening the economy is one of the necessary conditions and the main component of environmental development[4,5,11,12,15,16,17,19,21,22]. In essence, it means the process of greening the entire socio-economic structure and development of human society. Therefore, it is necessary to introduce new principles and effective measures aimed at integrating the environmental component into all sectors of the economy:

- the relationship of management, scientific, technical, and economic activities of the enterprise with the rational use of natural resources and the effectiveness of measures to protect the environment;

- setting limits on the use of natural resources, emissions of pollutants and on the generation and disposal of waste;

- providing tax, credit or other benefits to enterprises and citizens when implementing low-waste energy-saving and resource-saving technologies and non-traditional types of energy or other effective measures to protect the environment.

The basis for the greening of the economy is the potential for growth in production while maintaining and transitioning to the accelerated improvement of environmental quality. The need for greening is determined by the laws of Ukraine "On Environmental Protection" and "On Basic Principles (Strategy) of State Environmental Policy of Ukraine until 2030", other environmental laws and regulations of the state.

The use of modern environmentally friendly production technologies is now the main condition for increasing productivity and creating competitive industrial products at industrial enterprises.

One of the main factors of environmentally friendly enterprise is waste-free production. The need to move to new waste-free technologies was caused by the understanding that the existing production technologies are overwhelmingly open systems that irrationally use natural resources and generate significant amounts of waste, which are sources of environmental pollution. (Andreichenko, 2018).

Waste-free technology includes a set of measures that ensure minimal loss of natural resources, energy, and fuel from production, as well as maximum efficiency and cost-effectiveness of their use.

The main directions in the development of waste-free technology are:

- creation of the most closed systems, organized by analogy with natural ecosystems;

- integrated use of raw materials;

- disposal of emissions.

In Ukraine, industry is very important for economic development, but at the same time industrial complexes are key anthropogenic factors.

Thus, it can be noted that the main task of greening the economy is the process of preparing the national economy for the transition to sustainable development[6,7,8,9,10,13,14,18,20,23,24,25]. To achieve it in modern conditions, it is necessary to abandon the extensive use of natural resources and find more progressive and innovative management models.

References

1. Andreichenko, A. (2018). Practice of application of non-waste technologies in the agro-industrial complex on the way to implementation of the global program of sustainable development. *Agrosvit*, (6), 40–45. URL: http://www.agrosvit.info/?op=1&z=2599&i=6

2. Pavlo Hrytsenko, Viacheslav Voronenko, Yevhen Kovalenko, Tetiana Kurman and Vitalii Omelianenko (2021). Assessment of the development of innovation activities in the regions: Case of Ukraine. Problems and Perspectives in Management, 19(4), 77-88. DOI: 10.21511/ppm.19(4).2021.07.

3. Kovalov, B., Burlakova, I., and Voronenko, V. (2017). Evaluation of Tourism Competitiveness of Ukraine's Regions. Journal of Environmental Management and Tourism, 8(2), 460-466. DOI: 10.14505//jemt.v8.2(18).19.

4. Voronenko, V., Kovalov, B., Horobchenko, D., and Hrycenko P. (2017). The Effects of the Management of Natural Energy Resources in the European Union. Journal of Environmental Management and Tourism, 8(7), 1410-1419. DOI: 10.14505//jemt.v8.7(23).10.

5. Horobchenko, D., Voronenko, V. (2018). Approaches to the Formation of a Theoretical Model for the Analysis of Environmental and Economic Development. Journal of Environmental Management and Tourism, 9(5), 1108-1119. DOI: 10.14505//jemt.v9.5(29).24.

6. Babenko, V., Matsenko, O., Voronenko, V., Nikolaiev, S., Kazak, D. (2020). Economic prospects for cooperation the European Union and Ukraine in the use of blockchain technologies. Вісник Харківського національного університету імені В. Н. Каразіна. Серія «Міжнародні відносини. Економіка. Країнознавство. Туризм», 12, 8-17. DOI: 10.26565/2310-9513-2020-12-01.

7. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. (2021). Analysis of the Definition of “Change” as an Economic

Category. Механізм регулювання економіки, 1, 92-98. DOI: 10.21272/mer.2021.91.07.

8. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

9. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

10. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

11. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

12. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

13. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

14. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

15. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

16. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

17. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

18. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

19. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

20. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

21. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

22. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

23. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

24. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

25. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

**The paper is prepared within the scientific research project "Sustainable development and resource security: from disruptive technologies to digital transformation of Ukrainian economy" (№ 0121U100470).*

PROBLEMS AND WAYS OF THE GREENING OF UKRAINE'S ECONOMY*

***Anna Mukorez**, student of ARI BiEM,*
***Voronenko Viacheslav**, PhD, As. Prof.,*
Sumy State University, Ukraine

Implementing measures to modernize the economy has long been one of the main tasks of any state. The corona crisis, the war, and climate change have changed many areas. Including the economy. In today's world, there is an overuse of resources, which also leads to their depletion. All these factors contribute to the main goal - to build prospects for economic development taking into account environmental factors. We need to change not only the economy, but also the approach to it, so that future generations can have economic prosperity.

The transition to a new stage of the economy, the introduction of new technologies - all this is the modernization of the economy. Many scholars study the development of technologies and innovative projects to ensure the competitiveness of enterprises and countries as a whole. In today's world, modernization should be understood as overcoming technological dependence. The goal is to increase the efficiency of economic processes. All this is an integral part of raising the level of the economy, as the acceleration of the development of innovative technologies increases the main economic indicators. But does replacing equipment improve the environment? This is a pressing issue for every country since the introduction of the concept of greening the economy.

In general, environmental factors can be considered as factors of innovative development. It is a process of consistent implementation of technical, technological and managerial innovations for the implementation of sustainable development processes, by achieving a balance of development components, while preserving and

improving the environment. For example, V. Kravtsiv interprets the greening of the economy as "the process of penetration of ideas, knowledge, laws of ecology, environmental thinking in other areas of science, production, society, states" (Kravtsiv V. S., 2007). We believe this definition is correct, because it shows the conscious choice of society to modernize the economy in the light of the future and its improvement. To put it simply, organic is produced with low and non-harmful levels of emissions, conservation of biodiversity and the environment. This approach is very important, because in our time it determines the nature and direction of the economic type of development of the state.

Today in Ukraine the situation with the environment is quite difficult, because the Ukrainian economy is characterized by a high degree of the resource intensity of the economy due to the large number of plants and enterprises that focus on mining and processing industry. From here we can highlight the following problems:

- Low level of implementation of innovative technologies
- Dependence of the economy on natural resource potential
- A large number of harmful emissions through factories
- Lack of environmental thinking
- Inability to implement environmental projects due to economic instability

To overcome the above-mentioned problems, it is necessary to modernize the economy so that the development of the state and the economy includes compliance with environmental standards. For the rationality of this approach in Ukraine there are the Basic principles (strategy) of the state environmental policy of Ukraine for the period up to 2030, which includes problems and measures to address them. The aim is to achieve a good state of the environment by introducing an ecosystem approach to all areas of socio-economic development of Ukraine (UNDP, 2017). Based on these principles, we can identify the following ways to solve the problem of environmental economics:

- Reducing the dominance of resource-intensive and raw material production;
- Fines for environmental violations at all enterprises;
- Implementation of innovations with much less environmental impact;
- Continuous monitoring of compliance with the company's standards with prior improvement of legislation in the environmental field.

Thus, the paper considers the main problems of greening the economy in Ukraine, analyzes the possibility of modernization in compliance with environmental standards[5,6,12,13,15,18,20,22,23,25]. To spread this problem, it is necessary to fight not with the consequences, but to make changes today. It is important to encourage the observance and study of greening of all citizens of the state. Environmental modernization has not been easy, as it requires learning[26] and innovation[3,7,8,9,10,11,14,16,17,19,21,24].

References

1. Kravtsiv, V. S. (2007). Rehionalna ekolohichna polityka v Ukraini (teoriia formuvannia, metody realizatsii) [Regional ecological policy in Ukraine (theory of formation, methods of implementation)]. Lviv [in Ukrainian].

2. Strategy of sustainable development of Ukraine for the Period to 2030 (Draft 2017)]. Retrieved from https://www.undp.org/content/dam/ukraine/docs/SDGreports/UNDP_Strategy_v06-optimized.pdf

3. Pavlo Hrytsenko, Viacheslav Voronenko, Yevhen Kovalenko, Tetiana Kurman and Vitalii Omelianenko (2021). Assessment of the development of innovation activities in the regions: Case of Ukraine. Problems and Perspectives in Management, 19(4), 77-88. DOI: 10.21511/ppm.19(4).2021.07.

4. Kovalov, B., Burlakova, I., and Voronenko, V. (2017). Evaluation of Tourism Competitiveness of Ukraine's Regions. Journal of Environmental Management and Tourism, 8(2), 460-466. DOI: 10.14505//jemt.v8.2(18).19.

5. Voronenko, V., Kovalov, B., Horobchenko, D., and Hrycenko P. (2017). The Effects of the Management of Natural Energy Resources in the European Union. Journal of Environmental Management and Tourism, 8(7), 1410-1419. DOI: 10.14505//jemt.v8.7(23).10.

6. Horobchenko, D., Voronenko, V. (2018). Approaches to the Formation of a Theoretical Model for the Analysis of Environmental and Economic Development. Journal of Environmental Management and Tourism, 9(5), 1108-1119. DOI: 10.14505//jemt.v9.5(29).24.

7. Babenko, V., Matsenko, O., Voronenko, V., Nikolaiev, S., Kazak, D. (2020). Economic prospects for cooperation the European Union and Ukraine in the use of blockchain technologies. Вісник Харківського національного університету імені В. Н. Каразіна. Серія «Міжнародні відносини. Економіка. Країнознавство. Туризм», 12, 8-17. DOI: 10.26565/2310-9513-2020-12-01.

8. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. (2021). Analysis of the Definition of “Change” as an Economic Category. Механізм регулювання економіки, 1, 92-98. DOI: 10.21272/mer.2021.91.07.

9. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

10. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in*

Management. 2021. 19(4). C. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

11. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

12. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

13. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

14. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

15. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

16. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

17. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

18. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

19. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. C. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

20. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. C. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

21. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. C. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

22. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. C. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

23. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

24. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

25. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

26. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

**The paper is prepared within the scientific research project "Sustainable development and resource security: from disruptive technologies to digital transformation of Ukrainian economy" (№ 0121U100470).*

TRIGGERS OF UKRAINE'S ECONOMIC DEVELOPMENT

***Olha Lukash**, PhD, As. Prof.,*
Sumy State University, Ukraine
***Anastasiia Bodnarashek**, Student,*
Sumy State University, Ukraine

The modern world is characterized as volatile, changeable, ambiguous and complex, which causes difficulties for economic development. Although the coronavirus pandemic had a very negative impact on the general situation of the countries and caused an economic crisis, it also became a trigger for the active development and modernization of various spheres of human activity[6,7,8,11,16,18,21,22]. In the context of globalization, countries need to seek and implement various triggers that will contribute to their economic, political and cultural development.

The main idea of our research is to improve the existing methods of assessing the state and dynamics of economic development by simplifying the analysis by the method of normalization and simplifying the values of indicators in the analyzed time period.

A trigger is any stimulus in the external environment that makes us think about a related concept, idea, look, sound, or smell, that makes us think about something or act in a certain way.

In the world of behavioral economics, a trigger is any stimulus in the environment that makes us think about a related concept or idea. How do businesses and economists use this psychological phenomenon to their advantage? This question is important in modern economic theoretical and applied research. Triggers and formal signals shape everything from what people think - what matters most to them - to what we like, what we buy and even how we vote.

In our research, the triggers of Ukraine's economic development were considered and analyzed. These include the development of the business environment, the use of "green finance", the creation of business incubators, tourism development, active investment and investment, the use of the military budget to develop other areas of government, overcoming debt dependence, the transition from export-oriented to sustainable economy, convergence, proper regulation of migration processes and the introduction of innovations, will lead to the development of economic activity of the country[9,10,12,13,14,15,17,19,20,23]. The main statistical indicators that affect the country's economic development were analyzed, and it was found that Ukraine needs to pay more attention to the development of innovation.

The method of simplification and normalization of trigger indicators proposed in the research allowed to simplify the analysis and draw some important

conclusions of the study:

1. Graphical and / or tabular presentation of the results gives a fairly obvious interpretation of the results, namely: only "green" investments are fully consistent with the concept of the trigger of economic development. The rest of the indicators do not have a clear trigger effect, and some openly follow the general dynamics of economic development.

2. The presented results of the analysis also gives a reliable idea of economic processes and comparative dynamics of their course in the economy, which is not always easy to do with traditional analysis.

3. Normalization of trigger indicators in tabular form simplifies the perception of the nature of economic phenomena (triggers) in terms of one time period for multidimensional indicators.

References

1. Climatescope Reports. URL: https://global-climatescope.org/reports/.

2. Derev'yanko, Y., Lukash, O., Shkarupa, O., Melnyk, V., & Simonova, M. (2020). Greening Economy vs Greening Business: Performance Indicators, Driving Factors and Trends. International Journal of Global Environmental Issues, 19(1/2/3), 217–230. https://doi.org/10.1504/IJGENVI.2020.10037584

3. Global Innovation Index (GII). URL: https://www.wipo.int/global_innovation_index/en/.

4. Квасова Ю. А., Гузилова С. В., Хомутецкий А. А. Тренды и триггеры современного макроэкономического развития России. *Синергия наук*. 2018. № 25. С. 187–195. URL: https://www.elibrary.ru/item.asp?id=35296206.

5. Резнікова Н. В. Зелені фінанси як тригер сталого розвитку. 2021. С. 30–34.
URL: http://194.44.12.92:8080/jspui/bitstream/123456789/6077/1/Резнікова.pdf.

6. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

7. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

8. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category.

Механізм регулювання економіки. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

9. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

10. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

11. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

12. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

13. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

14. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

15. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

16. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

17. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

18. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

19. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

20. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

21. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

22. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

23. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

RESEARCH ON THE POLICY EFFECT OF PROMOTING THE MARKET ORIENTED REFORM OF CHINA'S ENERGY INDUSTRY—— BASED ON THE COAL INDUSTRY ANALYSIS-1998-2018

Dong Lu, *Postgraduate,*
Xi'an University of Finance and Economics, China
Li Rui, *PhD, As. Prof.,*
Xi'an University of Finance and Economics, China
Xin Ying, *Postgraduate,*
Xi'an University of Finance and Economics, China

In 1998, the State Council reformed the coal management system, delegated all the state-owned key coal mines directly managed by the former Ministry of Coal Industry to lower levels, market-oriented reform began, and coal production began to reverse the situation of total losses. In 2005, the State Council issued the Opinions on Promoting the Healthy Development of the Coal Industry, and the pace of marketization reform of the coal industry was further accelerated. Since 2006, China's coal capacity has entered a period of mass expansion. From 2006-2015, about 3.2 billion tons were added, and the problem of coal overcapacity has become increasingly prominent. In 2016, the State Council promulgated the Opinions of the State Council on Reducing Excessive Capacity and Getting rid of Poverty. The coal supply-side reform began to start, and the market-oriented structural adjustment was further deepened. By 2018, coal in reducing excess capacity was 690 million tons and achieved 87% of the target of overcapacity reduction of 800 million tons. From the above analysis, we can see that the government's policy regulation runs through the whole process of coal marketization reform, and plays a decisive role in every key node.

The coal industry in the policy regulation has a serious adverse impact on the stable development of the national economy. Therefore, in the process of market reform in the coal industry, how effective is the policy? Is the directivity of the policy been achieved? Is the choice and collocation of policy tools optimal? These questions all require us to give specific answers. In order to answer the above series of important questions, the traditional policy analysis method cannot get an accurate answer. We must use the latest policy literature quantitative analysis tools for quantitative analysis of large sample size and semi-structured policy documents. However, domestic research in this field has just started.

At present, most of the research results on policy issues in the coal industry are mostly in the traditional qualitative research and case studies. In general, the development of Chinese coal industry: the contradiction between market mechanism and government regulation and the division of interests of coal-power linkage mechanism(Liu & Tan, 2017; Wang, 2018); The Contradiction between China's

Coal Industry Development and the Intensive Environmental Protection Policy(Jiao et al., 2018); Cost constraints of coal cleaning and utilization(Hao et al., 2017); Central-local income distribution of coal mining(Zhang & Liu, 2017). Blind development of coal chemical industry and the efficiency of subsidy policy(Zhang et al., 2018).

The government plays an important role in industrial planning and management and the process of marketization in China's coal industry. However, the present research results still lack of systematic research on the policy characteristics and historical reform logic, and lack of standardized empirical research on the mechanism and effect of China's coal industry policy tools on the industrial life cycle. Therefore, it is necessary to scientifically discuss the policies in the theory and practice of conducting the quantitative policy literature analysis on the potential problems of China's coal industry policy marketization reform path.

This paper collected 237 policies of the coal industry issued by the central government from 1998 to 2018, and made quantitative analysis on the effectiveness of relevant policies in the document from four aspects: document subject and policy action object. The analysis results found that: (1) Analysis of the policy body shows that the coal industry published many departments, in the process of 20 years of market reform, the coal industry authorities and regulators for many times, in a long period of time, supervision into one, which leads to the coal industry in multiple cross management, lack of effective coordination and communication, easy to cause management functions unclear, related policies are also prone to uncoordinated or even mutual constraints, the overall planning and obvious shortage between policies.(2) From the analysis of the role object of policies, it can be found that the coverage of the coal industry policy has gradually expanded in recent years, but the targeted policy design for the whole industrial chain and the whole life cycle of the coal industry is insufficient. Through the empirical observation of developed countries, we can be seen that industrial policy needs comprehensive, whole process and whole link coverage. However, among the main concerned objects of China's coal policy, there are few policies on coal deep processing, coal chemical industry and other industrial chain links, which leads to the insufficient superposition effect between policies in various industrial links and reduces the effect of policy implementation.

Based on the analysis of the path and problems of coal industry, this paper puts forward the following policy suggestions: First, focus on strengthening the pertinence, stability and continuity of policies. In the future of coal industry policy process, according to the characteristics of the coal industry, industrial life cycle characteristics and industrial chain development to formulate targeted industrial policy, considering the ecological environment protection, supply side structural reform and technological innovation related policy coordination, and further strengthen the policy consistency between coal production, coal management and

coal consumption policies. Second, we will standardize and make effective use of fiscal subsidies and tax incentives to promote the extension of the coal industry chain to be refined and advanced. The domestic coal chemical industry is still in the growth period and cultivation period, and the state should reduce and exempt from the consumption tax of coal chemical industry demonstration projects. Different preferential tax policies will be given to major coal chemical industry construction projects. For major scientific research projects of key generic technologies, it is suggested to be included in the guidelines of the national science and technology development plan and give certain financial subsidies.

References

1. Hao Jiming, Wang Jinnan, Jiang Hongqiang, Liu Nianlei. National Industrial Development Strategy Strategy under the constraints of Environmental Bearing Capacity [J].State Engineering Science, 2017 (4): 20-26
2. Jiao jiao, Zhao Guohao, Zhang Baojian. Research on System Based MoModel [J]. Economic Questions, 2018 (3): 79-84.
3. Liu Pingkuo, Tan Zhongfu. How to achieve stable matching and scale linkage [J]. China Management Science, 2017 (1): 106-116.
4. Wang Yujia. Energy relationship and price status under supply-side reform —— Take coal power industry chain for example [J],2018(7):26-33.
5. Zhang Bo, Liu Lu. Coal mining income sharing: basis, connotation and system design [J]. Economic and Social System Comparison, 2017 (2):65-76.
6. Zhang Hongyu, Zhou Li, Zhang Xiliang. Review of the Current Status and Policy of China's Modern Coal Chemical Industry [J]. Modern Chemical Industry, 2018 (5): 1-5.

THE IMPORTANCE OF SMES IN TERMS OF SUSTAINABLE DEVELOPMENT GOALS

Oleksandr Kubatko,*Dr. of Econ., Prof.,*
Anastasiia Yaremenko,*student*
Sumy State University, Ukraine

Small and medium enterprises (SMEs) are seen as key players in national and regional development in many countries and play a vital role in the EU economy. Moreover, the EU countries see SMEs as an important factor in achieving sustainable development goals, such as poverty reduction. SMEs account for an average of 95% of private enterprises, providing 60-70% of jobs in most OECD countries (2018), which is an extremely important factor in the economy. Moreover, SMEs are not only an important source of employment, they can also be a source of innovation and productivity, as SMEs are the easiest to innovate[5,6,7,8,9,10,13,15,17,20,21].

World business experience shows that small, medium and large enterprises are not mutually exclusive, but complementary. In 2020, the number of small enterprises in Ukraine was 1,955,119, medium - 17,946, and large - only 512. So there were 97.4% of SMEs in 2020 in Ukraine. In this year, in most EU countries, the percentage of SMEs ranges from 99.5% (Germany, Luxembourg) to 99.9% (Hungary, Italy, the Netherlands, Spain,). Therefore, the contribution of SMEs to the development of the state economy and socio-economic indicators should not be underestimated.

Proving the importance of SMEs for the economic and social development of the country, consider the employment rate in Ukraine and EU countries on SME in 2020 (see Figure 1)

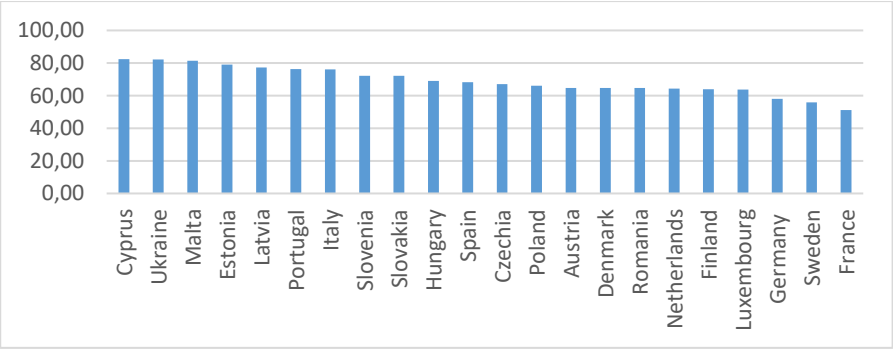


Fig. 1 - "Percentage of employed population on SMEs in Ukraine and EU countries in 2020"

Created by the author based on [2,3]

As we can see, Ukraine ranks second in terms of employment of SMEs. In contrast, developed economies such as Austria, Denmark, Finland, Germany, Sweden and France have the lowest employment rates for SMEs, due to fewer SMEs in these countries according to high market competition and the difficulty in starting a business in developed economies. Nevertheless, even in France, employment for SMEs exceeds 50%. Therefore, it can be concluded that it is SMEs that provide more jobs, which, in turn, makes a great contribution to the state economy.

Successful development of entrepreneurship is possible only in conditions of healthy competition, creating a favorable climate and rational support from the state, the effective operation of market mechanisms [4].

Therefore, for the effective functioning of small and medium enterprises it is necessary to create a favorable business environment for their successful development[11,12,14,16,18,19,22]. One of the effective factors of support is governmental support, especially for small enterprises. If the county chooses to pursue sustainable development goals, then investing in SMEs is a key factor in achieving such goals as: overcoming poverty; overcoming hunger; full and productive employment, promoting innovation and economic growth.

References

1. OECD. (2018). Small businesses, job creation and growth: facts, obstacles and best practices.
2. State Statistics Service of Ukraine. URL:http://www.ukrstat.gov.ua
3. Eurostat. Database. URL:https://ec.europa.eu/eurostat/data/database
4. Yu. O. Olvinska. Features of state regulation of small business in the world. Public Administration: Improvement and Development № 2, 2015. URL:http://www.dy.nayka.com.ua/?op=1&z=814
5. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09. https://essuir.sumdu.edu.ua/handle/123456789/80687
6. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)
7. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of “Change” as an Economic Category.

Механізм регулювання економіки. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

8. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

9. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

10. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

11. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

12. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

13. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

14. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

15. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

16. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

17. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

18. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

19. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

20. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

21. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

22. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

MANAGEMENT OF DOMESTIC BIOGAS PLANTS IN RURAL AREAS OF CAMEROON – PRACTICES, CHALLENGES AND PERSPECTIVES

Chama Theodore Ketuama
Jana Mazancová
Hynek Roubík
Department of Sustainable Technologies,
Faculty of Tropical AgriSciences,
Czech University of Life Sciences

Biogas plants are used to produce biogas and organic fertiliser through anaerobic digestion of organic waste. Biogas is a clean alternative to firewood and charcoal as household energy, especially for cooking. The performance of biogas plants is affected by the management practices that users apply. This study identifies and evaluates the management practices and challenges faced by domestic biogas producers in rural areas of Cameroon to provide perspectives to improve the production process. Multistage sampling was applied to select respondents. Firstly, a purposeful sampling was performed to identify six regions (West, Littoral, Central, Adamaoua, East and North) of the country with high biogas potential and 12 extension staff in the regions. Secondly, 30 biogas users and 30 nonusers were randomly sampled. Semi-structured interviews and observations were used to collect data on biogas plant operation, monitoring, and maintenance. Descriptive statistical analysis of the collected data was performed using the Statistical Package for the Social Sciences (SPSS) software. Biogas in rural areas of Cameroon is produced with fixed dome and floating biogas plants, ranging from 1 to 25 m^3 in size, and constructed with masonry and plastic polyethene materials. Of the biogas plants sampled, 82% had on site feedstock (waste) generation from cattle stables, pig and poultry units. The others (18 %) were fed mixed animal and plant waste collected from other locations. The daily operation of each biogas plant was ensured by an average of 0.3 (±0.2) man day. Only 17 % of the users received government extension services. Current management challenges of biogas plants include under- or overfeeding of the biogas plants, poor monitoring of the anaerobic digestion process, and inadequate maintenance, leading to structural failures. The average payback period for biogas plants is 3.4 years. Gaining knowledge and adopting good management practices are essential to improve and sustain biogas production. Such practices include the use of monitoring devices to improve anaerobic digestion and detect plant failures. Furthermore, improving the delivery of extension services will improve user knowledge and skills in the management of biogas plants.

Keywords: Biogas energy, good management practices, Cameroon

WHAT INDICATES ABOUT THE EFFICIENT FINANCIAL PERFORMANCE OF THE STARTUPS?

***Inga Kartanaitė**, Kaunas University of Technology, Lithuania*
***Rytis Krušinskas**, Kaunas University of Technology, Lithuania*

The increasing interest in startups is observed in the literature and business environment. Startups are related to the fast growth, high risk (Santisteban & Mauricio, 2017), high failure rate (Slavik, 2019), the high expected rate of returns (Aydın, 2015) and uncertainty (Tripathi et al., 2019). Many research are trying to fill the existing gap in knowledge of what indicates about the financial efficiency of startups. The reasons behind this are the great success stories of startups and at the same time the high uncertainty and the lack of financial resources necessary to grow the business. For this reason, researchers and investors are searching for the signs which would indicate their financial efficiency. We are trying to fill the existing gap in the literature by summarizing the factors (Figure 1) which would provide the insights of the financial efficiency of such companies.

Low level of inventory	Rapid inventory turnover	Capital resources	Investments attracted
The growth of total assets	The growth of ROA	Revenues generation	Constant cash flow
International sales	Profit	Higher level of retained earnings	High market value

Figure 1. The signs of the financial efficiency of startups (made by authors)

Different sources in the literature show that efficient startups manage to maintain the low level of inventory, have fast inventory turnover (Baek & Neymotin, 2016a; Lan et al., 2019), low level of accounts receivable, constant cash flows (Lan et al., 2019) and have sufficient amount of capital for business development (Chung et al., 2021; Matricano, 2020). The ability of startups to maintain the sufficient level of capital highly depends on their ability to attract external investments (Cumming et al., 2017; Knockaert et al., 2010) and higher efficiency was noticed among startups which managed to receive the funding (Hernández-Trillo et al., 2005). The growth in total assets (Alperovych et al., 2020) and ROA (Kaiser & Kuhn, 2020) are used for the growth in size to estimate, as it is noticed that startups greater in size manage to attract more attention from investors. The ability of startups to generate revenues and international sales decrease the riskiness of failure as more assured sales are

gained from the different markets (Baek & Neymotin, 2016b, 2016a). The level of retained earnings is also important for efficiency as this variable might indicate either the possible bankruptcy of the business (Fuertes-Callén et al., 2020) or the higher profitability in the future. The importance of profit for these companies is noticed as profit generation is the most important aim for any investor (Omri et al., 2015) or the business owners. However, the highly negative ratios of profitability either before or after the initial public offerings (IPO) are noticed for these companies (Gao et al., 2013; Kartanaitė & Krušinskas, 2022). But the high market value is considered as the sign of investors' trust in startups business development. Considering the high uncertainty of the financial performance of startups observed in the literature, the values of the ratios of startups financial efficiency are analyzed.

Table 1. The financial efficiency ratios of the unicorn startups (made by the authors)

The ratio (unit of measurement)	AVG	MIN	MAX
Accounts receivables turnover (times a year)	19,42	0,00	1834,15
Asset turnover (coefficient)	0,77	0,00	4,67
Cash flow ratio (coefficient)	0,09	-2,33	0,95
Inventory turnover (coefficient)	0,08	0,00	2,92
Return on Assets (coefficient)	-0,16	-4,67	0,70
Return on Equity (coefficient)	-15,98	-7118,50	18,27
Return on Investments (coefficient)	-5,67	-373,81	191,63
Return on Sales (coefficient)	-2,90	-1069,83	0,69
Working Capital ratio (coefficient)	0,36	-1,31	0,95
Working Capital turnover (times a year)	4,02	-129,37	440,22

We used the five years financial data of 97 unicorn startups with IPOs to observe if these companies have the signs of efficiency identified in the literature. The choice of these companies was firstly based on the high company market value (more than 1 billion USD (Kenney & Zysman, 2019)) and data availability because startups are private companies which become public after the IPO (Kim & Heshmati, 2010). The idea of this research is to observe the actual picture of the financial results of the unicorn startups so we did not transform the data. We firstly observed the highly negative average ratios of profitability for these companies. The initial data analysis revealed that the most of companies in our dataset have the negative net income. There are also several unicorns with negative equity as well which might have affected the results of ROE. The majority of companies operates in technology sector and do not have inventories, which might be the reason of the low level of inventory turnover. However, unicorn startups fail to manage their assets properly, as the value of asset turnover ratio is low. Working capital is used several times a year. On average, unicorn startups manage to collect the receivables fast, but the

minimum and maximum values of accounts receivable turnover indicate about the existing problems for some companies.

Our findings show that although unicorns suffer from the negative profitability and fail to use the assets efficiently, they still grow and manage to expand the business. The continuous startups growth even with the unusual values of the financial measures promotes analyzing these companies more detailed.

References

Alperovych, Y., Groh, A., & Quas, A. (2020). Bridging the equity gap for young innovative companies: The design of effective government venture capital fund programs. *Research Policy*, *49*(10), 104051. https://doi.org/10.1016/j.respol.2020.104051

Aydın, N. (2015). A Review of Models for Valuing Young and Innovative Firms. *International Journal of Liberal Arts and Social Science*, *3*(9), 1–8. https://www.ijlass.org/data/frontImages/gallery/Vol._3_No._9/1._1-8.pdf

Baek, H. Y., & Neymotin, F. (2016a). International Involvement and Production Efficiency among Startup Firms. *Global Economic Review*, *45*(1), 42–62. https://doi.org/10.1080/1226508X.2015.1084240

Baek, H. Y., & Neymotin, F. (2016b). Young startup firm exports and productive efficiency. *Applied Economic Letters*, *23*(15), 1088–1092. https://doi.org/10.1080/13504851.2015.1136389

Chung, W. Y., Jo, Y., & Lee, D. (2021). Where should ICT startup companies be established? Efficiency comparison between cluster types. *Telematics and Informatics*, *56*, 101482. https://doi.org/10.1016/j.tele.2020.101482

Cumming, D. J., Grilli, L., & Murtinu, S. (2017). Governmental and independent venture capital investments in Europe: A firm-level performance analysis. *Journal of Corporate Finance*, *42*, 439–459. https://doi.org/10.1016/j.jcorpfin.2014.10.016

Fuertes-Callén, Y., Cuellar-Fernández, B., & Serrano-Cinca, C. (2020). Predicting startup survival using first years financial statements. *Journal of Small Business Management*, 1–37. https://doi.org/10.1080/00472778.2020.1750302

Gao, X., Ritter, J. R., & Zhu, Z. (2013). Where have all the IPOs gone? *Journal of Financial and Quantitative Analysis*, *48*(6), 1663–1692. https://doi.org/10.1017/S0022109014000015

Hernández-Trillo, F., Pagán, J. A., & Paxton, J. (2005). Start-up capital, microenterprises and technical efficiency in Mexico. *Review of Development Economics*, *9*(3), 434–447. https://doi.org/10.1111/j.1467-9361.2005.00286.x

Kaiser, U., & Kuhn, J. M. (2020). The value of publicly available, textual and non-textual information for startup performance prediction. *Journal of Business Venturing Insights*, *14*(e00179), 1–21. https://doi.org/10.1016/j.jbvi.2020.e00179

Kartanaitė, I., & Krušinskas, R. (2022). Financial Efficiency of Unicorns:

Regional and Sector Related Aspects. *Engineering Economics*, *33*(2), 200–214. https://doi.org/10.5755/J01.EE.33.2.30798

Kenney, M., & Zysman, J. (2019). Unicorns, Cheshire cats, and the new dilemmas of entrepreneurial finance. *Venture Capital*, *21*(1), 35–50. https://doi.org/10.1080/13691066.2018.1517430

Kim, Y., & Heshmati, A. (2010). Analysis of Korean IT startups' initial public offering and their post-IPO performance. *Journal of Productivity Analysis*, *34*(2), 133–149. https://doi.org/10.1007/s11123-010-0176-0

Knockaert, M., Clarysse, B., & Wright, M. (2010). The extent and nature of heterogeneity of venture capital selection behaviour in new technology-based firms. *R & D Management*, *40*(4), 357–371. https://doi.org/10.1111/j.1467-9310.2010.00607.x

Lan, S., Yang, C., & Tseng, M. L. (2019). Corporate sustainability on causal financial efficiency model in a hierarchical structure under uncertainties. *Journal of Cleaner Production*, *237*, 117769. https://doi.org/10.1016/j.jclepro.2019.117769

Matricano, D. (2020). The effect of R&D investments, highly skilled employees, and patents on the performance of Italian innovative startups. *Technology Analysis & Strategic Management*, *32*(10), 1195–1208. https://doi.org/10.1080/09537325.2020.1757057

Omri, A., Frikha, M. A., & Bouraoui, M. A. (2015). An empirical investigation of factors affecting small business success. *Journal of Management Development*, *34*(9), 1073–1093. https://doi.org/10.1108/JMD-07-2013-0088

Santisteban, J., & Mauricio, D. (2017). Systematic literature review of critical success factors of information technology startups. *Academy of Entrepreneurship Journal*, *23*(2), 1–23. https://www.proquest.com/openview/98a6e3daafe35edd5cad397b46b02c1b/1?pq-origsite=gscholar&cbl=29726

Slavik, Š. (2019). The Business Model of Start-Up-Structure and Consequences. *Administrative Sciences*, *9*(3), 69. https://doi.org/10.3390/admsci9030069

Tripathi, N., Seppänen, P., Boominathan, G., Oivo, M., & Liukkunen, K. (2019). Insights into startup ecosystems through exploration of multi-vocal literature. *Information and Software Technology*, *105*, 56–77. https://doi.org/10.1016/j.infsof.2018.08.005

GOALS OF SUSTAINABLE DEVELOPMENT AS THE KEY TO THE FUTURE OF THE PLANET

Drozd Serhii
PhD Student
Sumy State University
ORCID https://orcid.org/0000-0002-0716-3078

On our planet, humanity has always evolved in different directions, and this development went along with increasing the use of natural resources. With each stage of development, the use of our planet's natural resources has grown, and today we can no longer continue to use the planet's resources without thinking, regardless of how our future generations will live.

In 1987, the UN World Commission on Environment and Development identified sustainable development as meeting the needs of today, without compromising the ability of future generations to meet their own needs [1].

The United Nations Environment Program (UNEP) established 17 key goals in 2015, which will allow the world to continue to exist while maintaining sustainable development. Namely, the following goals: no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities, steel cities and communities, sustainable consumption and production, climate action, underwater life, life on earth, peace, justice and strong institutions, partnership for goals [2].

Figure 1 - Sustainable development goals

Each of these goals contains several sub-goals, the achievement of which is an inevitable step in creating a world of sustainable development. All these sub-goals have an economic, environmental, social character. For now, in the approved document, the implementation of the targets is mainly calculated until 2030. Let's divide the known under the purposes on groups economic, social and ecological.

Economic: sustainable agricultural practices that increase productivity and production, help maintain ecosystems; expand international cooperation by 2030 to facilitate access to clean energy research and technology; expand infrastructure and modernize technologies to provide modern and sustainable energy services to all developing countries; development of quality and reliable, sustainable and sustainable infrastructure, including regional and cross-border infrastructure, to support economic development and human well-being; increase the share of industry in employment and gross domestic product in accordance with national conditions and double its share in the least developed countries; upgrade infrastructure and modernize industries to make them more sustainable, more resource efficient and more clean and environmentally friendly technologies and industrial processes.

Social: increase the resilience of the poor and vulnerable, ensure sustainable food production systems; ensure that all students acquire the knowledge and skills needed to promote sustainable development; carry out reforms to give women equal rights; ensure access to safe accessible, accessible and sustainable transport systems for all by 2030, improving road safety, in particular by expanding public transport; improve education, awareness to mitigate the effects of climate change; promoting the rule of law at the national and international levels and ensuring equal access to justice for all.

Environmental: to develop methods of strengthening and adapting agricultural production to climate change; support the genetic diversity of seeds, crops, farm and domestic animals and related wild species; significantly reduce the number of deaths and diseases from harmful chemicals and air, water and soil pollution and pollution; provide universal access to affordable, reliable and modern energy services; significantly increase the share of renewable energy in the world energy balance; increase resilience and adaptability to climate hazards and natural disasters in all countries; integrate climate change measures into national policies, strategies and planning.

How one can look at such a division into economic, social and environmental aspects is possible but not ideal because there is a crossover of goals and some are possible only after others, yet such a division allows us to see exactly what problems need to be addressed from today to a possible deadline.

The challenge for humanity by 2030 is to achieve these seventeen goals and many of the sub-goals described above. The path to sustainable development is very difficult and thorny, but humanity needs to achieve its goals to ensure the prosperity of the entire planet in the future.

References

1. *Sustainable Development UNESCO* (2021) Retrieved May 30, 2022, from https://en.unesco.org/themes/education-sustainable-development/what-is-esd/sd#:~:text=The%20concept%20of%20sustainable%20development,to%20meet%20their%20own%20needs.%E2%80%9D

2. *Sustainable development goals UNEP* (2015) Retrieved May 30, 2022, from https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-1-no

INTERNATIONAL SOCIAL SOLIDARITY ECONOMY MODEL FOR SUSTAINABLE DEVELOPMENT OF UKRAINE

Oleksii Goncharenko, *PhD, As. Prof.,*
Sumy State University, Ukraine

The solidarity of Ukrainian society during the war created a "quantum leap". The links between government, the military, local governments, NGOs, and the common people were instantaneous to address issues that the state could not resolve for decades. The efficiency and speed of decision-making has increased many times, the crime rate has fallen to unprecedented levels, the results can be listed for a long time. But the fact is that a multimillion nation has worked as a single mechanism. Unfortunately, the trigger for such changes was the war. And the price that people pay is the highest of all possible - lifes. An example of social solidarity is the actions of all the above-mentioned entities to organize the flow of refugees from the hot spots of Ukraine. The readiness of citizens to receive and help displaced persons should be especially noted. We can also talk here about the international solidarity of the peoples of Europe, who have shown unprecedented support for Ukrainians, moral, psychological and financial. If we analyze the level of support, we can say that Ukraine was already a member of the European Union. Military-political support is not the subject of this opus, so let's skip this question. The situation prompts considerations about the future reconstruction of Ukraine. In our opinion, it is extremely important now to develop the experience of social solidarity of society and transfer it to business formation for sustainable grows.

In this context, it becomes important to prevent oligarch's capitalist structure of the Ukrainian economy impedes social ecological transformation[1,4,5,6,7,8,13,14,15,16,]. Along with this, Ukraine's Western partners talk about creating funds for the reconstruction of Ukraine.

Let's analyze possible ways to create preconditions for the restoration of the Ukrainian economy and society through sustainable growth.

Given that, the EU allocating funds before, in fact did not know how they are used. And this is problem number one. Problem number two is the archetype of Ukrainians, which began to transform during the war. From the absolute passivity in the participation of government before beginning of the war, to the unprecedented manifestations of solidarity during the war, what will be after the war we can only be guessed. But the role of the EU in the future can be extremely large. Creating different funds for the reconstruction of Ukraine is an important issue, filling them from different sources, it is of course a difficult issue for our Western partners, but the most difficult issue is to spend money correctly. And here the mechanisms of solidarity in the broadest sense can play an important role. For example, joint and several liability for the results of reconstruction. Its goals have been chosen by Ukraine for a long time, long before the war, when Ukraine chose the course of integration with the EU. And, of course, the question is not to get tired of restoring the old, but to determine the priorities and create a quantum economic leap, bypassing some stages of development. Also, an important issue is the mechanism of interaction between Western partners and Ukraine. The main aspects of which, in my opinion, should be based on the following principles:

– openness and control;

– targeted use of investment funds for small and medium-sized businesses, bypassing public authorities, and for infrastructure and social needs - also trust funds where possible (not for ministries, but for specific recipients) with guarantees from the state;

– priority to international solidarity business associations and public organizations;

– priority of providing investments to enterprises that create added value and implement the latest environmentally and economically efficient technologies;

– economic choice of industries and directions of development, not "so, it has historically been"

– A model at the following levels can be chosen as an international solidarity model:

- level of Institutional Reconstruction;
- level of recovery of small and medium business;
- level of cooperation of local self-government;
- support for solidarity groups.

Moreover, investments and grants should be provided on the principles of co-financing, including. The key to such cooperation is the presence of a partner from among the partner countries. Targeted support is provided for the development of projects in the context of sustainable development using the latest technologies[2,3,9,10,11,12,17,18]. And reporting and control takes place on the

fund's online platform, as well as the submission of applications for funding and the results of independent selection.

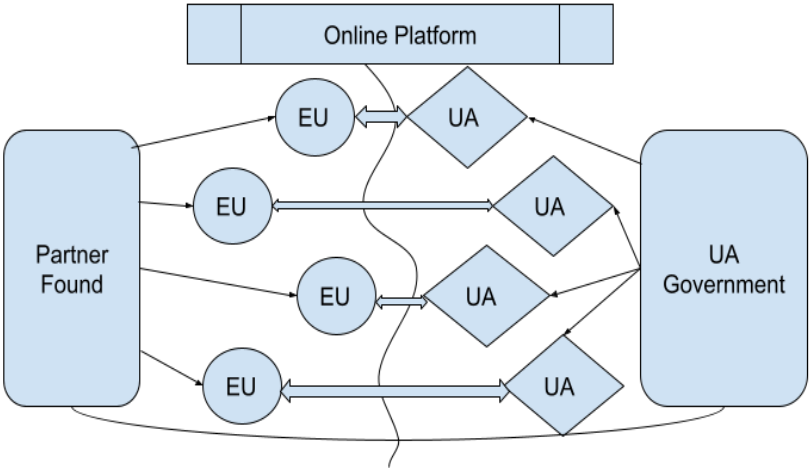


Figure 1 - Schematic model of international solidarity for the reconstruction of Ukraine

The figure 1 shows the links between the participants of the proposed model, where UAs are partners from Ukraine receiving assistance in various forms, EUs are partners from partner countries that coordinate activities, through which the Partner Fund allocates funds. The add-on in this case is an online platform for finding partners, submitting applications, selecting participants, monitoring work, reporting, etc. The Government of Ukraine, being both the recipient and the organizer of the conditions for the implementation of this mechanism.

As history shows, only the unification of society for the common good wins.

References

1. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09. https://essuir.sumdu.edu.ua/handle/123456789/80687

2. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in*

Management. 2021. 19(4). C. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

3. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

4. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469

5. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

6. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

7. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

8. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

9. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

10. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

11. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. C. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

12. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. C. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

13. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. C. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

14. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. C. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

15. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

16. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

17. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

18. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

Prepared within the framework of the Jean Monnet Module "Social Solidarity Economy: Implementing the EU Experience for Sustainable Development"

(SSExpEU - 101047518 - GAP-101047518, 2022-2025), funded by the European Union

ANALYSIS OF UKRAINIAN ENTERPRISES BUSINESS ENVIRONMENT QUALITY

***Yuriy Derev'yanko**, PhD, As. Prof.,*
Sumy State University, Ukraine
***Marina Matusenko**, Student,*
Sumy State University, Ukraine

The business environment is a set of all external and internal factors that affect the business. Keep in mind that external and internal factors can influence each other and work together to influence business. For example, the legal act on labor protection is an external factor that affects the internal environment of economic activity. In addition, some external factors are beyond the company's control. These factors are often called external constraints. In this study, we will look at some key environmental factors[8,9,11,12,13,16,18,19,20,].

The main idea of this research is to improve the existing methods of assessing the quality of the business environment of enterprises, based on the application of the proposed indicator of weighted quality of the business environment.

The business environment helps to identify business opportunities, use useful resources, helps to plan and improve the overall efficiency, growth and profitability of the business. There are different types of business environments, such as micro-environment and macro-environment. The business environment is the most important aspect of any business. The forces that shape the business environment are its suppliers, competitors, the media, government, customers, economic conditions, investors and many other organizations.

The business environment is a complex, dynamic, unpredictable set of factors that affect the activities of the enterprise and connects many economic entities: the enterprise itself, its competitors, suppliers, contact audiences, intermediaries and consumers. Understanding and analyzing the business environment is strategically important for the successful development of the company, it allows managers to focus on the priorities of future development in a highly competitive environment, the struggle for each client and ultimately profit.

In general, it is formed in Ukraine, but is characterized, on the one hand, by significant penetration into economic issues of the state and government, and on the other - their weak interest in the existence of a civilized, efficient and effective economic environment[5,6,7,10,14,15,17,21,22].

In this regard, it is urgent to understand both the state and business entities that transparent business has great advantages and prospects, its mastery is a difficult path, but carries invaluable experience and skills in difficult and adverse conditions.

In recent years, the study of the quality of the business environment has acquired a new character. This, in particular, can be explained by the high popularity of such field of research as a behavioral economics. Given this and recent research, we proposed to conduct such an analysis not by standard methods, but by analyzing four key areas for any company:

1) assessment of external influence by consumers (through the Consumer Sentiment Index)

2) assessment of market impact on enterprises (through the Economic sentiment indicator)

3) assessing the effectiveness of public administration (through the index of economic freedom)

4) assessment of external macroeconomic impact (through balance of payments indicators)

This method, to our opinion, on the one hand covers as much as possible all the factors that scientists call system-forming in the formation of the business environment, and on the other hand makes such an analysis as clear as possible not only for professionals.

Conclusions of the calculation according to the proposed method of comprehensive assessment of the business environment of enterprises:

1) the quality of the business environment has been growing steadily throughout 2019, reaching a peak at the end of the year;

2) the third quarter of 2020 turned out to be the worst;

3) trends in the quarterly change in the quality of the business environment in 2020-2021 are quite similar;

4) the quality of the business environment at the end of 2021 reached the value of the conditionally "pre-crisis" 2019, but still has not returned to the maximum values for the last 3 years.

References

1. Consumer Sentiment. URL: https://www.investopedia.com/terms/c/consumer-sentiment.asp

2. Derev'yanko, Y., Lukash, O., Shkarupa, O., Melnyk, V., & Simonova, M. (2020). Greening Economy vs Greening Business: Performance Indicators, Driving Factors and Trends. International Journal of Global Environmental Issues, 19(1/2/3), 217–230. https://doi.org/10.1504/IJGENVI.2020.10037584

3. Index of Economic Freedomю. URL: https://www.heritage.org/index/explore

4. Платіжний баланс України. URL: https://index.minfin.com.ua/ua/economy/balance/

5. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

6. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

7. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

8. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

9. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

10. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

11. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

12. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

13. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

14. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

15. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

16. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

17. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

18. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

19. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

20. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

21. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

22. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

CHALLENGES FOR ECONOMY FOR COMPLEX ENVIRONMENTAL

Luc Hens,
VITO, Belgium
Nguyen An
Thinh, HUNRE, Vietnam

This contribution uses a problem of coastal erosion in Vietnam as an illustration of an interdisciplinary research involving human ecology, environmental science, tourism and economy. Vietnam has over 3000 km of coastal areas. In particular its eastern coast along the South China (East) Sea is subject to impacting erosion. This affects all stakeholders and all ecosystems in the coastal area.

This research is about coastal erosion of beaches in the artist would heritage site of Hoi An visited by over 200 000 tourists per year. Coastal erosion was studied in 13 sections of the Hoi An coast during the period 2005-2020, and the erosion forecast from 2030 until 2040. Coastal erosion affects is most services in this area, not only removing the beaches (up to 435m/year, but also damaging the buildings behind the beaches until collapse. Coastline erosions for the period 2005-2015 was measured using radar images. Data on the hotels and their occupancy were based on web sources. For the period 2020_2040 linear extrapolation figures were used, assuming a continuous erosion process that is not affected by policy measures.

The economic cost of the beach erosion was estimated using the factors and characteristics that affect the beach value and captures the consumer's willingness to pay for the perceived erosion problems. For each of the 23 sections under study the beach value and the revenue losses were calculated.

The results show that the beaches provide a significant value to the tourism sector in Hoi An. Beach protection needs to find the balance between the economic and the environmental aspects of the beaches. The traditional systems used to prevent coastal protection are insufficient to cope with the progressing erosion.

The study is also illustrative for the limitations of linking environmental issues with monetary values. Even when inclusive parameters as "total economic

value" are used, different aspects which are important from an environmental point of view, are not covered by the monetary approach.

References

1. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09. https://essuir.sumdu.edu.ua/handle/123456789/80687
2. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)
3. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025
4. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469
5. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03. https://essuir.sumdu.edu.ua/handle/123456789/82241
6. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08. https://essuir.sumdu.edu.ua/handle/123456789/84026
7. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02. https://essuir.sumdu.edu.ua/handle/123456789/77238
8. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling.

Mechanism of Economic Regulation. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

9. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

10. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

11. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02.
https://essuir.sumdu.edu.ua/handle/123456789/83750

12. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07.
https://essuir.sumdu.edu.ua/handle/123456789/87533

13. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05.
https://essuir.sumdu.edu.ua/handle/123456789/80477

14. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

15. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

16. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04.
https://essuir.sumdu.edu.ua/handle/123456789/85156

17. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the

Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

18. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

SOCIO-ECONOMIC PRECONDITIONS FOR THE DEVELOPMENT OF ENERGY NETWORKS

Serhiy Shaparenko *student, EK-91*
Oleksandra Kubatko*: Ph.D., As. Prof.*
Sumy State University, Ukraine

The world is increasingly beginning to improve approaches to shaping energy policy, because the conditions of limited natural resources force more and more people to direct the policy of states in search of factors for the formation of energy potential for the development of society and the country as a whole[5,6,8,9,10,11,13,14,15,16,]. One of such factors should be energy efficiency, which combines not only energy conservation but also optimization of the ratio of efficiency to energy costs[2,3,4,7,12,17,18,19]. This problem has posed certain technological and economic challenges to Ukraine, at the same time, it opens opportunities for the development and application of innovative, high-tech developments in the fuel industry, which necessitates the formation of an improved energy policy of Ukraine. Peculiarities of ecological components of production activity and energy sector in particular are given in [1]. Prerequisites for the development of electricity in our country were: Currently in Ukraine there are opportunities for the development of alternative energy technologies. According to the adopted Energy Strategy of Ukraine until 2035 "Security, Energy Efficiency, Competitiveness", intensive use of all types of renewable energy sources is envisaged, which in turn will become an effective tool in ensuring energy security of the state. It is important to note that the share of alternative energy in the fuel and energy balance is projected to grow at 11% (by 2020) of the basic energy supply and more than 25% (by 2035). However, in order to achieve the set goals, it is necessary to attract investments in the amount of 12 billion euros. Therefore, creating a favorable investment climate for business is a priority. Currently, the State Agency for Energy Efficiency is working on mechanisms to attract investors to Ukraine. So, with the support of the Government of Germany, in 2017 the UA MAP Interactive

Map (https://www.uamap.org.ua) was created, where potential investors from around the world can get acquainted with the implemented and potential projects in Ukraine. As of 2020, there are already about 300 profitable and interesting business offers worth more than 5 billion euros on the map.Thus, Ukraine's energy lags far behind world standards. Our country has already begun to make some changes to correct this problem, but we need to increase the pace of development of this industry, and in any case not to slow down. In the future, the developed electricity industry will become the basis for the development of the country's economy, as it will be able to provide them with reliable, high-quality and cheap electricity supply.

References

1. Melnyk L., Dehtyarova I. Synergetic Basis of Innovation Marketing //Scientific Journal of Riga technical University. Series: Economics and Business. – 2012. Riga Technical University. - # 22. – PP. 118-124
2. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09. https://essuir.sumdu.edu.ua/handle/123456789/80687
3. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)
4. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025
5. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01. https://essuir.sumdu.edu.ua/handle/123456789/80469
6. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03. https://essuir.sumdu.edu.ua/handle/123456789/82241

7. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

8. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

9. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

10. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

11. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09.
https://essuir.sumdu.edu.ua/handle/123456789/81810

12. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02.
https://essuir.sumdu.edu.ua/handle/123456789/83750

13. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07.
https://essuir.sumdu.edu.ua/handle/123456789/87533

14. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05.
https://essuir.sumdu.edu.ua/handle/123456789/80477

15. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

16. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758
17. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156
18. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514
19. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

OPENING YOUR OWN FARM-STYLE CAFE

I. Vorobyouv
student gr. FM-91 / 1 an
Oleksandr Kubatko, Dr. Sc., Prof.
Sumy State University, Ukraine

The purpose and task of this project is to meet the needs of consumers and provide high quality services. The business plan is dedicated to the opening of the cafe "Love it" in the center of Sumy on the street. Petropavlovskaya or on the street. Kharkiv. The cafe belongs to the section №56 of NACE 2010 "Activities for the provision of food and beverages", and therefore it is allowed to engage in this business in Ukraine. It should also be noted that this activity is not subject to licensing, but we will need a license to sell alcoholic beverages.

Why such a name "Love it"? Every visitor is special to us. Everyone has their own tastes and preferences. Some like to travel, others want to learn about the world of different dishes and discover something new, and for some it is most important to spend time with family. But unfortunately not everyone has free time or the

opportunity to travel abroad with the whole family to try new dishes. This is what inspired us to create this institution and we can combine it all. And also this institution is decorated in the style of a farm, which we associate with childhood memories. Also, the topic of ecology is quite relevant today [1-18]. In addition, we try to meet the needs of the most demanding guests so that they feel at home. And we do all this with love. We ask the same of each other. It should also be noted that the financial reporting procedure BU and payment of taxes for private individuals is much easier than for legal entities, so you can do all the paperwork yourself, thereby reducing potential costs. I would also like to add that the procedure for paying taxes (amount and date) for a private individual is usually already prescribed in advance and is called the "Entrepreneur's Calendar", for greater certainty you can use the Tax Code of Ukraine. Also, the analysis of the sales market showed that in this area today this market niche is filled, and, consequently, competition is expected. Particular attention should be paid to the "big players" of this market. These include: Viva Olive, Safari, New York, Soot, Chekhoff's, La Spezia and Simbiosi & Yappi. These are the largest and most popular establishments in the city that already have a reputation and regular customers, but nevertheless the establishment I offer will be able to give decent competition. It is proposed to introduce a modern European style of service. Modern farming style in design is at the same time a certain simplicity and on the other hand it is a modern environmental theme. Another distinctive feature of this cafe will be a flexible work schedule. The staff of the institution will consist of highly qualified employees. The cafe is quite democratic type, designed for visitors of any category. This business takes into account the fact that the basis of the range is aimed at European cuisine. Finally, I want to indicate the required amount of funds required for the implementation of this project. It is approximately UAH 528,000, but just in case I propose to make another reserve of 10%. Another distinctive feature of this cafe will be a flexible work schedule. The staff of the institution will consist of highly qualified employees. The cafe is quite democratic type, designed for visitors of any category. This business takes into account the fact that the basis of the range is aimed at European cuisine. Finally, I want to indicate the required amount of funds required for the implementation of this project. It is approximately UAH 528,000, but just in case I propose to make another reserve of 10%. Another distinctive feature of this cafe will be a flexible work schedule. The staff of the institution will consist of highly qualified employees. The cafe is quite democratic type, designed for visitors of any category. This business takes into account the fact that the basis of the range is aimed at European cuisine. Finally, I want to indicate the required amount of funds required for the implementation of this project. It is approximately UAH 528,000, but just in case I propose to make another reserve of 10%.

References

1. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

2. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

3. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

4. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

5. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

6. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

7. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

8. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

9. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

10. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

11. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

12. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

13. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

14. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

15. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

16. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

17. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

18. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

MODERN PROBLEMS OF ENVIRONMENTAL EDUCATION

Pavlo Hrytsenko, *PhD, As. Prof.,*
Sumy State University, Ukraine
Kyrylo Chulanov*, PhD student,*
Sumy State University, Ukraine
Mariana Maslii*, student,*
Sumy State University, Ukraine

The current environmental situation prompts a rapid restructuring of the thinking of mankind and each individual person, the formation of environmental consciousness and culture. In this regard, environmental education and environmental upbringing are becoming a new educational priority area[18]. The experience of the EU countries shows that, based on the principles of the country's environmental policy, a high level of environmental culture and an active position of a person in environmental protection, it is possible to improve the state of the environment[1-17]. At the same time, a high level of environmental culture is impossible without environmental education, which should be carried out on the basis of the complexity and continuity of education.

It should also be noted that it is necessary to cultivate environmental consciousness in people, and not just teach. The passivity of a man himself is one of the reasons for low environmental awareness, that is why the issue of environmental education is very relevant in modern society.

Environmental education is an organized and purposeful process of forming a system of scientific knowledge about nature and society, views and beliefs that ensure the formation of a responsible attitude of young people to nature, a real indicator of which is the practical actions of students in relation to the natural environment that meet the standards of human morality.

Environmental upbringing is inseparable from environmental education. Environmental education allows you to form a unity of consciousness and treatment, which is in harmony with nature. This harmony is achieved through various

pedagogical approaches aimed at proving the unity of all living things on the planet and the responsibility of human, the crown of nature, for all flora and fauna (Yakovleva N.). The functions of environmental education are presented in:

- generates adequate ecological ideas;
- forms an attitude to nature;
- forms a system of skills, abilities and strategies of interaction with nature;
- develops human communication skills;
- performs an important informative function;
- forms the personality of a young person and a citizen.

It should be noted that the need to strengthen the influence on the spiritual sphere of the personality, the formation of the moral component of environmental culture is a necessary condition for the environmental education of young people. Overcoming the ecological crisis depends on the moral improvement of a human, his culture and relationships with nature and other people. If people in the near future can`t learn to care for nature, they will destroy themselves. And for this we need to cultivate ecological culture and responsibility.

Thus, we can conclude:

- the problems of the ecological safety of mankind at the present stage should be solved by highly qualified personnel who have knowledge of the biosphere, the laws of its development, the specifics of the interaction between nature and society in all its diversity, information processes in nature and society, and are also able to apply the latest technologies including computer technologies for solving environmental problems at the local, regional and global levels;

- environmental training of students should be considered as a part of a continuous cross-cutting environmental education program and as an obligatory component of the educational system of a technical university, contributing to the improvement of the training of engineers, the growth of their general and professional culture;

- environmental education should be started at preschool age, since that time the foundations of personality are laid, including a positive attitude towards nature and the world around;

- training of citizens with a high level of environmental knowledge, environmental consciousness and culture based on new criteria for assessing the relationship between human society and nature should become one of the determining levers in solving very acute environmental and socio-economic problems of modern Ukraine.

References

1. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

2. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

3. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

4. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

5. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

6. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

7. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

8. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

9. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

10. Melnyk L., Derykolenko O., Matsenko O., Mazin Y., Piven V. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World. *Mechanism of Economic Regulation*. 2020. 3. С. 117-133. DOI: https://doi.org/10.21272/mer.2020.89.09. https://essuir.sumdu.edu.ua/handle/123456789/81810

11. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02. https://essuir.sumdu.edu.ua/handle/123456789/83750

12. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07. https://essuir.sumdu.edu.ua/handle/123456789/87533

13. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05. https://essuir.sumdu.edu.ua/handle/123456789/80477

14. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

15. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. С. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

16. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. С. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

17. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. С. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

18. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. С. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

Khakhalieva A.A.
student, Sumy State University, Ukraine
Karintseva O.I., *Dr.(Economics),*
Prof. Sumy State University, Ukraine
Kharchenko M.O.,
PhD, Sumy State University, Ukraine

DEVELOPMENT OF A POLICY TO PREVENT BANKRUPTCY OF A COMMERCIAL ENTERPRISE

Modern enterprises need to develop in line with global trends[1,2,3,4,5,6,7,12,15,16,18,19]. The most common of these are globalization and focus on resource conservation technologies, as well as adherence to the principles of sustainable development[8,9,10,11,13,14,17,20].

Today, when the world is experiencing a global financial crisis, no company or company, even the most stable, can be sure of its financial stability.

Any commercial organization is interested in its financial prosperity, but with the increase in the number of companies there is increasing competition in almost every segment, and against this background, organizations become sensitive to changes in market activity.

Today, the organization may face the problem of insolvency, instability, which can lead to bankruptcy. The financial crisis has shown that even the country's largest companies are not insured against it. To stay competitive in the market, organizations need to improve their financial and economic performance.

To ensure the stable operation of the organization and prevent financial collapse, organizations need to conduct a financial risk assessment of business bankruptcy, which will allow the company to predict the crisis at the right time and quickly take measures to eliminate it, so the relevance of this topic is growing.

Every enterprise, small or large, in its business activities enters into relationships with suppliers and contractors, customers, with various credit companies, tax authorities and extra-budgetary funds, investors, etc., ie with all those people in relations with which the organization has obligations. knitting.

These obligations may, over time, lead to the company at some point being obliged to deliver the goods, provide a service or make a payment in favor of another person. But it may happen that a company that yesterday fulfilled its obligations one hundred percent, today may simply be insolvent, ie will enter the zone of unreliable partner or "zone of financial risk" or even simpler, will be on the verge of bankruptcy.

Both government agencies and credit companies in this situation put such a partner before choosing:

- give the organization a controlled chance to overcome the financial crisis within the company;

- set conditions for the liquidation of the company and the subsequent sale of property in order to meet the requirements of creditors;

- declare voluntary liquidation

Bankruptcy is understood as a financial crisis and, despite the fact that bankruptcy is a legal fact, as only an arbitral tribunal can recognize the fact of bankruptcy, it is based mainly on financial reasons:

- excess of borrowed capital over equity and its assets. This situation is characterized by a financial indicator - net negative value, which is formed as a result of unprofitable activities of the enterprise in the previous period;

-low liquidity of the enterprise, characterized by the excess of term financial liabilities over the amount of assets in highly liquid form and is manifested in long-term insolvency of the enterprise;

- excess of negative cash flow over positive cash flow and lack of prospects for a breakthrough in such a situation;

- limited own funds and refusal of credit companies to cooperate;

- financial errors in the work of staff .

All this leads to negative consequences for the company itself, as well as:

- significantly reduces the economic potential of the country, causing damage to business partners, public funds, in terms of generating income from mandatory payments;

- inefficient use of credit resources provided to him, the company affects the reduction of the overall rate of return on capital;

- reducing the volume of its activities, the company reduces the number of employees, increasing unemployment in the country .

Bankruptcy, as a concept, can be characterized by its types:

- real bankruptcy - characterizes the complete inability of the company to restore its solvency and financial stability, as a result of which it is declared legally bankrupt;

- technical bankruptcy - characterizes the excess of receivables over accounts payable, and the amount of assets significantly exceeds the amount of its financial results;

- Intentional bankruptcy characterizes the intentional infliction of economic damage to the enterprise in the personal interests or interests of others. Prosecuted;

- fictitious bankruptcy - a deliberately false declaration of insolvency of the company in order to mislead creditors to obtain a deferral of credit obligations or a discount on the amount of debt, which is also considered a criminal offense.

References:

1. Melnyk L. H., Derykolenko O. M., Mazin Yu. O., Matsenko O. I., Piven V. S. Modern Trends in the Development of Renewable Energy: the Experience of the EU and Leading Countries of the World // Механізм регулювання економіки. 2020. № 3. С. 117-133. https://essuir.sumdu.edu.ua/handle/123456789/81810

2. Melnyk, L., Dehtyarova, I., Kubatko, O., Karintseva, O., & Derykolenko, A. (2019). Disruptive technologies for the transition of digital economies towards sustainability. Economic Annals-XXI, 179(9-10), 22-30. doi: https://essuir.sumdu.edu.ua/handle/123456789/85476

3. Melnyk, L., Matsenko, O., Dehtyarova, I. & Derykolenko, O. (2019). The formation of the digital society: social and humanitarian aspects. *Digital economy and digital society*. T. Nestorenko& M. Wierzbik-Strońska (Ed.). Katowice: Katowice School of Technology. [in Ukrainian].URL: http://essuir.sumdu.edu.ua/handle/123456789/74570

4. Derev`yanko Yu.M., Lukash O.A., Litsman M.A., Svitlychna A.O. The State and Trends of Enterprises Efficiency on the Basis of Modern Indicators. *Механізм регулювання економіки*. 2020. 1. С. 106-115. DOI: https://doi.org/10.21272/mer.2020.87.09.
https://essuir.sumdu.edu.ua/handle/123456789/80687

5. Hrytsenko Pavlo, Voronenko Viacheslav, Kovalenko Yevhen, Kurman Tetiana and Omelianenko Vitalii. Assessment of the development of innovation activities in the regions: Case of Ukraine. *Problems and Perspectives in Management*. 2021. 19(4). С. 77-88. DOI: 10.21511/ppm.19(4).2021.07. https://essuir.sumdu.edu.ua/handle/123456789/85729 (**Scopus**)

6. Hrytsenko, P. V., Kovalenko, Y. V., Voronenko, V. I., Smakouz, A. M., Stepanenko, Y. S. Analysis of the Definition of "Change" as an Economic Category. *Механізм регулювання економіки*. 2021. 1. С. 92-98. DOI: 10.21272/mer.2021.91.07. https://essuir.sumdu.edu.ua/handle/123456789/84025

7. Kubatko O. V., Yaryomenko D. O., Kharchenko M.O., Almashaqbeh Ismail Y. A. Economic and environmental aspects of Smart Grid technologies implementation in Ukraine. *Механізм регулювання економіки*. 2020. 1. С. 28-37. DOI: doi.org/10.21272/mer.2020.87.01.
https://essuir.sumdu.edu.ua/handle/123456789/80469

8. Kubatko O.V., Ignatchenko V.M., Shaparenko S.V., Starodub I.A., Yaryomenko D.O. Economic optimization of resource use based on smart grid. *Механізм регулювання економіки*. 2020. 2. С. 37-46. DOI: doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/82241

9. Lukash O.A., Derev`yanko Yu.M., Kozlov D.V., Mukorez A.I. Regional Economic Development in The Context of the COVID-19 Pandemic and the Economic Crisis. *Механізм регулювання економіки*. 2021. 1. С. 99-107. DOI: https://doi.org/10.21272/mer.2021.91.08.
https://essuir.sumdu.edu.ua/handle/123456789/84026

10. Matsenko, O., Kovalev, Y., Tkachenko, O. & Chorna, Y. Complex Solution of Ecological and Economic Problems of Traffic Jams. *Mechanism of Economic Regulation*. 2020. 4. С. 6–15. DOI: https://doi.org/10.21272/mer.2019.86.02.
https://essuir.sumdu.edu.ua/handle/123456789/77238

11. Matsenko, O., Tereshchenko, V., Piven, V., Panchenko, A. & Perekhod, E. Socio-environmental and Economic Problems of Solar Panels Recycling. *Mechanism of Economic Regulation*. 2020. 1. С. 48–55. DOI: https://doi.org/10.21272/mer.2020.87.03.
https://essuir.sumdu.edu.ua/handle/123456789/80473

12. Melnyk L. Hr, Shaulska L. V., Matsenko O. I., Piven V. S., Konoplov V. V. Modern Trends in the Production of Renewable Energy: the Cost Benefit Approach. *Механізм регулювання економіки*. 2021. 1. С. 6-17. DOI: 10.21272/mer.2021.91.01. https://essuir.sumdu.edu.ua/handle/123456789/83761

13. Melnyk L., Matsenko O., Piven V., Kyrylenko M., Derykolenko O. Formation of Human Capital in the Digital Economy. *Mechanism of economic regulation*. 2020. 4. С. 19-35. DOI: https://doi.org/10.21272/mer.2020.90.02.
https://essuir.sumdu.edu.ua/handle/123456789/83750

14. Nesterenko V., Dolhosheieva O., Kirilieva A., Voronenko V., Hrytsenko P. «Green» vector of the economic development of the country. *Механізм регулювання економіки*. 2021. 3. С. 82-90. DOI: 10.21272/mer.2021.93.07.
https://essuir.sumdu.edu.ua/handle/123456789/87533

15. Pavlenko D. S., Kubatko O. V., Ziabina Y. A. Economic, Social and Technological Factors of Startup's Success. *Механізм регулювання економіки*. 2020. 1. С. 64-74. DOI: https://doi.org/10.21272/mer.2020.87.05.
https://essuir.sumdu.edu.ua/handle/123456789/80477

16. Sotnyk I. M., Matsenko O. M., Popov V. S., Martymianov A. S. Ensuring the economic competitiveness of small green energy projects. *Mechanism of Economic Regulation*. 2021. 1. С. 28-40. DOI: https://doi.org/10.21272/mer.2021.91.03.
https://essuir.sumdu.edu.ua/handle/123456789/84021

17. Sotnyk I., Sotnyk M., Olondar A., Pidopryhora N., Maslii M. Managing the energy-efficient development of the university: re-straints and ways to overcome them. *Mechanism of Economic Regulation*. 2020. 3. C. 68-86. DOI: https://doi.org/10.21272/mer.2020.89.06.
https://essuir.sumdu.edu.ua/handle/123456789/81758

18. Tambovceva T., Melnyk L., Dehtyarova I. , Nikolaev S. Circular Economy: Tenden-cies and Development Per-spectives. *Mechanism of Economic Regulation*. 2021. 2. C. 33-42. DOI: https://doi.org/10.21272/mer.2021.92.04. https://essuir.sumdu.edu.ua/handle/123456789/85156

19. Yaremenko A., Chortok Yu., Goncharenko O., Chama Theodore KETUAMA Peculiarities of formation of the region's logistics infrastructure on the basis of Eco-innovations within the framework of stakeholders' partnership in the Enterprise-Region. *Механізм регулювання економіки*. 2021. 4. C. 9-13. https://essuir.sumdu.edu.ua/handle/123456789/87514

20. Yevdokymov Andriy V., Dron Viktoria V., Yevdokymova Alona V., Karintseva Oleksandra I., Kharchenko Mykola O. Designing the information educational environment of the studying course for the educational process management using cloud services. *Механізм регулювання економіки*. 2020. 3. C. 87-96. DOI: doi.org/10.21272/mer.2020.89.06. https://essuir.sumdu.edu.ua/handle/123456789/81759

Наукове видання Економіка для екології. Матеріали Міжнародної науково-практичної конференції (Суми, 31 травня – 01 червня 2022 року)

Стиль та орфографія авторів збережені.
Організаційний комітет і редакційна колегія можуть не поділяти точки зору авторів.

Автори відповідають за точність, достовірність і зміст матеріалів.
Посилання на матеріали конференції обов'язкові.

Відповідальний за випуск та комп'ютерне верстання: П.В. Гриценко

Формат 60×84/16. Ум. друк. арк. 7,96.
Обл.-вид. арк. 8,58.

Видавець і виготовлювач Сумський державний університет,
вул. Римського-Корсакова, 2, м. Суми, 40007
Свідоцтво суб'єкта видавничої справи ДК № 3062 від 17.12.2007