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Proceedings of the International Scientific and Practical Conference "Socio-Economic Challenges" are devoted to finding a systemic solution to multidisciplinary problems in the field of modern development, management, administration of various systems, corporate social responsibility, innovation management in various fields of environmental management.

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

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ANALYSIS OF CHANGES IN THE WORLD ECONOMY CAUSED BY RUSSIAN-UKRAINIAN WAR

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The economic damage from a full-scale Russian invasion of Ukraine will contribute to slowing global growth from the pandemic crisis. Due to the devastating hostilities and human losses, Ukraine's GDP is expected to drop by half. And for Russia, a deep contraction of the national economy is predicted under the influence of sanctions and the decision of several European countries to reduce the import of Russian energy carriers, which constitutes a significant share of the country's exports (IMF, 2022).

Shock waves from the unstable situation in these two countries, caused by Russian aggression, reach a number of important sectors of the global economy. One such sector has been the flow of food commodities, creating catastrophic food shortages, particularly in low-income countries in Africa. At the same time, Ukraine and Russia account for about a third of the world wheat production, a quarter of barley production, and about 75% of the world supply of sunflower oil, the largest exporter of which is Ukraine (Stackpole, 2022), which only indicates the vulnerability of global food security.

Russian aggression also affects the world's non-food trade. Since Ukraine was the fifth largest exporter of titanium and the largest supplier of neon, the shortage of these materials threatens production in the transportation, medical and computer industries where these goods are used. And Russia is an important exporter of raw and intermediate goods, precious metals that are difficult to replace, such as palladium, which is used in the production of catalytic converters and whose Russian supply is about a quarter of the world market. In addition, the Russian Federation is the world's second-largest producer of potash fertilizers, which also negatively affects food security. However, the most prominent products for the world economy are oil and natural gas, where Russia supplies 10 and 9% of global needs, respectively (Ruta et al., 2022).

According to the above, Russia's war against Ukraine was accompanied by a sharp increase in inflation under the pressure of prices for energy carriers and basic goods. And although world prices had already risen during 2021 as a result of increased demand caused by the economic recovery and the prolonged disruption of many value chains, the war only accelerated it (Borrell, 2022). Thus, the greatest effect of rising inflation was observed in developing countries and in the poorest

sections of other countries, which contributes to increasing inequality around the world. However, although the price component of the world crisis caused by the Russian invasion is coming to a relative norm, there is still a danger of the situation aggravating due to active hostilities on the territory of Ukraine, which will cause an international sanction response to Russia's actions, the uncertainty of the Ukrainian agricultural sector regarding its future, and the difficulty of substitutability of Russian energy carriers.

Russian aggression also has an impact on international logistics and world tourism. Changed routes add additional hours on the train and may require an intermediate stop on the way. This, together with the increase in fuel prices and general inflation, significantly affects the state of trade and civilian travel. Travel disruption from Ukraine and Russia accounts for about 3% of global tourism receipts, which amounted to US$14 billion in 2020 (UNWTO, 2022). In addition to this, both markets are important for European sea routes.

Accordingly, in the wake of global concern over a possible energy crisis, rising inflation and lack of necessary food even in the future, the full-scale Russian-Ukrainian war and the COVID-19 pandemic have pointed to the importance of supplier diversification as one of the main criteria for the resilience of economies to the challenges of the globalized world.

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SOFTWARE FOR NEOBANKING

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The choice of fintech solutions for business is a complex process related to ensuring cyber security, compliance with legal regulations and customization to the specific needs of the partner. In fintech, there is a category of solutions designed to simplify the life of business owners and to give them the tools to serve their financial needs. It is about Banking-as-a-Service – the system in which traditional banks provide their banking infrastructure to third parties and allow companies such as fintech access this information (Melnyk, M., Kuchkin, M., Blyznyukov, A. 2022). And the last use this access to develop innovative financial products based on already existing infrastructure. One of the BaaS cooperation models that is gradually developing in the fintech market is White Label. The purpose of the work is to research modern fintech solutions and to observe the most famous software developers for neobanks.

Creating products using white-label platforms and using API interfaces has many advantages: resource saving and faster startup, quick entry to the market and extended offers, the ability to know your product and budget from the very beginning. The service includes rebranding services, quality customization, reference materials with clearly defined user paths, professional technical support, ongoing maintenance and updates when necessary. Besides, management in business, banking and neobanking plays a vital role too, so a lot of research is devoted to SocioEconomic Issues (Akpoviroro, K.S., Adeleke, O.A.O. 2022, Biewendt, M. et. al. 2021, Tovmasyan, G. 2017).

BaaS will benefit any business that wants to build financial functionality into their products, but lacks the time, money and expertise to do so. Additionally, with the growth of the amount of data on the Internet, the need for high-quality cybersecurity increases. Including through social network analysis, the work of Kirichenko, L., Radivilova, T., Anders, C. 2017 is devoted to this. Using wight label solutions, the customer can be confident in the security of data. Moreover, type of partnership is also used in other industries to scale operations. For example, logistics, healthcare and food delivery, and others.

There are many neobank software developers around the world, and below are some of the largest ones.

Switzerland-based payment processing provider Radar Payments. It is one of the largest white-label platforms on the current market and a leading innovative service provider offering universal solutions. RadarPayments works with all types of customers: merchants, payment service providers (PSPs), banks, non-banks, niche

solutions, acquirers, issuers, and anyone interested in their services. The company offers: integrated and contactless payment solutions, SWIFT instant payment support, fraud management, payment portal solutions for on-the-go commerce (ThePaypers, 2022).

Mambu is a German software company that allows banks and financial institutions to conduct and manage financial transactions. It is a SaaS, cloud-native, API-driven banking and financial services platform, which is designed to power financial innovation, to bring solutions to market faster, drive down cost barriers and allow ecosystems to expand. (Mambu, 2022). The company offers: online, private and core banking, multi-user accounts, CRM, API integration with Zenoo, Backbase, Infinitus, Ondato, etc.

Meniga is a software company founded in Reykjavík, Iceland in 2009. It's a global leader of white-label Digital Banking solutions – serving over 100M banking customers across 30 countries. Meniga's portfolio of products includes personal finance management, carbon insight services, automated real-time notifications, predictive analytics and personalised engagement technologies, targeted rewards and consumer data analytics. The company offers: data management: consolidation, enrichment and optimization of financial data for both companies and individuals, aggregation hub, data analytics, digital banking APIs, cashflow assistant, carbon insights, UX workshops.

Some authors pay special attention to the issues of the efficiency of the banking industry in MENA countries (Rizk, S. 2022), while others research the financial technologies innovations on CEECs capital markets (Paskevicius, A., & Keliuotyte-Staniuleniene, G. 2018). Moreover, now, research is being carried out in the field of financial services in African countries, particularly on how credit obligations affect the quality of bank assets and what determines the availability of financial services in these countries (Bakari, I. H., Idi, A., & Ibrahim, Y. 2018, Karaye, A.I., Ahmad-Zaluki, N.A., Badru, B.O. 2022).

Neobanks beyond doubt set future trends in the financial world. Thanks to white-label companies qualitatively improve the customer experience and their services, new unique solutions appear on the market and cross-industry interaction develops. Banking is also important for Health Care. Many authors pay great attention to the issues of Health Care Financing and its impact on the Economic Growth, especially in US and EU countries (Serpeninova, Yu., Makarenko, I., Plastun, A., Babko, A., & Gasimova, G. 2020, Kotenko, N., & Bohnhardt, V. 2021, Samoilikova, A., & Kunev, R. 2020, Taraniuk, L., D'yakonova, I., Taraniuk, K., & Qiu, H. 2020, Minchenko, M., & Demchuk, K. 2021).

Furthermore, numerous scientific works are devoted to innovations and optimization solutions for fintech and business that help the economy flourish. (Goncharenko, T. 2020, Vasylieva, T., Harust, Yu., Vinnichenko, N., & Vysochyna, A. 2018, Zarutska, E., Pavlova, T., & Sinyuk, A. 2018, Masharsky, A., Azarenkova,

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In conclusion, white-label solutions not only help business, however, contribute to the development of the economy in general. Thus, BaaS and WL-solutions in banking will continue to prosper.

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DIGITAL TRANSFORMATION OF ENTREPRENEURIAL STRATEGIES

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In the conditions of variability and risk of the business environment, entrepreneurs are studying the possibilities of modern business strategies. In the entrepreneurial process, the management should consider the features of its external macro- and microenvironment to digital transformation of entrepreneurial strategy (Melnyk & Karintseva, 2021).

The formation of a basic competitive strategy ensures the selection and disclosure of its main elements, identification, and formation of the role of the components of the internal corporate organizational and economic mechanism during the implementation of the strategy, as well as the distribution of resources between them (Sotnyk &Taraniuk, 2018).

Companies focus on using the latest advances in artificial intelligence neural networks in today's competitive digital environment. Those businesses that use modern competitive strategies in their activities can succeed and become efficient and competitive. Experts identify nine basic directions of technologies of the Fourth Industrial Revolution, which form the basis of digital entrepreneurial strategies (Melnyk & Kovalov, 2020).

1) Big Data and Analytics. Every minute, the amount of information is constantly growing, but, unfortunately, there is still no clear structure. Because of this, entrepreneurs often face such a problem as the rapid acquisition of information necessary for making effective managerial decisions.

2) Autonomous Robots. Robotics was and remains a promising direction of technology movement. As for autonomous robots, as the name suggests, these are robots that do not require human intervention in some specific process carried out by the robot. They can be equipment in production, which significantly facilitates control and the process of production optimization.

3) Simulation or modeling. This component is used at the design stages to visualize business processes better. It should be noted that in the future, it is planned to use directly in testing, for example, equipment in production. With the help of a virtual presentation, it will be possible to detect this or that error at the testing stage, which will save financial and time resources for the enterprise.

4) Horizontal and Vertical System Integration. These processes are necessary to create a unified information system. Today, unfortunately, the information space exists only within one specific enterprise or logistics chain. Industry 4.0 seeks to erase these boundaries and provide access to all information regardless of level.

5) Internet of Things, IoT. In this technology, the Internet is used to exchange information between people and various "things", machines, devices, sensors, etc. The Industrial Internet of Things (IIoT) is another type of IoT. The collected data is processed and sent to the appropriate services of the enterprise, which allows the staff to make informed and balanced decisions quickly. This technology allows all production components to be connected in real time in a single integrated network of information exchange.

6) Cybersecurity. More precisely, with the appearance of more information, with its complete transition to the "online" mode, the number of attempts to obtain information illegally will increase. This is already one of the problems of many leading companies today when it is possible to protect users' data fully.

7) The Cloud. Cloud technologies are not yet extensively used. Every year, the information generated by devices is constantly increasing; of course, it has to be stored somewhere. The productivity of these technologies is only growing, but they already provide constant access to information.

8) Additive Manufacturing. This applies to the use of 3D printers. There are already many orders for finished products using this technology, which simultaneously helps save costs for storage and transportation.

9) Augmented Reality. Augmented, or virtual, reality will allow to learn and make decision faster. For example, if a particular piece of equipment in a production facility has failed, an employee wearing virtual reality glasses identifies the problem much faster.

The fourth industrial revolution may also involve the widespread adoption of 3D printing, printed electronics, blockchain technology, virtual and augmented reality, and the development of autonomous robots.

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LEGAL REGULATION OF REPORTS ON PAYMENTS TO GOVERNMENTS, AS A TYPE OF REPORTING ON SUSTAINABLE DEVELOPMENT

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With the gradual process of European integration and implementation of European legislation in Ukraine, reporting on sustainable development began to prevail over the usual forms of reporting. Therefore, since 2016, logging companies and oil-producing companies of the European Union began to submit reports on payments to governments

The EU Directives and the regulatory support for the preparation of reports in Ukraine became the main regulatory and legal acts for the formation, regulation, and control of such reports in Ukraine (Table. 1).

Table 1

Legal regulation of the procedure for drawing up and submitting reports on payments to governments

Criterion	Legal act
The essence of the report on payments to governments	- Directive 2013/34/EU; - Law "On accounting and financial reporting in Ukraine"
Report form and submission deadlines	- Directive 2013/34/EU; - Law "On accounting and financial reporting in Ukraine"; - Law "On ensuring transparency in extractive industries"
Content and preparation of the report	- Directive 2013/34/EU; - Law "On disclosure of information in extractive industries"; - Law "On ensuring transparency in extractive industries"
Control and transparency of the report	- Directive 2013/50/EU; - Law "On ensuring transparency in extractive industries"; - Tax Code of Ukraine

Source: author's development

Directive 2013/34/EU is the main regulatory framework for the preparation and formation of such reports. Section 10 of this Directive requires large European companies operating in the extractive and logging industries to report annually on payments to governments (Directive 2013/34/EU, 2013).

The transparency and control of such reports is regulated by Directive 2013/50/EU. Article 6 of this Directive dictates the basic requirements for the transparency and accuracy of such reports (Directive 2013/50/EU, 2013).

Law of Ukraine No. 996 "On Accounting and Financial Reporting" stands out among the laws of Ukraine that regulate the submission procedure and terms of drawing up a report on payments to governments. It approved the concept of this type of reporting, the procedure, and deadlines for submitting reports on payments to governments. (Law of Ukraine No. 996 "On Accounting and Financial Reporting", 1999).

The Law of Ukraine "On Ensuring Transparency in the Extractive Industries" defines the legal principles of regulation, disclosure, and dissemination of information to ensure transparency and prevent corruption in the extractive industries in Ukraine. And first, it is aimed at fulfilling Ukraine's international obligations in connection with joining the Extractive Industries Transparency Initiative. The same law is partly responsible for the content and form of submission of reports on payments to governments, as well as the Law of Ukraine "On disclosure of information in extractive industries" (The Law of Ukraine "On Ensuring Transparency in the Extractive Industries", 2018).

The Tax Code of Ukraine controls the process of accounting and payment of such payments from mining companies and logging enterprises. However, it does not provide a specific percentage or formula for calculating such payments (Tax Code of Ukraine, 2011)

The procedure for submitting a report on payments to governments is regulated by Resolution of the Cabinet of Ministers of Ukraine No. 419 "On approval of the procedure for submitting financial statements" (Law "On disclosure of information in extractive industries", 2021).

Liability for non-submission and late submission of reports in Ukraine is controlled by the Tax Code of Ukraine and the Code of Administrative Violations. However, during martial law, fines are not imposed on enterprises that have not submitted reports.

The implementation of all the presented instruments of normative and legal regulation forced many enterprises to speed up the process of integration into European legislation, as well as to change approaches in reports related to the implementation of sustainable development goals.

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BUSINESS MANAGEMENT STRATEGY ON THE BASIS OF SUSTAINABLE DEVELOPMENT

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Sustainable development – it is a process that exists and will be carried out regardless of the aspirations of the company's management. However, if it is researched and mastered, as well as successfully used, then the development process will happen much faster and more efficiently. For this purpose, every enterprise must have a well-founded plan for activities and development, monitor strategic, tactical and operational changes, adjust the functioning mechanism, etc. (Demianenko, 2020).

As a result of the interaction of the ecological, economic and social components of the systems, the development of the primary grade, i.e. the enterprise, resulted in the sustainable development of the higher level system, as a result of which (Kukharuk, Zmitrovych, 2005):

– the enterprise is covering its needs by receiving profit, improving its image as a manufacturer of an environmentally safe product, reducing energy consumption, reducing the amount of waste in production, the staff receives an appropriate reward for competence and professionalism, social responsibility and strategic advantages over competitors are formed;

– at the regional level, the problem of employment of the population is solving, the level of environmental waste pollution decreasing;

– the level of environmental and technological safety is improving at the national level;

The problem of developing such a mechanism of strategic management of the enterprise, which would take into account the priorities of sustainable development and provide the enterprise with an effective tool for assessing the level of achievement of the set goals, is becoming urgent.

To solve this problem, it is possible to propose the following procedure for the formation of an enterprise management strategy on the basis of sustainability (Figure 1):

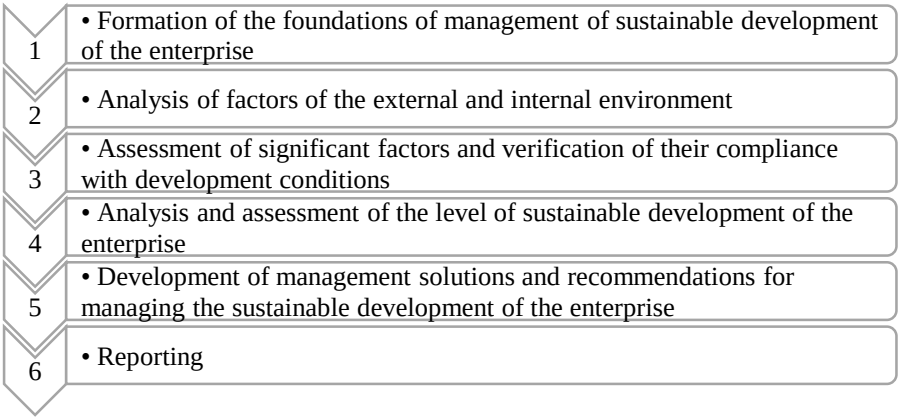

Figure 1. Stages of the mechanism of managing the sustainable development of the enterprise

The presence of such a system of continuous control makes it possible for the enterprise to function effectively, to develop in the long term and to warn of danger in a timely manner.

Therefore, the main idea of the sustainable development strategy is to find the best ratio of socio-economic development and the use of resources that would maintain environmental security, doesn't pose a threat to the resource capabilities of future generations, and guarantee the necessary quality of life and well-being of the population.

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THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND ENVIRONMENTAL SUSTAINABILITY: A CASE OF UKRAINE

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The transition to sustainable development is a complex process, which requires significant transformations in economic, social and environmental spheres. Policy-makers often have a dilemma: to provide a high level of economic growth today or to think globally about the needs of future generations (George et al., 2015). Many scientists discussed these issues, however, the relationship between economic growth and sustainable development is ambiguous and requires profound research. The purpose of the abstract is to investigate the relationship between economic growth and environmental sustainability in Ukraine.

Scientists often utilize the Environmental Kuznets Curve (EKC) to indicate the relationship between economic growth and the quality of environment. It is the hypothesis that there is an inverted U-shaped relation between GDP per capita and environmental quality (Hysa et al., 2020). Technological changes and behavioral patterns may explain how this model works. However, there are some drawbacks and limitations of the EKC. For example, the hypothesis does not work for all pollutants, and the model can be different when we apply various econometric approaches.

There are other ways to describe the relationship between economic growth and environmental sustainability. The limits theory and the new toxics theory are likely to take into the account the limitations of the EKC. For instance, the new toxics theory anticipates that new toxic emissions have the positive impact on GDP, whereas the usual pollutants have the negative influence (Orhan et al., 2021). Decoupling is a violation of the relationship between the growth of the volume or pace of the economy and the growth of the volume or pace of exploitation of resources or the harmful anthropogenic load on the environment and human health.

Analyzing the relationship between economic growth and environmental sustainability in Ukraine, we take GDP per capita as an indicator of economic growth and CO_2 emissions per capita as an indicator of environmental quality. The time frame covers years 2002-2020. In order to visualize the results, we take 2002 as a base year (GDP per capita in 2002 =100% and CO2 emissions per capita in 2002 = 100%). The results are shown on Figure 1. The findings demonstrate the general tendency of economy to grow and CO_2 emissions to decline. However, there is some interaction between economic growth and environmental sustainability. For

example, in the period of 2008-2009 Great Recession GDP per capita significantly declined, and the same happened to CO_2 emissions per capita. After this economic crisis, economy recovered and CO_2 emissions also increased. A positive tendency was observed in 2016-2020, when there was both an economic growth and CO_2 emissions reduction.

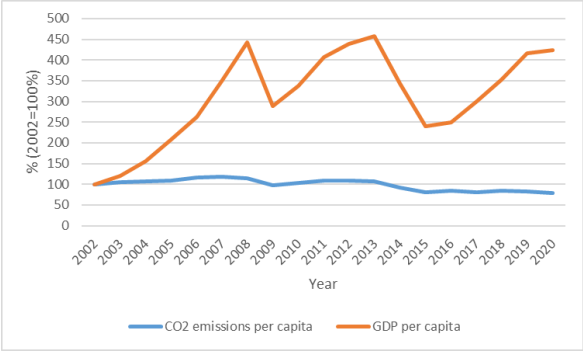

Figure 1. The change in GDP per capita and CO2 emissions per capita in 2002-2020 in Ukraine (adjusted %, where 2002=100%)

In Ukraine today we need a variety of strategic reforms in economic, legislative financial spheres in order to make the successful transition to ecologically balanced development. We can propose following recommendations:

- develop and adopt an effective system of emissions monitoring;
- promote renewable energy;
- develop green financial infrastructure;

To conclude, Ukraine needs qualitative restructuring of the national economy for the sake of long-term economic growth, which will not be accompanied by increased pressure on the environment. All available resources should be directed not only at development of the domestic economy, but also on preservation of the environment.

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SUSTAINABLE DEVELOPMENT INDICATORS IN THE DIAGNOSTICS OF THE INTERNAL ENVIRONMENT OF THE ENTERPRISE

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Sustainable Development is a balance between meeting existing business needs and protecting the interests of future generations.

The term "Sustainable Development" first appeared in 1972 at the United Nations Conference on the Human Environment in Sweden (Stockholm). However, at the UN Conference on Environment and Development in Rio de Janeiro in 1992, this term was used as "the name of a new concept of the existence of all humankind. The concept of sustainable development was formulated to overcome the main environmental threat for modern civilization, which existed in the form of some theoretically justified danger, recognized by a relatively narrow circle of scientists and politicians and associated with overpopulation, irreparable waste of natural resources and environmental pollution (Report, 1992).

The main idea of sustainable development is the search for the best ratio of socio-economic development and the use of resources that would maintain environmental safety, would not pose a threat to the resource capabilities of future generations and would guarantee the necessary quality of life and well-being of the population.

L. Mel'nik says that any socio-economic system, in order to ensure its development in the long term, must fulfill such conditions as the organization of the system in space and time, ensuring the balance of the entire system and individual elements, the direction of development, the presence of a driving force (Mel'nik, 2005).

According to these conditions, the concept of sustainable development, as scientists believe, should be based on such principles (Mel'nik, 2005; Vasjutkina, 2014):

1. the principle of balance (ensuring the proportional development of the economic, social and environmental spheres);
2. the principle of purposefulness (providing the system with incentives for self-development due to the presence of developed scientific, technical and production potentials, which will ensure harmonization with the surrounding environment and assume an ecological orientation of socio-economic development);
3. the principle of ensuring sustainability (the balance of natural, industrial and socio-economic spheres);
4. the principle of adaptability (the ability to adapt to changes that occur in the external environment and affect further development in the long term);

5. the principle of dynamism (changes in any activity parameter lead to changes in others, which is reflected in the system of indicators and makes it possible to determine the state of the system at any moment);

6. the principle of integrity (ensuring proportionality and balanced development of all spheres and elements, namely operational, financial, investment spheres;

7. the principle of environmental motivation (causes the adjustment of motivational tools to achieve the goals of greening the economy).

The implementation of these principles makes it possible to achieve effective interaction, balance, and harmonization of the components of the sustainable development system to achieve progress.

To assess the sustainable development of enterprises, the values of certain indicators are determined, which allow to identify the level of sustainability in the above areas at the internal level of the enterprise (Fig. 1).

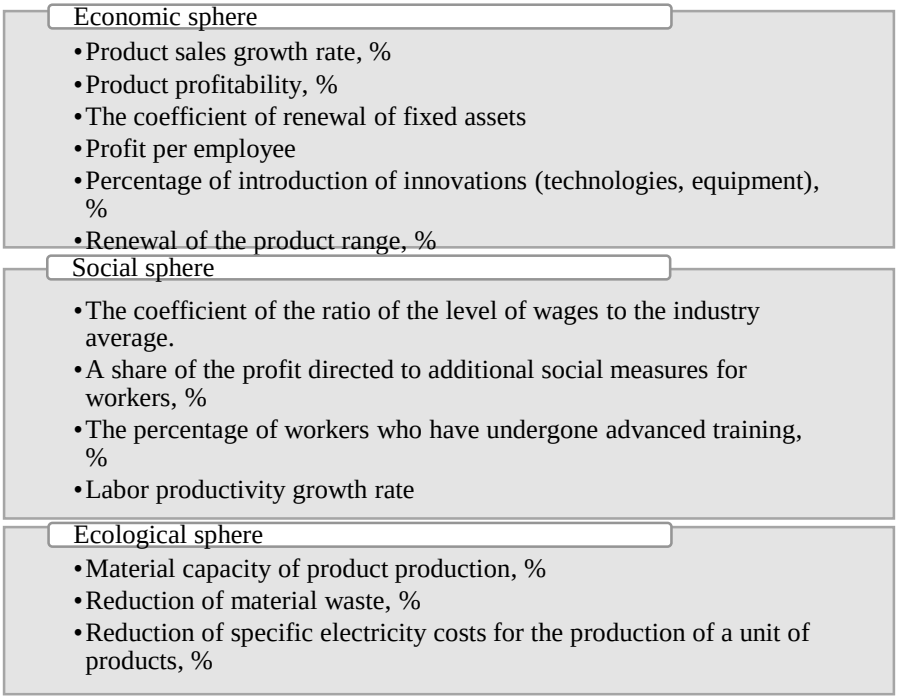

Figure 1. Indicators of diagnostics of the internal environment of enterprises from the point of view of sustainability (Volkova O et al., 2009)

These indicators can reflect the current situation at the enterprise and focus attention on areas where sustainable development has certain lags in the enterprise's activities, so most enterprises pay more attention to indicators of the economic sphere than social and environmental ones. Such trends are related to the fact that the effect of environmental indicators is noticeable almost immediately and can be measured in monetary terms.

Therefore, in order to realize sustainable development from the economic, social and ecological points of view, it is necessary to create special mechanisms for their balanced interaction, which are a sequence of certain actions, namely, it is necessary to formulate the strategy, goals, functions, principles and methods of enterprise management, as well as specify the subject and the object of management within the concept of sustainable development of the enterprise.

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STRATEGIES FOR THE RECOVERY OF UKRAINE AFTER THE DEVASTATING CONSEQUENCES OF THE WAR

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2022 was a real test for Ukraine. It was the year of finding its way in the largest conflict on the European continent since the Second World War. On February 24, Russia launched a devastating attack on our country, aiming to seize territory. Along with the aim to resist and regain its territories from the aggressor country, Ukraine faced an equally important task to restore the devastating consequences of the war.

As of July, according to the latest study by the International Organization for Migration, more than 6.6 million people in Ukraine are internally displaced, which is 15% of the total population of Ukraine. According to the UN, 6.65 million Ukrainians have left for Europe, of which almost 4 million have received temporary protection in one of the European countries. During a briefing in Geneva, the agency's spokeswoman Shabia Mantoux said that the situation with Ukrainian refugees could become "the largest refugee crisis" in Europe in the last century, (Shabia Mantoo, 2022).

The main international creditors of Ukraine - the IMF and the World Bank - predict that in 2022 the Ukrainian economy will shrink by 45%. It is also worth talking about rising prices and falling hryvnia, which are important factors. By the end of this year, according to NBU forecasts, inflation will exceed 30%. The consequence of this was undoubtedly the rise in fuel prices, which increased transport prices by 36.5% and food prices by 24.1%. Summing up, according to the NBU, consumer prices in July 2022 were 22.2% higher than last year. Regarding the hryvnia exchange rate, the Ukrainian national currency is devaluing, even though the official hryvnia-dollar exchange rate was fixed. Initially, the official rate was fixed at 29.25 UAH per dollar, but on July 21, the NBU decided to adjust it to 36.6, bringing it closer to the market, (Volodymyr Zelenskyi, 2022).

An equally important consequence was the budget deficit. In May, Volodymyr Zelenskyy made a statement that the destruction and shutdown of enterprises caused by the Russian occupiers causes damage to the Ukrainian budget in the amount of $ 5 billion per month(Ukrinform, 2022). The only source of financing the budget deficit is the emission of $ 8.5 billion and the funds of international partners - $ 14 billion. In general, according to the Ministry of Finance, from the beginning of the Russian invasion of Ukraine and until mid-August, the NBU financed the budget by UAH 255 billion. The largest financial donors are the United States, from which, according to the Finance Ministry, Ukraine received almost $4 billion and the EU,

which received almost $2.5 billion. More than $3 billion came from international financial organizations:

- IMF (1.4 billion dollars),
- World Bank ($ 929 million),
- European Investment Bank (720 million dollars), (Volodymyr Zelenskyi, 2022).

In addition to the United States, among individual countries, the largest financial assistance to Ukraine was provided by:

- Germany (1.373 billion dollars),
- Canada (1.172 billion dollars),
- Japan (581 million dollars),
- Great Britain (577 million dollars), (Ministry of Finance of Ukraine).

In total, during the Russian aggression, Ukraine has received over $14 billion from international partners.

According to the estimates of the Kyiv School of Economics (KSE), which were conducted with the government, the amount of direct documented damage to infrastructure caused to Ukraine by Russian aggression, as of August 22, 2022, is $ 113.5 billion, (Russia will pay).

According to experts of the "Russia Will Pay" project, the minimum needs for the restoration of destroyed assets are close to $ 200 billion, (Economic statistics).

The issue of strategy to restore the devastating consequences of the war is the issue of the future of Ukraine - a modern, European country. It is worth mentioning that the Government of Ukraine has already created a website with the Recovery Plan for Ukraine. The Recovery Plan of Ukraine is based on 5 Basic Principles (Figure 1):

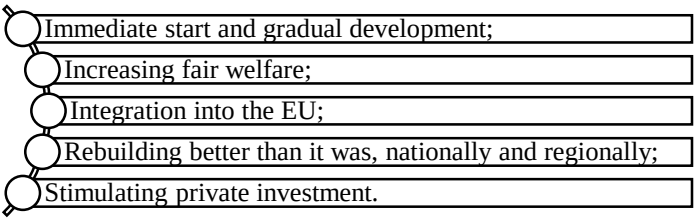

Figure 1. 5 Basic Principles

The site contains 850 projects, including strengthening institutional capacity, digital state, strengthening defense and security, striving for EU integration, energy independence and green course, improving the business environment, ensuring macro-financial stability, restoring and modernizing housing and infrastructure of the regions, developing the education system, modernizing the healthcare system

and others, as well as the expected results for all 10 years, as well as for the period from 2023-2025, 2026 and 2032. Thus, over the next 3 years, the government has set a goal to implement 580 projects that require funding of more than $ 350 billion, thereby contributing to the economy and entering the top 40 countries in terms of economic complexity. However, the ultimate goal of the plan for 10 years assumes an annual increase in real GVA by more than 7% and a place in the top 25 countries according to the Economic Complexity Index, (Recovery plan for Ukraine.).

An important stage of the strategy is, of course, the reconstruction of the destroyed infrastructure of cities. On June 17, at the British-Ukrainian summit in London, a memorandum was signed on the UK's readiness to participate in the restoration of Kyiv. And on August 25, the transport ministers of both countries signed a joint action plan to rebuild Ukraine's transport network. It provides financial and expert assistance in the restoration of railways, ports and airports. The total amount of support will be almost about 170 billion UAH. Also, the governments of Poland, the Czech Republic, Italy, Greece, Japan and other countries expressed their desire to help with the restoration of individual cities, (Volodymyr Zelenskyi, 2022).

A good solution for the economic recovery of the country will be the integration of the Ukrainian economy into the EU economic system. Various European logistics and infrastructure projects can help in this. For example, the inclusion of Ukrainian logistics routes in the European logistics networks under the TEN-T program, reconstruction of existing and opening of new checkpoints on the borders with European countries, transition of the railway to the European standard gauge, etc., (Ministry of Infrastructure of Ukraine).

Localization of production can become an important condition for full-fledged post-war development for Ukraine — at least 60% of products must be produced within the country. This point, by the way, is specified in the plan for the recovery of Ukraine after the war, which was approved by the specialized committee of the Verkhovna Rada in May 2022.

The reconstruction of the country is not only the restoration of physical objects. Already now, Ukraine needs qualified and experienced workers, and after the victory, this issue will become even more urgent. Therefore, the government must do everything to ensure that Ukrainians can live with dignity in their country, and not abroad.

The Ukrainian government is considering options for encouraging citizens to return to the Motherland: negotiations are underway with EU countries on the possibility of providing refugees with financial support for a certain period after returning to Ukraine. They are also discussing the provision of additional funding to hire Ukrainians for jobs that will help rebuild the state, as well as the creation of temporary basic income programs for those who will return home.

The reconstruction of Ukraine's infrastructure and the return of its citizens to a normal life is a long, difficult, but quite real process. Ukrainians are already united

and have strong support from the world community. It`s a good chance for Ukraine to move away from ineffective or morally outdated practices of both Soviet and modern planning of public space, taking into account the historical legacy and the modern context: real needs of people, landscape features, environmental friendliness and aesthetics. The experience of European countries will help our country become a better version of itself.

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DIGITIZATION OF THE PUBLIC SECTOR: THE ACHIVMENTS AND PROSPECTS OF UKRAINE

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Digital technology and the data revolution offer countries significant potential to increase public service efficiency and delivery, and to boost transparency and citizen trust. This has become all the more critical as countries continue to reel from the year-long impacts of the COVID-19 pandemic and strive to achieve a resilient recovery. The crisis has also highlighted the economic and social costs associated with delaying digitalization and GovTech – the application of technology to improving government.

According to (Gavega, A. 2021) in the modern world, digital communication is beginning to play an increasingly significant and comprehensive role. This is especially important when information becomes one of the means of solving geopolitical problems and used as a means of forming a certain socio-political platform for promoting the interests of regional and global players in world politics in other countries. The use of electronic signatures, digital exchange of documents and information, or electronic accounting of accounts both in the public and in the private sector is no longer news. Citizens can now actively participate in society through Internet tools, and this represents a digital transformation of public administration.

The efficiency of public administration through the use of digital communications are:

- The level of openness, accessibility and ease of granting administrative services by public authorities and local municipality;
- the level of confidence of citizens in these services that is directly proportional depends on their quality;
- the degree of public participation in making decisions on state power;
- level of corruption of state authorities.

According to (Kostetskyi, P. 2021) in latter years, digitalization has been an considerable factor in dynamic political, economic, social, and cultural intercourse. The speedy rise of digital technologies in global and national contexts leads to meaningful quantitative and high-quality changes in the economic development of countries. Digitalization leads to better clarity and is also related to newfound damages to the national economy. Digitalization provides organizations and society with new opportunities to perform changes that have not been possible in the past, and it is important not to get caught up in merely optimizing existing processes.

According to (Mynenko, S., Lyulyov, O. 2022) large-scale digitalization of society also affects public authorities, opening up other opportunities for incrasing the transparency of public administration and creating risks at various levels of public administration. The head elements of brightness of public authorities are identified: transparency, openness, and publicity. The primary functions that digitalization can perform in relation to public authorities are identified. The basic achievements of Ukraine in terms of the public power digitalization, which has improved its transparency level, are described. They annex a network of web portals of nomothetic, executive and judicial authorities, which provide public information in the form of messages, files, open data sets, photo and video information. Another considerable achievement is the service of providing services online and the introduction in Ukraine of full-fledged digital documents, which are analogs of physical.

Digital transformation is among the priorities of the Ukrainian government. Transferring public services online and digitizing processes are envisioned in the EU-Ukraine Association Agreement, the State Strategy of Regional Development, the Economic Strategy, and ministerial plans. Systemic efforts promise to greatly facilitate communication between citizens, the state, and businesses. Read this article to learn more about the steps being taken by the central government, the municipalities' potential, and where they should start on their path to transformation.

Therefore, the digital government is new ways of achieving public value and providing services and government procedures digital. This requires integration of digital communications into the public sector reform program since the beginning of their conceptualization. Governments that effectively implement digital Communications in the system of public administration, create better living conditions for their citizens, restore public confidence and improve their country's competitiveness in the world economy. Citizens are increasingly turning into consumers, increasing the bar for local and state management systems. Based on the possibilities of digital communication, governments can satisfy citizens' expectations and bring more stability to their activities.

Digital transformation is not so much of an abstract requirement today. It is a concrete opportunity to eliminate the distance between people and the state. Digitization's success and implementation time depend on many factors. However, the most important ones are studying the municipalities' technical capacity and demand, strategic planning, digital education, the availability of professional digital leaders on the ground, and motivation for education and development by communicating well the success stories.

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SOCIAL-ECONOMIC FACTORS IMPACT RESEARCH ON THE MANAGING BUSINESS VALUE PROCESS IN MODERN TURBULENT CONDITIONS

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Turbulent conditions of business functioning with inherent destabilizing factors affecting the management process worsen the level of financial and economic stability and structure of the organization. Economic, political, legal, as well as environmental factors are decisive in influencing the sustainability of business and the possibility of its value growth (Nechai et al., 2020). Investigating the critical factors that affect the company's revenue growth and its market value, researchers Mishra & Deb (2018) highlight such as the size of the company, its profitability, as well as productivity, which depends on investments in research and development. In addition, the state of liquidity and the quality of asset management are equally important factors that affect the operational results of the business. The factors of internal and external turbulence at the firm, which affect the solvency and the process of growth of its value, can be classified according to Table 1.

Table 1.

Classification of factors causing turbulence in the organization's business environment

Factor	Reason	Consequence
Administrative	Inability of management to think strategically; lack of understanding of modern trends in the development of socio-economic and technological processes; low level of professional competence of responsible persons.	Low quality of management decisions, which is reflected in the mission and vision of the future of the company; difficulty in the process of adaptation to external turbulent environmental conditions; loss of interest in cooperation with the company among customers and creditors.
Manufacturing	Technological backwardness of production facilities; high level of equipment wear; low level of control and non-compliance with product quality standards; economically and logistically	A decrease in the quality and competitiveness of finished products, and as a result the solvency of the business; non-compliance with environmental requirements; technical and aesthetic standards in the process

Continuation of table 1

	unreasonable location of production; low level of production culture.	of economic activity, which, among other things, negatively affects the growth of business value.
Financial	An ill-conceived financial and economic strategy; high cost of loan capital, the share of which in the structure of the balance sheet is overestimated; unfavorable conditions regarding the involvement of loan capital in the process of organizing financial and economic activities.	Rapid reduction of current assets and growth of inventories with a long rotation period; reduction of production rates and volume of revenue; increase in receivables, decrease in the general level of capital turnover and balance sheet liquidity; increasing financial risks and reducing the level of financial autonomy.
Socio-economic	Imperfect system of hiring employees and unsatisfactory financial support; delays in payments and lack of opportunities for career growth.	Reduction of motivation and moral component in the conduct of labor activities due to low quality of social security; low quality of performance of professional duties.
Market	Change in market conditions; the implementation of a reckless pricing policy, which is manifested in the discrepancy between the price and the quality of a product unit.	Low level of coverage of markets by own products; loss of sales markets and customers due to lack of incentive programs; severance of economic ties with partners due to bankruptcy or loss of solvency.

Source: compiled by the authors on the basis of (Kostakova, 2020)

In addition to the above, factors related to the innovative and investment component of business are no less important. If we talk about the innovative component, then the factors of turbulence in the process of market growth of business are the lack of opportunities to carry out technological renewal of production capacities and the introduction of own innovative and technical developments. As for the investment component, the internal factors of turbulence in this case are an unreasonably high level of capital expenditures in the process of project activity due to the low quality of investment management, which is reflected in the negative cash flow, the absence of planned volumes of profit for already implemented investment projects (Kostakova, 2020).

Rapid adaptation of business to turbulent market conditions is possible due to the activation of innovative technologies, through the introduction of fundamental

transformations of existing forms and methods of enterprise management. Among the tools that allow increasing the level of financial, economic and organizational stability of business in conditions of turbulence and reducing the overall efficiency of business under the influence of destabilizing factors, the following are proposed: increasing labor productivity due to the improvement of social standards of employee support, revision of current asset management methods, introduction of new technologies and innovations in the process of modernization of production means (Nechai et al., 2020).

The process of business adaptation, according to Terletska et al., (2021), represents adaptation to external destructive factors influencing management processes and the opportunity to use such influence to strengthen one's own production and economic potential. Predominant competitiveness is the basic goal of adaptive management, which involves compliance with an agreed development strategy, implementation of anti-crisis regulation, and, if necessary, product diversification.

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TRANSFORMATION OF ENTREPRENEURSHIP IN THE CONDITIONS OF DIGITALIZATION OF SOCIO-ECONOMIC RELATIONS AND CHALLENGES OF WARTIME: POSSIBILITIES OF USING IOT

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The previous crisis related to covid and the need to switch to a remote mode of work became the biggest driver of the introduction of Industry 4.0 in Ukraine and the world. But the war creates other tasks. Enterprises are faced with the need to relocate production facilities. Ukraine lost access to the sea, so logistics became a huge problem. The issue of managing traffic flows arises. We help to solve these problems. For many enterprises, survival is a question of war. But those who have already reached the level of digital maturity see that the tools of Industry 4.0 help to keep pace even now.

The philosophy of Industry 4.0 involves the creation of digital duplicates of enterprises using technologies that did not exist before - artificial intelligence, augmented and virtual reality, industrial Internet of things, predictive service. The use of such solutions allows enterprises to reduce production time by up to 25% and reduce the cost of the process by up to 30%. These indicators are relevant for developed countries, in Ukraine the reduction will be several times.

So, for example, Germany allocated about 140 billion euros to rebuild production and bring it to the level of digital. They developed 5G networks, which are needed primarily by manufacturers, not the population. 4G is enough for people, but high speed is needed to transfer massive amounts of data to the cloud. Germany was also working on new information processing protocols. At the state level, institutes were created that are engaged in the development of solutions in the field of Industry 4.0 for the benefit of all enterprises of the country.

Particular attention today should also be paid to the future development of military infrastructure using the tools of the Internet of Military Things (IoMT) - a class of Internet of Things for combat operations and war. It is a network of interconnected objects, in the military domain, that constantly exchange information with each other, to coordinate, learn and interact with the physical environment to perform a wide range of actions in a more efficient and informed way. The concept of IoMT is based on the idea that future military operations will be dominated by artificial intelligence and cyber warfare, which will mostly take place in an urban environment. Creating a miniature ecosystem of intelligent technologies capable of processing and sorting information received from sensors and autonomously managing several tasks at the same time.

IoMT covers a wide range of devices, which include intelligent scanning of physical objects, processing of received information and display of received results

through virtual or computer interfaces integrated into systems. These devices include items such as sensors, robotic systems, vehicles, unmanned aerial vehicles (UAVs), wearable devices, biometrics, ammunition, weapons, and other smart technologies.

The IoMT is in its early stages today, even for the world's advanced military front-runners. Information has always been and will be at the center of hostilities. Modern warfare is increasingly based on the control and management of information, and this requires a constant flow of up-to-date information to quickly make the best decisions. IoMT uses a set of relevant sensors located in a specific area to gain full situational awareness and monitor specific conflict zones and war zones. Modern militaries are struggling to invest in modern command and control systems, communications quality, computer systems, surveillance and intelligence (C4ISR) systems, and infrastructure for data collection, analysis, and dissemination. In general, IoMT devices can be classified into one of four categories:

Table 1.

Categories of IoMT devices and their purpose [1]

Category	Appointment
Data transfer device	A device attached to a physical thing that indirectly connects it to the underlying communication network.
Data collection device	A read/write device capable of interacting with physical things.
Touch and activation device	A device that can detect or process information related to the environment and convert it into a digital signal or physical action.
Control device	A device with built-in data processing and communication capabilities that can exchange information with the underlying network.

The concept of Industry 4.0 is used to solve specific production tasks. The world is changing and business understands that now it must be able to quickly produce new products that meet the specific requirements of specific customers. That is, manufacturers are thinking, first of all, how to make their company produce new products as quickly as possible. And secondly, how to make production cheaper.

Now, when a full-scale war is forming new awareness at all levels, there must be an even greater transformation of approaches, a fundamental understanding at all levels of government and society that Ukraine will be successful, developed only with the implementation of the Industry 4.0 philosophy, with an exclusively new understanding of what other path as we do not have the ability to become a high-tech state.

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ENVIRONMENTALLY FRIENDLY INNOVATIONS IN THE MODERN MANAGEMENT SYSTEM

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The relationship between modern production and nature is characterized by integrability and is regulated by administrative methods. However, the development of market relations necessitates the implementation of other approaches to nature management (Kemp & Pearson, 2007; Мельник & Кубатко, 2017).

Thanks to the improvements in the economic activities of enterprises, methods of organic agriculture and environmental protection measures have become extremely important and effective. Integration of environmental protection measures into the structure of all economic activities allows a direct impact on the environment. It increases the role of environmental risk factors emerging from the interaction of the environment and production. Therefore, the ecological aspects of the innovative activity of a modern enterprise are of particular importance and have received great recognition in scientific thinking and practice, contributing to the development of the natural raw materials transformation to create a product useful for humans. The interaction of innovation, production, management activities, and the environment within the framework of an enterprise's operation occurs at almost all stages of production.

During the last decades, the issue of environmental innovations at the global and national levels has received special attention bringing the rising coherence of national industrial and environmental policies. In this regard, the development of innovative environmentally friendly technologies, as the most effective and advanced, is of particular importance (Fussler & James, 1996; Прокопенко, 2008; Сотник, 2016).

The analysis of recent innovation studies has shown (Kemp & Pearson, 2007; Мельник, 2021; Мельник & Ковальов, 2020) that governments and scholars make the main emphasis on technological innovations, innovations in management and product promotion. However, there is a lack of research regarding ecologically oriented innovations. Most scientific studies consider the relevance of environmental innovations' implementation. Scholars investigate the methods of economic evaluation of innovations in terms of environmental protection and estimate the roles of stakeholders in innovative activities. At the same time, there is a lack of studies that prove the effectiveness of implementing environmentally friendly projects to create a positive image of society and increase the number of environmentally conscious customers. These aspects will contribute to demonstrating the

attractiveness and effectiveness of environmentally friendly innovative projects for the management of manufacturing enterprises. They can help avoid environmental sanctions against an enterprise and become an effective tool for managing production and increasing sales.

Innovation is a change that brings an update or improvement to the enterprise's products or production, managerial, financial, and other business processes (Маркевич, 2019; Мельник & Карінцева, 2021). Eco-innovation means the development and implementation of various resource-saving production technologies, the design and production of environmentally friendly goods, and new ways of organizing the production process, in particular, ecological marketing, management, etc. The implementation of environmentally friendly innovative projects and innovations leads to ecological, technological, managerial, economic, social, and other effects (Мельник, & Ковальов, 2020; Сотник, & Кулик, 2015). The study of environmentally friendly innovations requires a systematic approach, which includes the choice of a research strategy, and the use of various research methods and models.

As a result of conducting economic activities, there is an increasing need to analyze the conditions and nature of the processes intensifing environmental protection, to determine the relationship and interdependence in the use of resources, economic culture, and environmental protection (Сотник & Таранюк, 2018; Мельник, 2012; Мельник & Сотник, 2015).

When analyzing the ways to intensify environmental protection, two groups of indicators can be considered:

• characteristics of the initial conditions of the enterprise's environmental protection activities in connection with the technical and economic parameters of its production process;

• evaluations of the intensification process results based on summarizing the criteria for the effectiveness of environmental protection measures (Кличова & Гарєєв, 2016).

One of the most common methods of measuring intensification is determining the share of qualitative factors that contribute to the improvement of environmental protection measures. The effect of applying environmental protection measures is determined by the ratio between the number of purified and captured harmful substances, as well as the reduction of costs for these purposes. However, additional indicators and criteria are necessary to determine the degree of activation of environmental protection activities.

In general, consideration of the environmental aspects of innovation efficiency contributes to determining the optimal way to implement an environmental innovation and identifying the limits and sequence of investing in such an innovation. For example, it can be applied to choose the right project for the reconstruction of existing enterprises taking into account the achievements of

modern science and technology, for modernization, determining the effectiveness of innovative technologies in the environmental protection sphere, and launching low-waste technological processes. Management performance indicators show the efforts that management has made to affect the overall environmental performance of the enterprise (Сотник, 2011; 2013).

In the context of environmental aspects of innovative activity, the enterprise itself is perceived as a part of the ecological and economic system having environmental, innovative, production, and economic elements operating at the micro-level. At the same time, the problems of the enterprise's functioning are solved in accordance with the laws of system stability and development, or in accordance with the laws of the integrative functioning of innovations and environment considered as equivalent subsystems (Sotnyk & Goncharenko, 2015).

Scientists have developed many methods and approaches to carry out ecological and economic assessments of industrial innovation activity. They include market evaluation, cadastral and cost methods, rental evaluation, and methods based on calculating the components of gross domestic product. In addition, methods of cash flow discounting, benchmarking, pricing, options, and integral estimations can be used. Methods of direct damage accounting as well as analytical and empirical methods can be applied to determine the effectiveness of environmental protection measures.

Therefore, environmentally friendly innovative activity covers several logical stages: from defining the problem and evaluating the efficiency of natural resource use to modeling dynamic relationships between various aspects of the evaluation and analysis of environmental protection activities. However, already at the initial stage, the entire process of implementation of environmentally friendly innovative activity can be leveled, if the role of ecologically oriented innovations in the activities of manufacturing enterprises is not recognized.

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BEHAVIORAL AND SOCIAL DIMENSION OF THE WORLD PUBLIC HEALTH SYSTEM: BIBLIOMETRIC ANALYSIS

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The state of public health, the functioning of medical institutions, and the resource support of the healthcare industry in recent years have forced the actors ensuring the public health system to update the search and formation of a new concept for the functioning of the healthcare system. These topical issues related to the state and level of health of the population and satisfaction with the health care system require proper attention and high-quality, conceptual, international research by scientists worldwide who reflect the scientific and theoretical, methodological, and practical results of their work in numerous papers published in journals indexed in the international scientific databases Scopus and Web of Science.

Analyzing the scientific research of the world scientific community, we note that in recent years scientists have studied the following aspects: on the issues of the health care system - Hajebi A., Sharifi V., Abbasinejad M., Asadi A., Jafari N., Ziadlou T., Damari B. (Hajebi et al., 2021), Cosci F., & Guidi J. (Cosci et al., 2021); concerning medical services - Shiferaw K. B., Mengiste S. A., Gullslett M. K., Zeleke A. A., Tilahun B., Tebeje T., Mehari E. A. (Shiferaw et al., 2021), Arena C., Morshedzadeh E., Robertson J. L., Muelenaer A. A., Hendershot B. D., O'Leary J. L., VandeVord P. J. (Arena et al., 2020); the behavioral and social aspect - Thus, Kelly J. D., Bravata D. M., Bent S., Wray C. M., Leonard S. J., Boscardin W. J., Keyhani S. (Kelly et al., 2021), Lyeonov, S. V., Kuzmenko, O., Koibichuk, V. V., Rubanov, P. M., & Smiianov, V. A. (Lyeonov et al., 2021); and others.

Analysis of research of the behavioral and social dimension of the public health system of the world indicates the scientific achievements of scientists from different countries in specific issues of the chosen area. Therefore, the international experience in solving this issue in the public health system is an essential trigger for future global research in this area.

The basis for implementing the international development of scientific thought can be the international scientific database Scopus chosen for analysis, allowing for bibliometric data analysis of scientific publications. Thus, using the Scopus databases, it is possible to identify and analyze the characteristic features of research on the behavioral and social dimensions of the public health system.

The results of the study were obtained using the VOSViewerv toolkit.1.6.15.

The first stage of bibliometric analysis of significant scientific papers for 2000-2020 was to build a map of the relationships of key concepts “health care system, medical services, behavioral aspect, social aspect” with other related scientific categories. Thus, out of 901 categories (most related to the concepts under study) selected by the system, ten main clusters of interrelated scientific categories were identified, the grouping of which is depicted in Figure 1 using different colors.

The larger size of the rectangle means a higher frequency of mention in research of such a scientific category, which is placed in it as a key concept associated with the studied categories “health care system, medical services, behavioral aspect, social aspect”. Thus, the largest sizes of rectangles describing the highest level of influence of certain phenomena in the study of issues "health care system, medical services, behavioral aspect, social aspect", mean that the fundamental categories in the context of the socially oriented policy of state development of countries worldwide are the following categories (according to the data shown in Figure 1): “human”, “health care”, “behavioral research”, “health care quality”, etc.

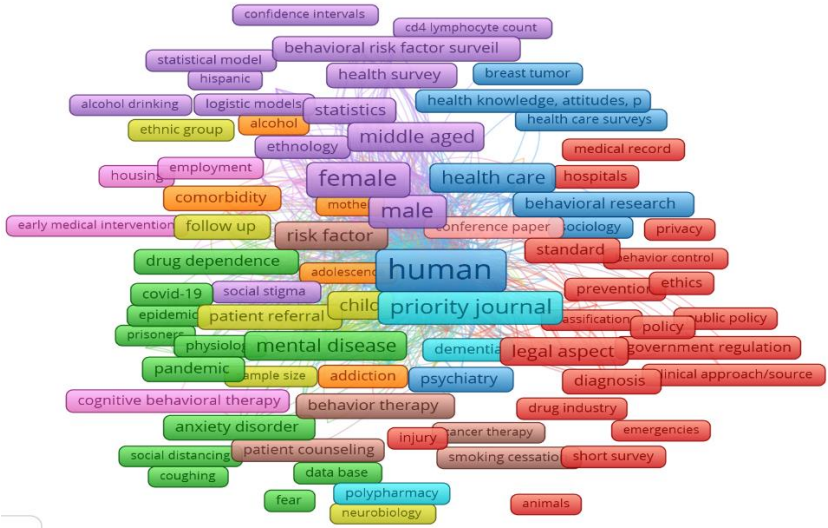

Figure 1. Scientific bibliography of the categories “health care system, medical services, behavioral aspect, social aspect” for 2000-2020 using software tools

Sources: developed/compiled/systematized by the authors based on the Scopus database using the VOSViewerv software toolkit.1.6.15 (Dotsenko, 2022)

Conducted a detailed content-contextual study of the constructed blocks of bibliometric analysis, emphasized on which areas focused the main scope of

scientific publications. An intercluster analysis was carried out, we noted the existence of intersections between the defined groups of categories and their description was carried out.

At the second stage of bibliometric analysis, to determine the study's evolutionary-time perspective, a map of the relationships of the key concepts under study with other scientific categories for 2000-2020 was constructed, reflecting the dynamics in the form of a contextual-time block. The main content determinants of the study of the behavioral and social dimension of the public health system of the world were identified at different time intervals. The results of contextual and temporal analysis of scientific research in papers from the Scopus database of the categories "health care system, medical services, behavioral aspect, social aspect" in dynamics for 2000-2020 can be reflected in four stages of changing research areas.

A logical continuation of the contextual-temporal analysis of the categories "health care system, medical services, behavioral aspect, social aspect" is the third stage of bibliometric analysis of the study of the behavioral and social dimension of the public health system of the world. It involves analyzing the spatial component of the study. At this stage, a geographically extensive map of the scientific bibliography of the categories under study was constructed. The leading country in studying the behavioral and social dimension of the public health system is the United States. The group also includes significant countries in this matter: Germany and Norway. However, the distribution of countries by cluster does not mean that countries are separated in their research within the established groups. Different states, in turn, actively intertwine with other countries in scientific research within the framework of specific issues.

The evolutionary-time extension of the third research stage is the fourth stage of bibliometric analysis. A visualization of an extensive geographic map of spatial and temporal measurement of studies of the categories "health care system, medical services, behavioral aspect, social aspect" was constructed in dynamics for 2012-2020. Within this stage, the evolution of the studied categories in the spatial aspect was determined. It was highlighted there are three stages of changing the priorities of the states in studying the topic.

Summing up the results of the study, we note that this scientific paper allowed formalizing theoretical achievements in the area of the behavioral and social dimension of the public health system in terms of content-contextual, evolutionary-dynamic, spatial, territorial-time analysis. It has been determined that the processes of the public health system have been studied for an extended period. Still, the aspect of the behavioral and social dimension of the public health system is relatively new and understudied. Thus, it requires further thorough, effective, and professional consideration. Moreover, the attention of the scientific community for a long time was focused on this issue in countries of high socio-economic development: the United States and the United Kingdom. China, Iran, and Japan were less involved in

this process at an earlier time period, but this issue became relevant for them in recent years.

The study results can serve as an information basis for identifying priority areas of policy formation and strategy for the state health system, based on determining the main significant, modern, priority characteristics of the healthcare industry.

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FEATURES OF KNOWLEDGE TRANSFER IN PROJECT-BASED ORGANIZATIONS

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One of the popular goals of modern organizations is to create an environment where co-workers can easily share their skills and knowledge to deal with the tasks. To fulfill this goal, the enterprise should have a knowledge management system. Knowledge management is the procedure of organizing, creating, developing, and sharing collective knowledge within an organization. Knowledge management in organizations is based on understanding knowledge creation and transfer.

Knowledge transfer can be defined in three different ways. Firstly, it is a process by which knowledge, ideas, and experience move from the source of knowledge to the recipient of that knowledge.

Second, it is an ultimate goal of teacher education and all learning, namely the effective implementation of new knowledge into one's practice.

And thirdly, it is a process that enables the socioeconomic use of humanistic, scientific, and technical knowledge through interaction with external stakeholders in contracted research activities or cooperations, consulting, and technical services, with the protection of the research results, licenses, rights of use, and in the creation of spin-offs, including technology transfer.

Submitting and developing the knowledge transfer system belongs to the management staff. According to Tovmasyan research [4], "professional knowledge" is the essential skill of a manager from the workers' point of view. And through collaboration in the workplace, a good manager can share their experience with workers.

Knowledge transfer is crucial for developing the labor potential of the company, especially in cross-national companies and groups. For example, Bardy [1] defined "Learning to learn" as an important soft skill for migrant workers in Germany. At the same time, the effectiveness of adaptation of new workers through the political plea "listen to me, learn with me" is questionable, as the intensity to implement the knowledge transfer school is from the management of the particular enterprise. To make it easier for employers, submitting them with specific tools for its implementation and measurement is better.

The effectiveness of knowledge transfer can be defined by measuring the level of adoption of each initiative by the recipient units [2]. This measure includes both the number of recipient units adopting the knowledge and the level of implementation at each site. The level of performance within a particular team can be affected by other variables, such as the difficulty of transfer, but also reflects the level of effort put forth by the recipient. Acceptance is a suitable measure of the

effectiveness of knowledge transfer because if a recipient unit does not implement the routine in question, knowledge does not transfer. The level of implementation can be measured through internal company assessments of implementation efforts jointly determined by headquarters and the recipient units.

Second, the performance of the recipient units can be measured after implementing the transferred routine [2]. Suppose one assumes, as is the case with each template in this study, that the transferred act achieved superior results compared to recipient units. In that case, the managers should expect an increase in performance in the recipient units upon effective implementation. Performance must be measured using available quantitative indicators, including sales force productivity, sales force coverage of potential customers, the ratio of selling costs to revenue, and others, depending on the enterprise goals.

The studies on the benefits and challenges of knowledge transfer across projects [3] showed that the body of knowledge of projects obtained from other projects is positively associated with project performance. Hypothesis 1 conjectures that the level of knowledge transfer across project efforts is positively related to the body of knowledge of projects participating in the knowledge transfer. Results marginally supported Hypothesis that. Projects that exerted the most substantial attempt to transfer knowledge across projects seem more likely to have a more significant body of knowledge. Regarding project performance, Hypothesis 2 suggests that the body of knowledge of projects that participated in knowledge transfer across projects is positively associated with the performance of these projects. Results supported Hypothesis 2. Projects with a greater body of knowledge are more likely to perform well.

In the study of Wiewiora [5], the project managers were interviewed to determine the knowledge transfer features in project-based organizations. Interviews specified that both face-to-face communication and through the electronic devices are often service to transfer knowledge to other projects. Still, interviewees highly valued face-to-face interaction over electronic. Thus, respondents emphasized the need for electronic communication and a lessons learned database. Geographical dispersion of projects has diminished the amount of social communication take place during projects. The project must develop specific means to increase communication when social communication is missing. As projects become more highly distributed along the dimensions of space, time, and organizations, the problems associated with knowledge boundaries between the practices of the different projects involved also increase. Depending on the project characteristics and size of the PBO, there is a change in the means of communication used to transfer the knowledge and the party involved in the inter-project knowledge communication. During the interviews, it was suggested that communication between co-located projects occurs mainly face-to-face during informal meetings. However, this may be unworkable for large PBOs

and/or small projects, and other approaches have to be utilized, including a lessons learned repository, e-mail, and online forums.

The studies demonstrated that the level of knowledge transfer across project efforts is related to an increase in the capabilities and implementation of projects; however, it is suggested that an extended project effort in transferring knowledge across projects can also hinder compliance with the schedule and budget of projects. Investments in knowledge transfer systems and technologies can also demand an increase in the costs of projects. Also, the communication systems in PBOs influence a lot on the knowledge transfer process. Despite these challenges, knowledge transfer across projects provides projects and project-based organizations with an effective way of dealing with the issues, problems, crises, and even disasters caused by the uncertainty generated by projects' complex and unpredictable nature.

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CONTENT MANAGEMENT SYSTEM AS A MEANS OF RAPID ENTRY INTO THE E-COMMERCE MARKET

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For the development of modern economic science, effective management of the company is the primary goal, for achieving which, modern means of automation of the company's activities began to be used. Automation of the company's activities through the introduction of information systems has become very popular. In modern conditions it is impossible to imagine the process of the company's functioning without the use of information systems. The relevance of researches in the field of using content management systems for e-commerce market, is confirmed by a last scientific publications in this field (Aggarwal V. et al., 2022; Abdullah E. et al., 2021; Halim E. et al., 2020; Gunawan A. et al., 2019).

The emergence and development of the Internet, improvement of information technology, systems, and standards of their interaction have led to the creation of a new direction of modern business − electronic business as a special form of business, which is implemented largely through the introduction of information technology in the production, sale and distribution of goods and services.

There is often confusion between two notions: electronic business and electronic commerce. Electronic business (e-business) is the realization of business processes by using the capabilities of information and telecommunication technologies, systems and networks. And the most important constituent element of e-business is electronic commerce (Pauley, 2019).

Electronic commerce (e-commerce) means any form of transactions in which the interaction between parties is carried out using the capabilities of information and telecommunications technology systems and networks. The European Commission defines e-commerce as "doing business electronically" (Rogach et al., 2003). It allows companies to interact more fully with suppliers and respond faster to and expectations of their customers. Companies can choose their suppliers wherever they are located and reach a global market with their products and services. E-commerce is only one part of e-business, which is limited to conducting transactions through electronic systems, such as selling goods or providing services over the Internet.

E-commerce has become a key boost of trade growth in developed and many developing countries, radically changing the usual business processes in the retail sector.

According to eMarketer Report by Cramer-Flood (2022), global retail and retail e-commerce spending is expected to stabilize in 2022 after two years of unpredictable circumstances and unusual growth patterns (Fig. 1).

By unpredictable circumstances means the outbreak of COVID-19, which forced governments around the world to impose strict quarantine measures, which meant that regular stores had to be closed and consumers had to stay at home. This contributed to the growth of online retail as people shopped online.

Due to the fact that in some parts of the world there are still strict rules regarding personal purchases, sales through e-commerce will grow this year, albeit at a slower pace, and in the coming years the growth will slow down.

Despite the drop-in growth rates, the share of e-commerce in retail sales (Oberlo, 2022) is expected to increase. In 2022, this figure is projected at 20.3 percent, and by 2025 it will increase to 23.6 percent.

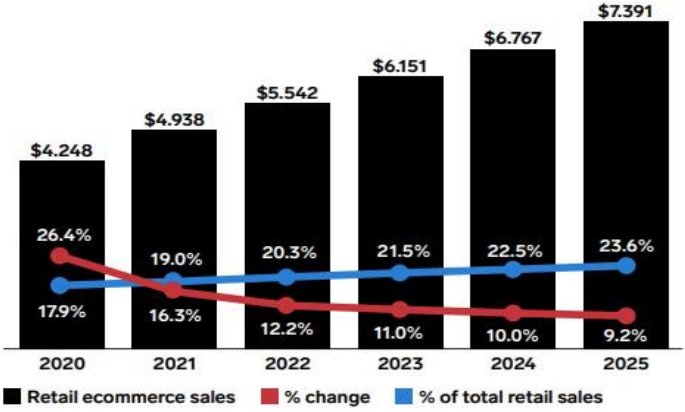

Fig. 1. Retail Ecommerce Sales Worldwide from 2020 to 2025
Source: (Cramer-Flood, 2022).

While the world e-commerce turnover in 2020 is estimated at $4.2 trillion, in Ukraine the total amount of physical goods and services purchased by ukrainians on the Internet in 2020 reached $3.8 billion.

A year ago, EVO Business (2020) predicted e-commerce growth in 2020 in Ukraine at 15%, but the pandemic has significantly adjusted it. Many new players have appeared online − from mini-productions to coffee shops. Now almost 9% of all purchases in Ukraine are made online − on marketplaces, in online stores and social networks.

This development of the e-commerce market is quite expected, as it is really profitable and convenient for the buyer, not to mention saving budget and time.

With the help of websites companies and shops solve such problems as:

– presenting yourself in the network, informing the public;
– expanding the potential audience of consumers;
– fast processing of orders and increase of sales;

– minimization of advertising costs;

– search for new customers and business partners.

For the customer, an interactive store can offer a much larger number of goods and services, and provide a much larger amount of information necessary to make a purchase decision.

It can also be noted that the creation of an online platform can not only solve some problems, but also significantly increase the competitiveness of the business. Since in comparison with the usual store, the sales territory of which is limited to the population of the city or district, the coverage area of the online store increases to the entire region or even the country.

The urgency of creating web-sites has led to the creation of a number of special systems that allow not only to create sites in a fairly short time, but also to manage the content of this site using a special panel.

Content Management Systems (CMS) is a software that allows you to publish and change information on the site by yourself, without the involvement of developers. Instead of creating your own system for creating web pages, storing images and other features, an out-of-the-box content management system handles all of these things for users so they can focus on the more important things of their websites.

This method of website development is truly considered to be one of the most convenient and practical. Flexible system of settings, possibility of editing the CMS itself or its separate elements, ease of adding and changing content − all these features have made website development on the basis of CMS really effective.

The content management system solves the following tasks:

– allows to create any number of sections and subsections;

– automatically builds the menu and site map based on the structure;

– gives access to direct editing of HTML code for specialists;

– allows to manage lists, font styles, that is, provides all the features of modern text editors;

– automatically optimizes media for placement on the site;

– allows to edit meta tags and page titles;

– allows to connect additional modules for different pages of the site.

The experience of implementing an online store based on CMS supports the above, because developing a website on CMS is really much easier, faster and cheaper than ordering an engine from a team of programmers. The easy-to-use interface allows you to launch a store in the shortest possible time and get the first sales within a week. With these systems there will be no difficulties if need to install additional functionality, or there is a need to redesign the project. Specialists are always easy to find, and their services will be cheaper than when working with unfamiliar code.

Nowadays, the Internet has become one of the main tools for doing business.

This is due to both the popularity of the Internet and its advantages for conducting commercial activities. The presence of a trading company on the Internet is necessary for successful competition in today's environment. Thus, e-commerce is one of the most important markets for goods and services, and CMS has become an effective way to quickly join the e-business, because it greatly simplifies the process of promoting services, doesn't require significant investment and certainly leads to a significant reduction in labor costs, reducing information processing time and generally increasing the efficiency of the company.

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CONCEPTUAL ASPECTS OF THE STRUCTURAL AND FUNCTIONAL CONTENT OF THE HEALTH INDICATORS SYSTEM

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Creating a socio-economic climate to form a sustainable high level of public health is an essential task for all humanity. To achieve this goal, it is necessary to define the conceptual aspects of health indicators' structural and functional content. Having a clear definition of the abstract aspects of health indicators, it is possible to create a high-quality modeled system in which each indicator has its weight and contains potential reserves for improving the level of health and, as a result, the growth of the country's economy. Health is often identified as our combined physical and psychological state. But health is much more than it seems at first glance. Every component of health is equally vital in pursuing a whole life. When working with health, we must rely on the generally accepted definition by the World health organization (WHO). As defined by the World Health Organization, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (Constitution of the WHO, 2006). The WHO definition of health introduces the concept of "well-being." It has both subjective and objective components. Based on the definition of health, this is a multifaceted category that includes many physical, social, medical, economic, and mental indicators (Yelnikova et al., 2020). In the following, we will describe the attributes of some of the possible aspects. The physical aspect of health is the most decomposed part of the economic category, namely: self-assessment of general health; study of symptoms of malaise and risk factors; request for medication; activity level request; demand for the use of medical services; clinical examination; assessment of nutrition and diet (Vasylieva et al., 2020). Mental attributes of a mentally healthy person include the following set of presets: free from internal conflicts; well-adapted: knows how to get along well with others; accepts criticism and is not easy to upset; seeks identity; has a strong sense of self-worth; knows himself, his needs, problems, and goals; has good self-control, balances rationality and emotionality; faces problems and tries to solve them wisely, that is, copes (Surmyak et al., 2012).

Social health communication is based on "Positive material of the environment" and "Positive human environment", which is connected with the social network of the individual (Bhandari, 2019). This spiritual dimension, apparently, cannot be specifically defined. It includes: honesty; principles of ethics; purpose of life, commitment to a higher being; belief in concepts that do not obey the "modern"

explanation (Gallo et al., 2019). Professional the importance of this aspect is manifested when people suddenly lose their jobs or face the need to retire (Druzhynina et al., 2018). For some this dimension may be just a source of income, but for others it can be a source of self-esteem and success (Alabdullah et al., 2022). Achieving goals and self-realization at work is a source satisfaction and increase of self-esteem (Kotenko et al., 2021). Manage your resources to live within your means, make sound financial decisions and invest, set realistic goals, and prepare for short- and long-term needs or emergencies. Awareness that each person's financial values, needs and circumstances are unique (Mohsen et al., 2018). Environmental health covers all different areas of the environment that affect the quality of your life and overall health (Minchenko et al., 2021).

These may include air quality, food sources / quality, water sources, exposure to chemicals and a cleaner lifestyle (Keliuotytė-Staniulėnienė et al., 2021). Over the past few years, the beauty, food and lifestyle industries have been incredibly boosted to provide the general public with more environmentally conscious products (Njegovanović, A. (2020). And as more and more research emerges on how certain substances affect our integumentary, respiratory, endocrine, and reproductive systems, people are becoming more aware of what they are consuming (Kyslyy et al., 2021). Good environmental health means a deeper understanding of what you consume and use (Martins A. 2022). Understanding how your social, natural and built environment affects your health and well-being Awareness of the volatile state of the Earth and the impact of your daily habits on the physical environment. Demonstration of devotion to a healthy planet (Singh, 2019). Concerns about money are one of the main causes of stress and illness. Your employees can reduce this stress by better understanding the role of money in their lives (Prokopenko et al., (2020). Also by learning financial skills, more efficient use of personal resources and developing a plan for the future (Kyrychenko et al., 2018). Indeed, the good feelings that come with real financial prosperity can help you stay healthy (Gupta et al., 2018). People need a goal in life. Depression and anxiety thrive when we lose our sense of purpose. Purposeful health looks like. When our work seems meaningless or when we lack a specific calling in our lives, feelings of futility and insecurity follow. But once the goal is found, everything else seems to fall into place. (Tovmasyan et al., 2020). Nutritional health is maintained by balancing nutrient intake with your specific daily energy needs. It includes a sensible diet, portion control and a balanced diet. When I say "diet", I do not mean a specific type of diet but only a balanced daily intake of fruits, vegetables, carbohydrates, proteins and fats. Understanding what you eat, where it came from, and how it got on your plate are important things to keep in mind when it comes to healthy eating (Tenytska, et al., 2020). Other dimensions include philosophical, cultural, socio-economic,

educational, therapeutic and preventive (Antosova, et al., 2019). Understanding and tracking changes in key aspects will help people quickly find unwanted changes in life and work all available actions to return to normal (Hinrichs et al., 2021). Every dimension of health needs to be considered, as systematically ignoring one of the factors will negatively affect others over time, and ultimately affect health, well-being and quality of life. However, they do not have to be equally balanced. Instead, we must strive for the "personal harmony" that is most authentic to us. We naturally have our own priorities, approaches and aspirations, including our own views on what it means to live fully.

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DEVELOPMENT OF DIGITALIZATION OF HIGHER EDUCATION IN UKRAINE

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Digitalization processes are of particular relevance in education, especially in the context of the COVID-19 pandemic and the introduction of martial law. Native and foreign scientists pay considerable attention to the digitalization of education [1-15].

In January 2021, the Ministry of Education and Science of Ukraine established the Directorate of Digital Transformation of Education and Science, responsible for policy-making in this area. Its main task is to implement projects and initiatives for digital transformation of education and science. The Directorate consists of two expert groups, which currently employ four experts. Each expert is engaged in the digital transformation of a particular level of education, from preschool to science [16].

One of the main tasks of the Directorate is to develop and approve the Concept of Digital Transformation of Education and Science, which, together with the Action Plan for it, is created for five years.

The draft Concept is aimed at overcoming problems, in particular [17, 18]:

- low level of digital competencies of participants in the educational process;
- outdated content of education in the subjects of the information industry;
- insufficient amount of computer equipment and lack of broadband Internet access in educational and scientific institutions;
- lack of quality digital educational content for education;
- lack of up-to-date, reliable information about students, teaching and research staff, as well as scientists for making management decisions and monitoring the effectiveness of policies;
- bureaucratization of internal document flow processes of educational and scientific institutions;
- inconvenience of receiving services in the education system;
- inaccessibility of scientific resources and infrastructures, etc.

The ultimate goal is planned to be achieved through the following strategic goals:

Strategic goal 1: "Digital educational environment is accessible and modern";

Strategic objective 2. "Education personnel have digital competencies";

Strategic objective 3. "The content of ICT education meets modern requirements";

Strategic goal 4: "Services and processes in education and science are transparent, convenient and efficient";

Strategic goal 5: "Data of education and science are accessible and reliable".

The ways and steps to achieve each of these goals for the period up to 2026 have been identified.

The processes of digitalization of education are undoubtedly reflected in higher education. However, the World Bank has approved the project "Improving Higher Education in Ukraine for Results". The project consists of four interrelated components, and its implementation will take place over five years.

The first component involves improving approaches to governance, financing, quality and transparency in higher education.

The second component is the formation of partnership alliances of higher education institutions to improve efficiency and quality.

The third component provides for capacity building and improvement of the educational environment. It is planned to finance the purchase of computer and multimedia equipment and software for the organization of distance learning and teaching, modern telecommunications, development of modern digital infrastructure in higher education institutions, development and launch of electronic learning management systems, purchase of laboratory equipment for modern teaching and research laboratories for higher education institutions, etc.

The fourth component will finance, in particular, operational management of the project, its evaluation and monitoring of implementation, organization of the financial management system, and preparation of reporting documents.

Among the four components, critical tasks for the digitalization of higher education are also presented, in particular:

1. modernization of the information and analytical system of higher education;
2. introduction of the National Online Student Survey and the Unified - electronic system of competitive state funding for research and development of higher education institutions;
3. launching and improving digital solutions for the educational measurement of learning achievements;
4. digital infrastructure for the organization of training in higher education institutions to ensure the continuity of the educational process through distance learning technologies, the development and launch of electronic learning management systems [16].

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CYBERSECURITY: PROTECTION FROM CRYPTOJACKING

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In 2022, there will probably be no sphere of life where digital technologies will not break in. Thanks to digital technologies, the economy and business are successfully developing and transforming, new opportunities for investment are emerging, etc. More details about the impact of information technology on business and investment can be found in the following articles (Khaliq et al., 2021; Yelnikova et al., 2020). The rapid development of scientific and technological progress, especially in recent decades, has changed the thinking of modern man, and the transition to digital technology and the spread of information technology has made life more comfortable. The advent of computers has made a real revolution. They have changed the approach to work, study, entertainment and other aspects and spheres of our lives. Schools have modern computers and Internet access devices, and scientific institutions have various devices for calculations and experiments. In hospitals, our body is scanned by complex tomography, and the actions of the staff are corrected through gadgets. The topic of medical staff management has received much attention in the following studies (Ziabina et al., 2021; Mishenin et al., 2020; Boronos et al., 2020; Oleksich et al., 2021; Mamay et al., 2020).

Personal computers, mobile communication, the Internet, which has become commonplace - this is not a complete list of the use of computer technology. Not so long ago not everyone could own a personal computer. Now we cannot imagine our life without mobile communication, and computers are in almost every home. However, when digital technologies are introduced into people's daily lives, the possibility and number of cyber frauds increases. More about the evolution and history of cybercrime can be found in the following paper (Ojeda Castro, 2021). The emphasis on the integration and impact of digital technologies in everyday life and business is made in many studies (Louis, R., 2017; Naser, 2021; Skrynnyk, 2021; Vysochyna et al., 2020; Vysochyna et al., 2020; Tiutiunyk et al., 2020).

In 2020, the Federal Bureau of Investigation received more than 847 Thousand complaints about cybercrime. According to a new report from the FBI's Internet Crime Complaint Center (IC3), financial losses due to cybercrime continued to rise sharply during 2021, totaling $6.9 billion (Securitylab, 2022). The topic of protection of economic and social interests of the population and the state is very relevant and many studies are devoted to it. (Novikov, 2021; Novikov, 2021; Harust et al., 2019; Levchenko et al., 2018,). Cybercrime includes various types of crimes committed by computer and on the Internet. The main types of cybercrime include the spread of malware, theft of credit card and bank account numbers, password cracking,

unauthorized mining and even copyright infringement. Problems with digital identity and blockchain are a separate topic that deserves attention, you can learn more about it in the research (Kibaroğlu, 2020).

Recently, the problem of unauthorized mining has become increasingly relevant. The purpose of the study is to analyze one of the types of cyber fraud - cyberjacking and to find ways to counteract unauthorized mining.

Cryptojacking is a scheme of using other people's devices (computers, smartphones, tablets or even servers) without the knowledge of their owners for the purpose of covert cryptocurrency mining. Instead of building specialized computer systems for cryptocurrency mining, hackers resort to cryptojacking techniques and steal computing power from their victims' devices. By adding up all these capacities, hackers can successfully (and most importantly without significant costs) compete with large players in the cryptocurrency mining market. The motivation of the attackers is simple: money. Cryptocurrency mining is a very lucrative business, but today it is extremely difficult to make a profit due to the huge associated costs and competition. However, if someone is limited in resources and not too scrupulous in matters of morality, then cryptojacking becomes an effective and inexpensive way to get the cherished crypto coins.

The user may not even notice how he became a victim of cryptojacking. In most cases, cryptojacking programs try to hide their activity from the user, but this does not make them harmless. Cybercriminals hack devices and install cryptojacking programs. These programs run in the background, mining cryptocurrency or stealing it from crypto wallets. Unsuspecting victims use their devices as normal, although the theft of computing power slows down the computer, increases electricity bills and shortens the life of the device. In order for the victim's device to secretly mine cryptocurrency, attackers usually force the victim to click on a malicious link in an email, which will download crypto-mining code to the computer. Or they inject JavaScript code into a website or online advertisement that automatically runs once downloaded to the victim's browser.

To detect a virus, first of all, you should pay attention to the operation of the device. If it starts to work incorrectly: the computer takes a long time to start, reboots on its own or cannot shut down normally, this may indicate the presence of a hidden miner. The virus can be detected by the increased operation of the device or its overheating at a time when no heavy programs are running on it and the user is not working. Mining significantly loads the power of the processor and video card. Therefore, slow operation of a computer or smartphone can also indicate malware infection. In the case when the task manager shows files that do not respond to the command to finish the work, it is worth checking these programs. To find a hidden miner, sometimes it is enough to scan your computer with an antivirus. Large cybersecurity companies often update their antivirus databases, including information about mining viruses. However, if the virus is encrypted using

cryptography, the antivirus may not find it. More serious forms of viruses can be installed when using flash drives or downloading updates to popular programs not from official sites. Such viruses may not be visible through the task manager, which makes it much more difficult to find them on the computer

How to deal with cryptojacking and remove the virus?

Use a reliable cybersecurity program, update the operating system and programs responsible for computer security in a timely manner. Downloading updates from the official websites of software manufacturers and removing unnecessary programs can also increase the protection of devices from both mining viruses and other malware.

Do not follow unfamiliar links and do not open unfamiliar applications.

Download applications only from official websites.

Use specialized browser extensions to block cryptojacking on the network, such as minerBlock, No Coin and Anti Miner. They are installed as extensions in popular browsers.

Use an ad blocker. Cryptojacking scripts are often delivered through online ads, so installing an ad blocker can be an effective means of combating them.

Disable JavaScript. When browsing the internet, disabling JavaScript can prevent cryptojacking code from entering the computer.

So, after the study, we can conclude that the problem of cyberjacking is becoming increasingly relevant in the modern world. However, if followed the tips mentioned above, it is possible to minimize the risks of becoming a victim of cyberjacking.

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EUROPEAN RECIPE FOR AUDIT: PREREQUISITES FOR IMPLEMENTATION IN UKRAINE

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One of the important steps toward economic integration and increasing political cooperation between the EU and Ukraine was the adoption of the Action Plan "Ukraine - European Union" [1]. It was an important new step that covered a time frame of three years. Its implementation helped in the implementation of the provisions of the Partnership and Cooperation Agreement [2] as an effective basis for cooperation between Ukraine and the EU, promoting and supporting Ukraine's goal of further integration into European economic and social structures.

These documents raise many key issues that should bring Ukrainian legislation, norms, and standards in various areas closer to the legislation of the European Union.

Thus, in particular, European legislation requires the introduction of a European system of quality control of services, including a system of quality control of audit services in Ukraine. Amendments to the legislation on auditing, in particular the transition to the International Standards on Auditing (2006) and the adoption of the Law of Ukraine "On Auditing Financial Reporting and Auditing" (2017) aimed at adapting national legislation to European Union standards and improving audit quality [4].

Analyzing the Action Plans and the Association Agreement, we can conclude that the issue of audit is given a separate place.

Cooperation in the field of public finance management is aimed at ensuring the development of fiscal policy and sound internal control and external audit systems based on international standards, as well as in accordance with the fundamental principles of accountability, transparency, economy, efficiency, and effectiveness.

Thus, external audit and control should ensure the proper functioning of the supreme audit institution (in Ukraine it is the Accounting Chamber) in accordance with internationally recognized standards of external audit. Promote the effective administrative capacity to prevent and combat fraud and other irregularities against national and international funds, including establishing effective cooperation structures involving all relevant national actors [2,6,8,10,14].

Particular attention is paid to enterprises, of general economic interest and which receive compensation for the provision of public services in any form for such a service, namely the correct presentation of information in individual accounts, so as to clearly track complete information on methods according to which costs and

revenues are allocated or allocated to different activities. These methods should be based on the principles of accounting - conditionality, objectivity, transparency, and consistency in accordance with internationally recognized accounting methodologies [1,2,3,5,16,17,18].

In addition, in order to help expand international cooperation in the implementation of EU legislation on financial reporting and auditing in Ukraine, there is a program "Implementation of EU practice in accounting, financial reporting, and auditing in Ukraine" 10.01.2020-09.01.2023. transparency and improvement of the business climate, which will promote domestic and foreign direct investment in the private sector and closer integration of Ukraine into the European and world economy.

The main difference between the adopted EU legislation and regulations in the field of accounting and auditing is based on the idea of transparency, which, in turn, contributes to the effective functioning of capital markets.

It should be noted that the quality of financial statements is the key to confidence and awareness of markets and investors. Improving the quality of the audit and the consistency of the audit is necessary to maintain confidence in the independent evidence they provide [7,9,12].

The world cares a lot about the quality of the audit, because the correctness of its results depends not only on the stability of the individual enterprise but also on the economy as a whole [13,15,16].

It is known that one of the real ways to improve the quality of audit services is to increase the responsibility of audit firms and auditors. To this end, the countries have state bodies for quality control of audit services, in particular: France - the National Chamber of Auditors, the Slovak Republic - the Office of Audit Supervision, and Ukraine - the Body of Public Oversight of Auditing.

Summarizing the presented study, we can draw the following conclusions:

1. Regulation of auditing in the EU, on the one hand, is in line with global trends in terms of standardization, increased independence, the introduction of quality control systems for auditors and audit firms and services, and on the other hand, aims to stimulate competition in the audit market large companies. European legislation requires introducing a European system of quality control of services, which is required by the market of audit services in Ukraine.

2. Amendments to the legislation on auditing are aimed at adapting national legislation to EU standards, improving the quality of auditing services, and providing investors, owners, and regulatory authorities with reliable validated information on the results of enterprises, which will improve the investment climate in Ukraine.

Auditors must recognize their professional responsibility to society through the provision of information in audit reports, and the state can and should establish certain legal safeguards to ensure the quality of audit services.

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VECTORS OF DEVELOPMENT AND ACTIVATION OF COOPERATION BETWEEN UKRAINE AND THE EU

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The analysis of certain aspects of investment and humanitarian cooperation indicates the need to identify obstacles to the activation of cooperation between Ukraine and the EU, especially in the war and post-war period.

In our opinion, the constant negative trade balance in Ukraine's trade with the EU indicates greater import dependence than export potential, which can be explained by the following reasons: the imperfection of the contractual framework on the elimination of customs duties and tariffs for Ukraine on EU markets; the presence of a high level of protection of EU internal markets by non-tariff methods, in particular, certification, sanitary conditions; the low competitive potential of Ukrainian exports - only the agricultural sector (Ukraine is an export agrarian giant), chemical and certain branches of the machine-building industry are competitive; Ukraine's great dependence on energy resources (a type of strategic import) and technically complex engineering.

Ukraine's problems on the European labor market: negative permanent outflow of personnel abroad; higher wages for foreign workers and better working conditions; weak business expectations among youth in Ukraine regarding development potential; martial law.

Analysis of the problem and prospects of Ukraine in the global labor market indicates a potential increase in the outflow of labor from the country, to a greater extent, such trends were determined both by the economic nature of labor migration in the past and by the military and political turbulence of Ukraine in the present, therefore, to balance the labor balance stabilization of the economy, the end of the war, stimulation of the creation of new jobs in Ukraine are urgent.

Identification and examination of obstacles to intensifying cooperation in trade, investment and humanitarian cooperation in the war and post-war period indicates the need to diagnose the vectors of strengthening cooperation between Ukraine and the EU.

The main vectors for intensifying cooperation in trade, investment and humanitarian cooperation in the war and post-war period for Ukraine and the EU are: signing agreements on additional trade liberalization; concluding an agreement with individual EU countries regarding the development of trade and investments; strengthening of technological exchange between the EU and Ukraine; stimulation

of scientific exchange between the EU and Ukraine; creation of conditions for the return of Ukrainian labor migrants.

To improve the state of trade relations between Ukraine and the EU, in our opinion, the following are relevant:

- in the conditions of martial law, intensifying the work of the Ministry of Foreign Affairs to eliminate the maximum level of trade barriers for Ukrainian goods on EU markets;
- signing of bilateral and multilateral agreements on coordination of forms and vectors of trade cooperation;
- promotion of the brand of Ukraine and Ukrainian goods at international markets and exhibitions;
- unblocking of sea ports to ensure normal operation for the export of Ukrainian goods;
- reorientation from the markets of developing countries and third world countries to the EU markets.

Analysis of the problems and prospects of trade relationships between Ukraine and the EU indicates the need to adjust the trade policy to minimize non-tariff trade restrictions, which would allow to increase the competitive export potential of Ukraine in the food and industrial markets of the EU.

Prospects of Ukraine on the world labor market:

- the possibility of attracting migrants from Asian and African countries as part of the development of educational tourism;
- simplification of migration conditions to Ukraine;
- improvement of the economic component of life in the country;
- creation of employment programs for labor force returning from labor migration from abroad.

The above proposals regarding the deepening of cooperation between Ukraine and the EU regarding trade, investment and humanitarian vectors of development indicate the need to harmonize national and general European legislation, bring Ukraine closer to the requirements of the EU tributary countries, develop technological, military and scientific exchange, which will become the basis for the synthesis of the economy, cultures and strategies for deepening cooperation between Ukraine and the EU.

THE ROLE OF FORENSIC ECONOMIC EXPERTISE IN THE INVESTIGATION OF CORRUPTION CRIMES

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During the entire period of Ukraine's independence, the society and the economic system of our country were significantly damaged by flourishing systemic corruption. Now our state is subject to full-scale armed aggression by the Russian Federation, which will, of course, have serious consequences for the economy of Ukraine. Therefore, now more than ever, it is important not to undermine the economic system from the inside with shameful acts of corruption, the scale of which may increase in the conditions of martial law in certain spheres of public life. Therefore, it is necessary to continue the fight against corruption in Ukraine, one of the directions of which is the detection and investigation of corruption crimes.

In order to more effectively investigate corruption crimes, they use the special knowledge of auditors, auditors, specialists and forensic economists who provide consulting, auditing, inspections, audits, monitoring of public procurement and forensic economic examinations. Among the most effective and qualified procedural forms of application of special knowledge in criminal proceedings regarding corruption offenses, forensic examinations are distinguished. In particular, a key scientifically based procedural form of the use of special knowledge, which allows the investigation and the court to obtain new information that has evidentiary value and cannot be obtained by other procedural means, is a forensic economic examination, which is conducted with the aim of confirming or refuting the circumstances of the commission of a criminal offense or determining amount of material damage.

This concept is relatively new: it appeared in Ukraine in 2001 as a result of the expansion of the range of questions that were posed to expert accountants and went beyond their competence. In the days of the planned and administrative economy, Ukraine was guided by the Instruction on the Procedure for Conducting Forensic Accounting Examinations in the Bureau of State Accounting Examination of the Ministry of Justice of the Ukrainian SSR dated December 30, 1974. However, after the cancellation of this instruction in 2001, another normative document that would determine the methodological aspects of the economic examination, was not accepted. Therefore, today there is no definition of the term "forensic economic expertise" in the Ukrainian regulatory and legal environment.

Instead, many definitions of forensic economic expertise coexist in the scientific literature. In our opinion, the definition given by L. V. Dikan, V. D. Ponikarov, and

O. V. Kozhushko most fully reveals the essence of forensic economic expertise: forensic economic expertise is a procedural form of research based on special knowledge in various areas of economics, economic analysis, revision and control of primary accounting documents, accounting and tax registers and financial reporting of economic entities of various forms of ownership in order to solve a wide range of issues arising during the investigation of economic crimes and the judicial review of economic disputes (Dikan et al., 2017).

The subject of forensic economic expertise is the questions that arise before the bodies of the pre-trial investigation and the court regarding financial and economic transactions revealed by inspections, audits and audits, the answers to which require special economic knowledge. The object of forensic economic examination is formed by economic transactions recorded in accounting documents and accounting registers, which are the subject of investigation or court proceedings. These can be accounting and tax accounting documents, forms of accounting, tax and financial reporting, accounting registers that contain information about the financial and economic activities of the enterprise.

With the help of forensic economic expertise, the following tasks are solved: establishing the amount of shortages or surpluses of material values and monetary funds; establishment and confirmation of the amount of material damage caused by officials; verification of the correctness of the write-off of raw materials and materials, the targeted use of funds; verification of the correctness of the methodology of the documentary audit and the reliability of its conclusions (Honcharenko et al., 2015).

Within the framework of forensic and economic examination, the following are distinguished: 1) study of accounting and tax accounting; 2) research of financial and economic activity; 3) research of financial and credit transactions.

Among the mentioned areas, accounting and tax accounting research is most often conducted, which is otherwise called forensic accounting expertise. Forensic accounting expertise can be called the predecessor of forensic economic expertise, because it was carried out in the 20s and 30s of the 20th century. Today, the term "forensic accounting expertise" is a professional derivation, which means one of the areas of economic examination.

Forensic and economic expertise is considered one of the main factors in the investigation of many corruption crimes. Corruption crimes, for the investigation of which it is usually necessary to conduct a forensic economic examination, are the crimes provided for in: Art. 191 of the Criminal Code of Ukraine (appropriation, waste of property or taking possession of it by abuse of official position); Art. 210 of the Criminal Code of Ukraine (improper use of budget funds, implementation of budget expenditures or provision of loans from the budget without established budget allocations or exceeding them); Art. 364 of the Criminal Code of Ukraine (abuse of power or official position); Art. 369 of the Criminal Code of Ukraine

(offer, promise or giving an illegal benefit to an official). In the investigation of corruption crimes, the main sources of information are documents, the thorough study of which by a forensic expert is the basis for detecting corruption.

The need to conduct a forensic accounting examination as a direction of economic examination appears during the investigation or trial of civil cases, crimes involving the appropriation of property, official (official) crimes, if it is necessary to carry out an analysis of information regarding financial and economic transactions reflected in the accounting system. Carrying out such an examination allows you to calculate the amount of damage caused as a result of the crime, as well as to assess whether the accounting documents are correctly drawn up, whether the display of business transactions corresponds to the rules and principles of accounting, whether the write-off of goods and material values was justified. Therefore, the opinion of an expert accountant is considered one of the key pieces of evidence in criminal proceedings when investigating corruption or economic crimes, the traces of which can be found in the accounting documents of enterprises.

Thus, based on the above, when investigating corruption offenses, it is necessary to apply special knowledge of accounting, tax accounting and financial reporting of enterprises, and forensic economic expertise can be considered one of the most effective and qualified forms of application of special knowledge.

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DETERMINATION OF REGULATORY EFFECTIVNESS INDICATORS OF TAX INSTRUMENTS[1]

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Voluntary participation in environmental regulation through environmental education, environmental dialogue, and environmental democracy leads to establishing the correct citizens' attitude to environmental taxes. Then it causes a change in preferences, market demand, acceleration of renewal of the consumption structure and stimulation of the development of ecologically oriented industries.

That is, the correct policy of environmental taxes significantly contributes to the optimization and modernization of industrial structure at the national and global levels. Environmental taxes become more effective when are used in conjunction with economic incentives. Indicators will show that market-oriented positive incentives can effectively stimulate the rational use of nature by market players and contribute to the process of industrial structure modernization.

Indicators will show that market-oriented positive incentives can effectively stimulate the rational use of nature by market players and contribute to the process of industrial structure modernization. But reliable tax instruments are necessary for the smooth performance of environmental protection function. Environmental taxes are an important prerequisite for reducing the transaction costs of enterprises, increasing the efficiency of environmental regulation and quickly transforming economic systems into an economy of sustainable development. Conversely, a less stringent environmental tax policy that sacrifices the environment for only economic growth may trigger a limit-to-growth problem in the near future. The support of environmental and economic growth depends on the coordinated promotion of environmental taxation policy in other areas.

In the modern era of informatization, digitization and the expansion of Internet networks, governments will be able to monitor the solution of environmental problems in real time. Technologies of mobile Internet, blockchain, and web resources should contribute to application of tax environmental instruments, implementation of regulatory acts, and the improvement of environmental policy, which should improve the convenience of government participation in solving environmental problems and reduce transaction costs for environmental policy using environmental real-time-data monitoring.

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In order to change the way of economic thinking a diversified environmental regulation by means of taxes should be offered to the ecological-economic traditional industry. Otherwise, an ill-conceived approach will lead to ineffective taxation, which can both worsen economic development and not lead to the desired environmental changes. Deterioration of economic development, as it is known, can affect society and cause conflicts and contradictions. Governments should support reforms aimed at improving the effectiveness of environmental taxes in areas such as education, employment, poverty reduction, social security, and income redistribution. Support of such a reform will reduce social tension during the implementation of tax instruments of environmental policy, as well as reduce the resistance of industrial sector. As a result, occurs transformation of economic development to a high-quality development of the national economy.

As already mentioned above, the effectiveness of environmental tax instruments can be ascertained with the help of relevant indicators. Such indicators may include:

1) C_t - cash receipts from environmental taxes, euros/hryvnias;
2) E_e - energy efficiency, tons of oil equivalent;
3) E_s - emissions of harmful substances into the atmosphere per capita, tons;
4) G_w - generation of waste of all kinds, tons;
5) P_r - part of energy generation from renewable sources, percentage;
6) Cp - costs for environmental protection, euros/hryvnias;
7) R_q - regulatory quality, percentage rank (Kaufmann et al., 2010).

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THE IMPACT OF THE LEVEL OF TRANSPARENCY ON THE ACTIVITIES OF FINANCIAL INTERMEDIARIES

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Transparency is understood as the level of openness of the bank's activities, achieved in the course of information disclosure. Disclosure of information is a description of information about the structure of the organization, risk management, financial activities of the bank and its results (Sidelnyk, N., 2021). The exception is confidential information containing commercial and banking secrets.

The effectiveness of the financial intermediation system and reduction of existing risks directly depends on the level of information openness of all market entities. Due to the specificity of their activity, financial intermediaries, especially banks, are the subjects most integrated into the country's economic system. The transparency of financial intermediation characterizes the disclosure by financial intermediaries of information necessary for the evaluation by other subjects of the results of the activities of individual financial intermediaries and the mediation system in general (Dove, M., et al., 2020).

The main groups of information consumers interested in increasing the transparency of financial intermediaries are distinguished. They can be ranked by the level of availability awareness. In general, this rating can take the form of:

1) rating agencies;
2) large strategic investors;
3) large creditors;
4) state structures;
5) financial analytical agencies and analysts, financial media;
6) small investors and creditors;
7) consumers of financial services/products of financial intermediaries (Rubanov P. M., 2014; Kaya, H.D., et al., 2021; Mynenko, S., et al., 2022).

For each individual type of transparency, this one rating may change. In addition, small investors and lenders can increase the level of transparency based on received analytics or services from qualified market participants.

Theoretical studies conducted abroad indicate that the transparency of the banking sector provides:

- efficient allocation of resources in the financial market by eliminating information asymmetries;
- reducing the frequency of banking crises and the costs associated with overcoming them;
- rapid recovery of problem banks in the post-crisis period;

- maintenance of high market discipline and banking culture (Bozhenko, V., 2021; Yelnikova, Ju., et al., 2020).

At the same time, a number of negative aspects are associated with the transparency of the banking sector:

- risk of destabilization of the bank at the first disclosure of information;

- transparent banks, compared to closed ones, may be more susceptible to the panic of depositors:

- share prices of transparent banks are more volatile;

- transparency of the banking sector stimulates the process of disintermediation, i.e. direct access of the borrower to the financial market and elimination of the intermediary from the market (Rosokhata, A., et al., 2022; Brown, E., 2020; Tiutiunyk, I., 2021).

The quality and volume of bank information and reporting submitted to regulators and to investors is an important factor in determining whether the market value of a bank and its shares rises or falls.

An analysis of the quality and reliability of the reporting of American and European banks, conducted by PWC, showed that the majority of bank executives, analysts and investors are convinced that the current financial statements of banks are not fully adequate to modern requirements and do not take into account the peculiarities of the modern economy, in which the main the emphasis is on knowledge and other intangible assets that form the value of the business (Formankovaa, S., et al., 2018).

The presence of a certain information secrecy gives rise to a number of risks (state, strategic, liquidity risk, reputational, payment system risk, risks in the deposit and credit market, and others), and objectively necessitates transparency in the banking sector, as one of the conditions for their reduction. Transparency in business involves providing all interested economic agents with the information they need to make rational decisions in an open, complete, timely and understandable form (Kozarezenko, L., 2018).

Increasing the level of transparency of banks' activities is one of the effective levers for increasing the level of their financial stability and reliability. Provided that transparent information about the risks of banks' activities is disclosed, market participants have the opportunity to influence them through their economic decisions. As a result, bank managers have additional incentives to conduct their activities more carefully in the context of finding the optimal ratio between risk and profitability (Bozhenko, V., 2021). This follows from the assumption that banks characterized by a high level of transparency have:

- competitive advantages;

- additional preferences due to the expansion of its client base and the opportunity to attract capital on the domestic and foreign markets on more favorable terms; -

additional income, while minimizing the level of risks and losses that they may incur in case of crisis scenarios of market developments.

High requirements for the quality and content of information disclosure by domestic financial intermediaries when attracting resources on the capital markets are caused primarily by the country's increased level of risk and the significant sensitivity of its assessment to negative factors in foreign markets (Yelnikova, Ju., et al., 2020). The need for relevant information is explained by the need to establish the optimal level of profitability and the fair price of a financial instrument, which is especially relevant for borrowers who enter international markets for the first time.

Thus, a logical chain arises, according to which increasing the level of transparency of banks' activities contributes to the growth of the level of trust of market participants in them, who, through their economic decisions, stimulate banks to restrain their "risk appetite". This allows banks to get additional profits.

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CLUSTER ANALYSIS OF THE HEALTH CARE STATE IN EUROPEAN DEVELOPING ECONOMIES

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A key issue for researchers is socio-economic disparities in health care systems of different economies. A significant number of publications is devoted to the issue of researching the efficiency of health care systems. For example, 115 studies were found in the Scopus database for the period from 2011 to 2021 for the query «efficiency of the health care system». Their bibliometric analysis made it possible to form 4 clusters based on the logic of coexistence in publications of 3 or more keywords according to the research topic. The number of relationships between publications is 612 units.

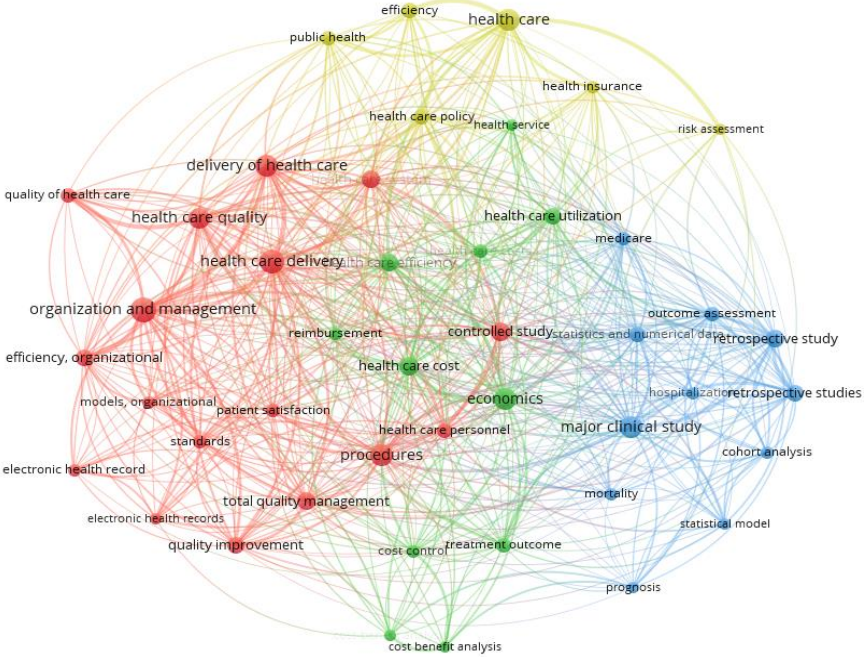

Fig. 1. Bibliometric analysis of scientific publications on the topic of the efficiency of the health care system

Source: author's elaboration based on the Scopus database using the VOSviewer 1.6.17 toolkit.

It is necessary to note the significant contribution to the study of practical aspects of socio-economic disparities, which was carried out by such scientists as Makarenko I., Sirkovska N., 2017; Druzhynina, V. et al., 2018; Kyrychenko, K. et al., 2018; Mohsen Yo. et al, 2018; Antosova I. et al., 2019; Gallo P. et al., 2019; Letunovska N. et al., 2020; Njegovanović A., 2020; Serpeninova Yu., 2020; Tenytska T. et al., 2020; Tovmasyan G., Minasyan D., 2020; Vasylieva T. et al., 2020; Yelnikova J., Kwilinski A., 2020; Keliuotytė-Staniulėnienė G., Daunaravičiūtė K., 2021; Oteh O. et al., 2021; Zhuravka O. et al., 2021; Hasan F. et al., 2022. Studies (Gupta S., Verhoeven M., 2001; Herrera S., Pang G., 2005; GuptaS. et al., 2007; Verhoeven M. et al., 2007; Afonso A. et al., 2010; Joumard I. et al., 2010; Grigoli F., Ley E., 2012; Jaba E. et al., 2013; Asandului L. et al., 2014; Grigoli F., Kapsoli J., 2018; Hrytsenko et al., 2021) show inefficiency of public spending on health care both in countries with developed economies and in countries with developing economies. The latter differ significantly from countries with developed economies in terms of the effeciency of the health care system, socio-economic conditions and the quality of public administration. The absolute majority of scientists focus their research on developed countries. This can be explained by the greater availability of the research information base for these countries.

Higher health spending tends to be associated with better health system performance. But there are significant differences between economies, even within the group of developing economies. According to the current classification of the Inernational Monetary Fund, the regional European group of countries with developing economies includes such countries as (IMF, 2022): Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Moldova, Montenegro, North Macedonia, Poland, Romania, Russia, Serbia, Turkey, Ukraine.

In order to identify disparities between the state of health care in the European developing economies, a cluster analysis was carried out using the *k*-means method with preliminary standardization of cluster indicators *x* according to the formula $\overline{x} = \left(x - x_{\text{cep.}}\right) / \sigma_x$.

The average value of public health spending per capita (PPP, international dollars) for the four-year period (2012-2015) and the average values of life expectancy, infant mortality rate under 5 years, the tuberculosis treatment success rate for the next four-year period (2016-2019) were used as cluster indicators.

Table 1

Mass centers of formed clusters

Indicators	Cluster			
	1	2	3	4
Public health spending per capita (PPP, international dollars)	598	812	265	1195
Life expectancy (in years at birth)	75,5	73,8	70,8	76,8
Infant mortality rate under 5 years (per 1000 live births)	12,2	7,3	13,6	5,3
tuberculosis treatment success rate (% of new cases)	87,75	79,83	73,5	34,5

The biggest difference was found between the countries included in cluster 3 (Ukraine, Moldova) and cluster 4 (Croatia, Poland) (Table 1, Fig. 1).

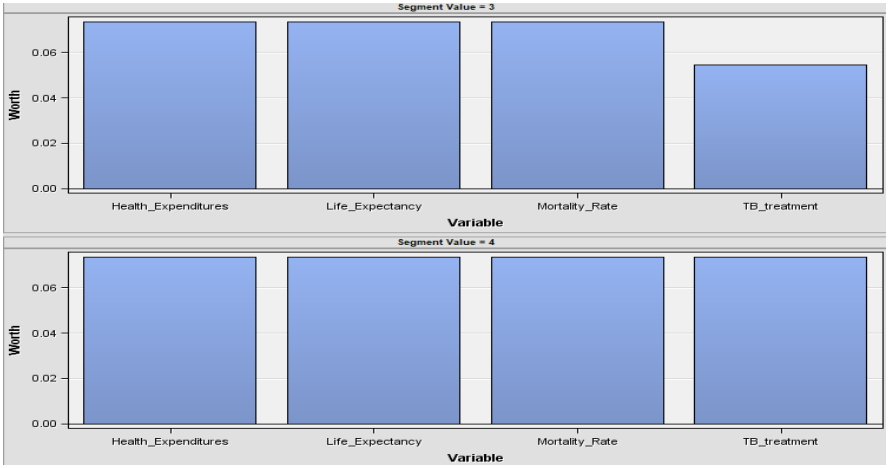

Fig. 1. Worth of clusters 3 and 4 indicators

Cluster 1 includes Albania, North Macedonia, Romania, Turkey. Cluster 2 includes Belarus, Bosnia and Herzegovina, Bulgaria, Hungary, Russia, and Serbia.

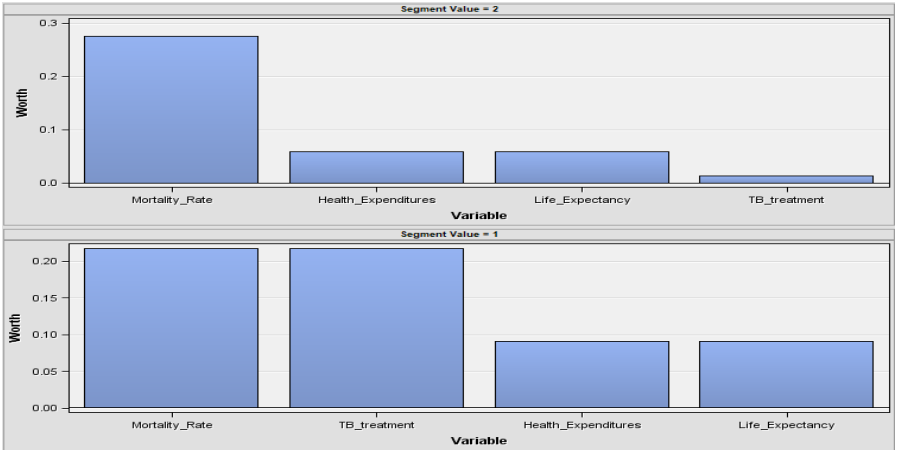

Fig. 2. Worth of clusters 1 and 2 indicators

Source: author's elaboration using SAS Enterprise Miner 15.1 toolkit.

Analyzing presented results, we conclude that public spending on health care per capita in the European countries with developing economies has a significant impact on health care indicators. Among the mentioned above countries, Ukraine and Moldova are in the worst condition, therefore they need an urgent reform of the health care financing system.

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SUSTAINABLE DEVELOPMENT GOALS, TRANSPARENSY AND AGRICULTURE: COVID-19 AND WAR IMPACT

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United Nations Sustainable Development Goals (SDGs) 2 "Zero Hunger" and 12 "Responsible Production and Consumption" are primary goals for agriculture companies (UN, 2021). General aspects of SDGs progress achievements in differen sectors of economy were investigated in Bhandari, Bhattarai, 2017, Bhandari, 2019, Formankovaa et al., 2018, Kostel, et al., 2017, Kozarezenko, L., Petrushenko et al., 2018, Kyrychenko,et al. 2021, Rahmanov et al., 2020, Serpeninova et al., 2020. However, agriculture sectors still remains under researched in the context of SDGs incorporation and transparency. One more important issue is investment provision of SDGs progress in this sector (Bhowmik, 2020, Bozhenko, 2021, Sokolov et al., 2018, Matsenko et al., 2021, Mynenko, and Lyulyov, 2022, Rosokhata, et al, 2022, Yelnikova and Barhaq, 2020).

Agriculture is one of the key spheres to achieve SDGs, because it deals with food security, hunger, waste-free production (SDG 2) and companies' transparency in all SDGs incorporation (SDG 12). Environmental (SDGs 7 "Affordable and Clean Energy", 15 "Life on Land") and socio-economic goals (SDGs 8 "Descent Work and Economic Growth", 11 "Sustainable Cities and Communities", 16 "Peace, Justice and Strong Institutions) are additional targets of this project. In the context of SDG 7 "Affordable and Clean Energy", agriculture supply value chain also can be oriented for creating the cheap sources of alternative energy. For the case of SDG 15 "Life on Land" agriculture can be used for reduction of environmental pollution, preserving biodiversity and lands from degradation. Agriculture companies can significantly contribute to overcoming Covid-19 pandemic challenges in labor market and fostering economic growth (esp. for Ukrainian export-oriented agriculture companies) within SDG 8 "Decent Work and Economic Growth" and ensure prosperity and resilience of the local areas they operate in within SDG 11 "Sustainable Cities and Communities". Unprecedented impact of Russian war aggression on the world grain and other food markets conjuncture and direct companies operation activity makes the investigation of SDG "16 Peace, Justice and Strong Institutions" in agriculture companies significantly urgent.

Prior to the Russian military aggression on the territory of Ukraine, the largest agro holdings in Ukraine have strong sustainability impact with high level of Corporate Social Responsibility (CSR), SDGs and sustainability transparency. One of the clearest examples of their CSR activities was to help staff and communities

overcome pandemic challenges. Thus, MHP in total allocated UAH 84 million to fight the coronavirus pandemic. Kernel – UAH 150 million.

It is also obvious that agro companies are the basis of food security not only in Ukraine but also in the world. Exports the wheat from southern regions of Ukraine account for a third of world trade. Ukrainian farmers are leaders in the production and export of sunflower oil in the world and are on the fourth place in the export of corn.

However, in the context of Russian aggression grain and food prices have risen significantly - the global food price index - The FAO Food Price Index (FFPI) in March 2022 was at its highest level in the history. According to UN Secretary-General Antonio Guterres, this creates the preconditions for a "hurricane" of world hunger, deep disruption of the global food system and political instability in many countries, especially the least developed countries in Africa, dependent on Ukrainian food (UN, 2022). In this context, the surveyed companies within their sustainability strategies and its ESG criteria form the basis not only for the viability of the agricultural sector key to Ukraine's economy, strengthen community capacity and employment, but also finance defense activities, contributing to the integrated achievement of a number of SDGs in such unprecedentedly difficult conditions.

The study of agriculture companies' sustainability transparency lies within the topic of financial and management reporting in general. For management practice today, it is relevant because of high importance of non-financial reporting besides traditional reporting for making management decisions. A comprehensive study of the level of SDGs incorporation at all levels of corporate governance, setting up a system for collecting, processing and interpreting information on planning, organizing controlling SDGs targets achievements - is a priority for comprehensive monitoring of constant SDGs progress. Identifying a particular type of sustainability related costs in the overall cost management system will increase their level of analytics - in terms of individual ESG - criteria and the most important SDGs and targets for the company's sustainability strategy adjustment.

Under the war the importance of sustainability transparency of agriculture companies and SDGs focus is highlighted significantly and need to be improved for tracking sustainable development progress.

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PROSPECTS OF USING SYNTHETIC-APERTURE RADAR IMAGES IN UKRAINE

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Ukraine is going through hard times because of the Russian invasion today. But the history of the 20th century has many examples of post-war «economic miracles». So, Ukraine also has new opportunities for post-war development. One of them is access to the use of SAR satellite images. This opportunity arose after the Serhiy Prytula Foundation purchased a satellite and access to the ICEYE database for a year. Scientific works (Miskiewicz, 2018; Jafarzadeh et al., 2019; Dźwigoł, 2021) prove that the study of new methods of scientific research is relevant today. The use of SAR time series can become a new method of solving many problems in Ukraine. Therefore, we set ourselves the goal of investigating the prospects of synthetic-aperture radar images in Ukraine.

First, let's explain the basic definition. Synthetic-aperture radar is a type of radar that collects data about an object by emitting energy in the range of electromagnetic waves and recording the amount of reflected energy after interacting with the Earth's surface. Usually, radars of this type are installed on aircraft, including satellites, spacecraft, or airplanes.

Unlike optical satellites, satellites using SAR technology can receive a clear image around the clock and under any weather conditions. However, processing the information received from SAR satellites is much more complicated. In general, it requires the following steps: applying the orbit file, radiometric calibration, de-bursting, multilooking, speckle filtering, and terrain correction (Meyer, 2019). The complexity of this process, the high cost of research, and the lack of free access by the world academic community made SAR an unpopular and ineffective technology for most fields for a long time. Due to the reduction of the costs of launching and maintaining satellites, the development of information technology, which greatly simplified the process of data pre-processing, the policy of the European Space Agency to provide satellite data for free use, and the increase of competition in the market of SAR satellites, this technology has become much more popular during the last decades.

Likely, the ease of analyzing and simplifying the processing of SAR data will attract more actors to the field in the future. Also, the relevance of SAR, as a unique means of prevention and response to changes in the environment, will greatly increase due to global warming and other environmental problems in the world.

According to a market report from Mordor Intelligence, the global SAR market was valued at $3,3 billion in 2020 and is expected to reach $6,5 billion by 2026, representing a compound annual growth rate (CAGR) of 11.6% during the period 2021-2026 (Mordor Intelligence, 2021).

Ukraine is not an exception to the global trend. As Andrii Kolesnyk, a former adviser to the head of the State Space Agency of Ukraine said in an interview with the BBC: «Ukraine was buying satellite images even before the full-scale invasion of Russia. About 30 – 35 million hryvnias per year were allocated for this» (Ковалевська, 2022). But he also said that it was mostly data from Chinese and Israeli optical satellites. Most of the companies that provided Ukraine with informational support in the form of access to satellite images after February 24, including Maxar Technologies and Planet Lab, also own mostly optical satellites. Therefore, the acquisition by the Serhiy Prytula Foundation of access to the ICEYE company database for a year and the capabilities of one of the satellites during its time in orbit had a significant impact on the volume and quality of satellite information for Ukraine. First, Ukraine can now receive data collected by SAR satellites, the advantages of which we have already talked about earlier. Secondly, due to the absence of intermediaries, the speed of obtaining information from satellites increases, which is important for quick decision-making.

Currently, Ukraine's Main Directorate of Intelligence owns the data from the satellites. Therefore, SAR satellite images are used mainly in the military sector. SAR images from satellites help the military to map the territory and detect objects on the surface of the earth (for example, to find buildings, logistics routes, missile sites, camouflaged equipment, etc.) It is most likely that this direction of using SAR images will be the most relevant in the short term for Ukraine. But the acquired satellite of the ICEYE company will remain at the disposal of Ukraine throughout the entire period of its operation, which makes more opportunities for the use of SAR images in Ukraine in the future. We consider promising to use images from SAR satellites in Ukraine in many directions. Let's describe the main ones.

1. Insurance. SAR satellite images can be a reliable source for assessing damage and destruction caused by natural disasters or military actions (this is currently very relevant for Ukraine), monitoring the activities of entities, etc. Thus, the automation of property and loss assessment becomes less time-consuming, which allows insurance companies to free up human resources. Effective management of human resources is an important topic for many studies (Hanić et al., 2020; Ziabina et al., 2021; 18. Oleksich et al., 2021; 19. Mamay et al., 2021;). A successful example of this application of SAR imaging abroad is the study of the consequences of the flood in the Darbhanga area (India) in 2017. According to the authors of the study: «These findings are crucial ... to assess flood impacts» (Tripathi et al., 2020).

2. Land use analysis and soil condition monitoring. Analysis of time series of SAR satellite images allows timely detection of fluctuations, subsidence, landslides,

etc. Previously, such changes in the early stages were often imperceptible and could lead to significant destruction and injuries. But today the SAR startup Synspective, through the analysis of soil deformation carried out in Guatemala City (Republic of Guatemala) during 2018-2021, has proven that the application of SAR technology can be a solution to this problem.

3. Monitoring of urban development. This area is particularly relevant for Ukraine, due to the need to rebuild cities that suffered from the Russian invasion. Satellite SAR images help analyze the state of cities and their rapid expansion and change in near real-time. This makes it possible to assess the state of the territory during social and economic changes. This use of SAR can provide answers to many research questions. For example, SAR images can help assess the impact of Covid-19 on city activity (Boronos et al., 2020) or analyze the long-term dynamics of the economy (Brown et al., 2020; Ramli et al., 2022; Rosokhata et al., 2022). An example of the real use of SAR in this area is the study of changes in land use in the city of Hangzhou (China) from 2000-2003, in which the use of SAR technology made it possible to create an accurate map of the city, reflecting its rapid pace of economic growth and development.

4. Energy and mining industry. As mentioned earlier, SAR satellite images allow for soil condition monitoring. This opportunity is important for the energy and mining industry. The territory of Ukraine is rich in deposits of oil, gas, coal, etc. So, we could use SAR images to conduct geological exploration operations, prevent accidents at the mining site, and control large-scale construction or production works. This use of SAR images can increase Ukraine's energy security, the importance of which is emphasized by V. Panchenko (Panchenko, 2020).

5. Agricultural business. There are many possibilities for using images from SAR satellites in the agricultural field. For example, SAR time series can help with crop inventory, crop cycle monitoring, plant biophysical changes, etc. Research aimed at creating long-term inventories of crop types has already been conducted in Ukraine (in the Belotserkivskyi district of the Kyiv region). According to the authors of this study: «It allows one to monitor compliance of crop rotation rules, which are necessary for the preservation of soil degradation. In particular, violations of winter wheat, winter rapeseed, sunflower and maize were identified» (Kussul et al., 2018). Continuation of research in this field can increase the efficiency of the use of land resources in Ukraine.

6. Analysis of the state of the country's infrastructure. SAR satellite images, which have high resolution, allow monitoring of the state of the road surface, subsidence, and displacement of the soil over a large area, and analyze the situation with problematic areas of infrastructure. Successes in this area would help Ukraine solve problems with infrastructure quality monitoring and increase the country's logistical attractiveness and convenience. But according to American scientists: «SAR-based methods are useful as a complementary tool rather than a replacement

for current technologies and practices, specifically in the sense of state of good repair» (Ozden et al., 2016).

7. Hydrological research and monitoring of water resources. Hydrological research has always required considerable training and a large amount of equipment. With the use of SAR satellite images, mapping and monitoring the state of surface water bodies has become much easier and cheaper. This can help solve the problem of dumping waste into rivers and improper disposal of waste by enterprises, the relevance of these topics for Ukraine is described in studies (Chygryn et al., 2020; Mishenin et al., 2020). Also, satellite images are often used to track boats (including poaching). For example, SAR satellite images have helped to assess the impact of the Covid-19 crisis on the frequency of ships entering French Mediterranean waters in 2020.

8. State sphere. Obtaining accurate and up-to-date information about the state of large areas is extremely important for decision-making in the public sector. The SAR satellite is one of the most effective tools that have such capabilities. In particular, SAR satellites' images can help Ukrainians detect crimes: illegal construction, extraction of natural minerals (in particular, amber), deforestation, fishing, etc. Exposing such types of illegal businesses can be one of the tools for solving the problem of the shadow economy in Ukraine. Many Ukrainian scientific works are devoted to the search for a solution to the problem of the shadow economy (Levchenko et al., 2018; Tiutiunyk et al., 2019; Tiutiunyk et al., 2021), which proves the relevance of research on this topic.

In conclusion, SAR is an effective tool for collecting large arrays of data about objects and processes on the Earth's surface. The uniqueness of the technology lies in the possibility of round-the-clock use in any weather conditions and the high resolution of modern radars. SAR images in combination with modern technologies and methods of working with data allow you to get an incredible amount of accurate information for making effective decisions. SAR has significant prospects for use in Ukraine, including in the areas of military intelligence, insurance, energy and mining industry, agricultural and public sectors, hydrological research, soil condition monitoring, and urban and infrastructure development. In our opinion, the effective use of SAR by state structures and businesses can make Ukraine more attractive for investment and contribute to the development of international cooperation, the importance of which for the country is described in scientific works (Nelson, 2017; Gentle, 2022). Therefore, conducting further research on the practical application of SAR images is very promising for the Ukrainian academic community and society.

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DETERMINING THE LEVELS OF REGULATORY EFFECTIVENESS OF TAX INSTRUMENTS AT THE NATIONAL LEVEL[1]

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There are several ways to improve environmental taxes and promote their effectiveness. Using diversified environmental taxes, governments should constantly enrich the instruments of environmental regulation and facilitate the transition from single to multiple regulation of environmental use. On the one hand, it is necessary to carry out market reform of the factors of production, on the other - to enrich the economic incentives of the tax policy. Optimization of the environmental management system, strict enforcement of environmental legislation, protection of the public right to environmental discourse, minimization of the possibility of collusion for the purpose of rent-seeking, promotion of the green transformation of the economy are needed. Governments should then identify the subject, object, scope, regime, basis and responsibility of their positive incentive tax policy of environmental regulation in order to properly promote clear environmental regulation according to the requirements and time, reduce political resistance to environmental regulation, and improve the economic performance of environmental regulation. politicians It is also necessary to create service information platforms to accelerate the ecological modernization of the industrial structure.

The considered levels of regulatory effectiveness of tax instruments in relation to nature use allow environmental taxes to be ranked according to the level of their regulatory effectiveness in order of decreasing effectiveness:

1. Environmental taxes to stimulate the generation of energy from renewable sources.
2. Environmental taxes to stimulate spending on environmental protection.
3. Environmental taxes for cash receipts in the budget.
4. Environmental taxes to reduce the generation of waste of all kinds.
5. Environmental taxes to increase the energy efficiency of the economy.
6. Environmental taxes to reduce emissions of harmful substances into the atmosphere.

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It is clear that the regulatory quality differs in different countries. In Ukraine, it is much less than in the EU, so ranked environmental taxes in Ukraine have less regulatory effectiveness. Environmental taxes in Ukraine include:

- Excise tax on liquefied gas.
- Excise tax on other petroleum products.
- Fee for special use of fish and other water resources.
- Other fees for environmental pollution to the Environmental Protection Fund.
- Environmental pollution tax.
- Energy tax.
- Excise tax on cars.
- Excise tax on electricity.
- Excise tax on fuel.
- Excise tax on gasoline.
- Wildlife use fee.
- Tax on emissions of pollutants into the atmosphere by stationary sources.
- Tax on CO2 emissions by stationary sources.
- Tax on generation and storage of radioactive waste.
- Tax for the special use of water (except the rent payment for the special use of water of water bodies of local importance).
- Tax on the special use of water from residential and communal services.
- Tax for the use of subsoil for the extraction of amber.
- Tax for the use of subsoil for oil production.
- Tax for the use of subsoil for the extraction of gas condensate.
- Tax for the use of subsoil for the extraction of minerals of national importance.
- Tax for the use of subsoil for the extraction of natural gas.
- Wood tax.
- Tax for the use of the subsoil of the continental shelf and within the exclusive (marine) economic zone.
- Waste disposal tax.
- Tax on water withdrawal for hydropower.
- Water pollution tax.
- Water transport tax.
- Water fee.

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THE PRACTICE OF ORGANIZING A CYBER FRAUD PREVENTION SYSTEM AT THE MACRO LEVEL

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Cyber fraud has become one of the most common crimes in the world. The risks associated with them are assessed by companies as extremely high, and the losses from them can exceed the costs of data security and protection. The development of cryptocurrencies and electronic money circulation led to the emergence of increased risks at the entire macroeconomic level [1]. At the same time, the possibilities of income laundering and the level of shadowing of economies have also increased. Accordingly, states lose income and opportunities for development, investment in the country decreases, and international competition and own profits decrease [2,3]. That is why recently the systems of combating such types of crimes are developing at a very fast pace not only at the levels of specific organizations but also at the levels of the state and international communities.

All counteraction systems are based on regulations introduced in the early 2000s. One of the main acts is the Convention on Cybercrime, which outlines the basic rules of international information exchange and the principles of the country's interaction in the information space [4,5]. The UN Convention on Cybercrime contains the main definitions of cybercriminals, their classification, and the purpose of punishment for them at the international level. All defined acts and documents regulating cyber security are aimed at creating a safe information space, protecting the information structure of countries, and defining the principles of interaction between states. All of them note the great importance of cybercrimes and their impact on the economic system of countries since the level of money laundering and financial losses from them can be different and affect the world at a global level [6].

Developed countries combine a lot of indicators that ensure stability at the macroeconomic level. These indicators include not only purely economic indicators but also social, political, and cultural ones.. That is why they need extensive cybercrime protection systems [7]. Each of the European countries at the legislative level has established methods of combating such types of crimes and relies in its activities on international treaties and acts. The CERT-EU organization is successfully operating in Europe, the main purpose of which is to detect cyber

attacks using special technologies. Then the detected violations are sent to the European Center for the Investigation of Cybercrimes, where they are studied and further punished by the law [8]. Every organization that uses even the smallest technologies has its corporate crime prevention system, which is the most effective in terms of the activity of this or that enterprise. For example, post-Soviet countries such as Armenia, Georgia, and Azerbaijan integrate cyber security systems into innovative technologies immediately after their creation [9]. Nigeria has its anti-crime system, which is integrated into small and medium enterprises and implemented in various areas such as education and banking [10]. Indonesia's defense systems are built on established relationships between people and delegation. The distribution of protection between agents in different areas allows for creating multi-level security of information at different stages of interactions [11].

One of the strongest systems for countering cybercrime is the UK system. In addition to international treaties, it is based on its strong directions of state policy regarding cyber security. Britain was one of the first countries in the world to introduce liability for crimes related to computer technology back in 1981. The main area of protection in Britain is government organizations and state institutions, as well as the protection of personal data of citizens [12]. And the greatest protection, in this case, is the adopted legislative acts, which determine not only administrative but also criminal responsibility for committing cybercrimes. Normative regulation of cyber security is still the main means of combating crime in most countries of the world, and financing and development of technologies for forecasting and detecting possible threats is an auxiliary means.

Recent years have led to the transition of business online. Many companies were forced to implement e-commerce due to the development of the pandemic: some companies moved completely to the online sector, and some increased electronic cash flow [13]. But in every country business has undergone changes. The field of health care has also changed, due to many things it has also gone electronic. Thus, electronic patient offices, electronic declarations, and vaccination certificates were created en masse [14,15]. The flow of user data has increased significantly, accordingly, the risks of information loss have also increased. Therefore, there is a new requirement for state governments to create security systems that will be reliable enough to store this type of data. Developed countries such as Germany, France, the United States of America, and Britain were able to quickly adapt to new conditions and implement protective systems [16]. For Ukraine, the adaptation system also passed quite quickly. The healthcare system has improved significantly, and electronic certificates are recognized internationally. No leakage of patient data was observed, which indicates a high level of information security. Since the beginning of the pandemic, business in Ukraine has also changed significantly and directed its own protection systems to combat cybercrimes[17].

In Ukraine, the number of cyber frauds has also increased significantly recently, which is due to many factors [18]. The first and most important factor at the moment is the war, leaving the digital sphere - the first sphere to be affected long before the full-scale invasion of the Russian Federation began. Thus, since 2014, the country's energy systems, government websites, including the website of the President of Ukraine, the Ministry of Defense, the Ministry of Finance, and the Ministry of Foreign Affairs, as well as the websites of the most famous Ukrainian mass media, have been affected in the process of cyber warfare. In January and early February 2022, attacks by cybercriminals became massive and were aimed at producing information from the internal databases of the Ukrainian government, as well as from the largest banks of Ukraine: Privatbank, Oschadbank, and others. Major attacks caused some sites to stop working or damage them. Mass cyberattacks were also carried out on users of Twitter, Telegram, Facebook, as well as other social networks to gain access to private devices and monitor Ukrainian citizens to facilitate the genocide.

There were phishing attacks on Ukrainian military personnel and their families, as well as on the private addresses of Ukrainians. The stolen information was released or used in mass terror during the invasion. Also, at the end of April 2022, systematic attacks were used on Elon Musk's Starlink system, then they became the main systems for providing access to high-speed Internet for the needs of the army and in those places affected by the Russian occupation.

Most of the attacks did not achieve their full success; after 2014, the Ukrainian system of countering cyber fraud in all areas has seen significant changes and has become more effective.

Until 2014, the concept of cybercrime was not defined in Ukraine. There was no legally approved method of combating them. The basis of protection against cybercrimes was voluntary united IT specialists or specialists of the Security Service of Ukraine in various departments, who exercised control over the technologies necessary for the work of the government. Each private organization, whether financial or social, had its specialists. In the conditions that existed at that time, the defense took place, albeit at a scattered level, but at a sufficient level, and with the beginning of the war, the direction and number of attacks, as already mentioned, increased. Therefore, there was an urgent need to create a new system that could provide Ukrainians with reliable protection. In 2014, the activities of the CERT-UA team, which became the main asset for responding to the emergence of cyber threats, were established at the state level. Among this team were analysts and programmers who identified the possibility of weak points in government systems and used their improvement. Already in 2016, the cyber security strategy of Ukraine was approved, and a special National Cyber Security Coordination Center was created. This center provided a complete set of actions to combat cybercrime. They carried out analytical and preventive activities. The center was able to create programs to counter threats,

provide the financial and technical basis for programs, as well as participate in international programs and training on the implementation of cyber security in the country and gain foreign experience. Thanks to various international funds and defense associations, equipment and software arrived in Ukraine, which made it possible to provide a more effective response to opportunities and existing cyber threats [19].

In 2018, the Security Service of Ukraine opened the Cyber Security Situation Center. The center is equipped with the technical means used by NATO countries, which allows to ensure uninterrupted work of state services and protect the data of Ukrainians even today. Blocking Russian resources and some social networks was another strategy to combat cybercrime, which made it possible to resist the outflow of information about Ukrainian users and protect them from possible espionage and interference in personal life.

The IT Army of Ukraine has become an important factor outside of ensuring the cyber security of the country in the conditions of war. This army, which consists of programmers, analysts, project managers, etc., was created unofficially on February 24, 2022, and became another front for Ukraine. Since the beginning of the large-scale war, Ukrainian specialists have not only repelled several attacks on banking institutions and government websites but also carried out several successful counterattacks on Russian websites, which were the main sources of disinformation. It is worth noting that all joint attacks of Ukrainian and international programmers are not aimed at stealing the data of ordinary citizens or obtaining illegal profits, but at helping in the fight against a war with a neighboring state. That is, they became part of the fight against cyber fraud in modern conditions. In general, the Ukrainian protection system is not perfect. It remains quite scattered and needs a single center of coordination. Also, in Ukraine, there is still no punishment for cybercrimes at the state level for foreign fraudsters, which makes the state vulnerable to attacks from abroad. Ukrainians need international experience to modernize their achievements.

So, it can be noted that the systems of combating cyber fraud in the world are quite developed. Some countries have a legislative basis and include a wide range of powers, functions, and mechanisms. For an effective application, systems must be constantly developed and improved. It is constant progress that will minimize possible risks and create reliable protection.

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FOUNDATIONS OF THE STRATEGIC DEVELOPMENT OF THE UNITED TERRITORIAL COMMUNITIES OF UKRAINE

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One of the main results of the implementation of the decentralization process is the creation and formation of self-sufficient and affluent united territorial communities, with the availability of appropriate material, financial, human and land resources, social infrastructure facilities. This is a necessary condition for improving the provision of citizens` needs for high-quality and operational basic social and administrative services and creating conditions for the sustainable development of territories, the most rational use of both budgetary funds and donations from entrepreneurs in community. The constant development of the united territorial communities should ensure the qualitative changes and directly improve the quality of life of the population of a certain territory. The very process of forming affluent united territorial communities, under conditions of constant changes in the external environment and uncertainty, draws attention to the problems of finding adequate mechanisms and methods for ensuring the consistent development of communities as well as to the implementation of new tools that will ensure the maximum use of the available resource potential of the territories. Therefore, the creation of united territorial communities is only the first step on the dynamic path of development of local self-government [1]. The united territorial communities is constantly faced with the need to timely response to growing number of new challenges, the overcoming of which will lead to the development and harmonization of socio-environmental and economic relations. That is why it is very important to choose, from the very beginning, the path that will ensure the successful development of the territorial community.

Despite the current development of scientific research and the practical use of strategic planning at the local self-government level, Ukraine lacks a comprehensive planning tool that could provide accounting, socio-environmental and economic balance of the united territorial communities. The concept of sustainable development and the practical experience of strategic planning for the development of united territorial communities indicate the need for a balanced combination of key parameters of the economic, social and environmental subsystems. These are the interrelated elements of the life of the territory, that is, there is a need for further thorough research on the outlined issues [2, 3, 4]. The development strategy of the united territorial community is a document of strategic development planning that defines strategic and operational goals for a long-term (5-7 years) period, tasks for

sustainable economic, environmental and social development of the united territorial community. This document is developed taking into account the provisions of the Law of Ukraine "On the Fundamentals of the State Regional Policy" and Decree of the Cabinet of Ministers of Ukraine No. 932 as of November 11, 2015 "On approval of the procedure for developing regional development strategies and action plans for their implementation as well as monitoring and evaluating the effectiveness of the implementation of these regional strategies and action plans". The development of strategic and policy documents is recommended to be carried out in compliance with the following principles: objectivity (development of documents based on data of state statistics bodies, other central and local executive authorities, the results of public surveys, taking into account real goals and indicators that can be achieved and evaluated); validity and expediency (development of documents based on clearly defined development goals and economically sound measures and projects that contribute to their achievement using the best world experience in the field of forecasting economic, environmental and social development); coordination (of relationships and consistency of long-term strategies, plans and development programs at the state, regional and local levels); openness and transparency (providing public access, which involves informing about the goals, objectives and expected results and indicators of the implementation of strategic and policy documents, and also provides all business entities with the necessary guidelines for planning their own production activities); equality (creation of equal opportunities for expressing the positions of all parties in the development and implementation of relevant documents); non-discrimination and equal access (creating opportunities for expressing the positions of all parties in the development and implementation of relevant documents); efficiency (determining and ensuring the functioning of the mechanism for achieving goals, timely fulfilling the tasks and measures); historical continuity (taking into account and preserving the positive achievements of the previous development of the community); sustainable development (ensuring the development of society to meet the needs of the present generation, taking into account the interests of future generations).

Based on SWOT analysis, the logical connections are identified between internal (strengths and weaknesses) and external (opportunities and threats) factors that are of strategic importance for the united territorial community development. These connections make it possible to formulate the comparative advantages, challenges and risks that serve as the basis for formulating the strategic goals for the united territorial community development in the long term.

Globalization has been the basis of international trade for a very long time and has determined the development of entire industries, countries and regions. However, the world has changed: the COVID-19 lockdowns, disruption in production and supply chains due to war, structural changes in markets at all levels. The whole world has felt all the weaknesses of globalization. Therefore, the

awareness of the need for deglobalization should become the key factor to the development and implementation of the strategy for the united territorial community development. In addition, the balance of interaction between the main elements, i.e. self-government bodies (the state), science (education) and the private sector (business), is a necessary condition for the community development.

The process of strategic development of united territorial community can be represented as a series of the following successive steps [5]: 1) organization of work; 2) carrying out a strategic analysis; 3) forecasts, scenario modeling and making strategic choice; 4) development of an action plan (goals, objectives); 5) public discussion and approval of the chosen strategy; 6) monitoring and implementation of the development strategy.

Formation and implementation of the united territorial community development strategy should be based on the competitive advantages of a particular united territorial community. It also should comply with the strategy of regional development of the region and the state, be real, be calculated on real financial resources and to comply with the rules of public participation and lobbying neutrality.

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UKRAINIAN STEPS TOWARDS DIGITIZATION

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One of the current global trends in economic development is digitalization. Today, the dynamic impact of digital technologies is felt in virtually all sectors of the world economy and at various levels of national economies. The digital economy is the next level of development of economic systems, characterized by the dominance of information and communication technologies and computers, which can significantly improve the efficiency of business processes in all areas of economic activity.

The modern development of information and communication technologies, primarily electronic networks, has become a powerful impetus for the emergence and formation of a new trend in modern economic development - digitalization of the economy. Digital form of communication raises the level and efficiency of communication between producers and consumers and creates new opportunities and markets for the reorganization of economic processes.

One of the first steps towards the digitalization, made by Ukraine, was the accession in June 2015 to the Declaration of the First EU Eastern Partnership Ministerial Meeting on the Digital Economy, to which Ukraine reaffirmed its intentions and readiness to cooperate with the EU in this area. In 2017, the Law of Ukraine “On Electronic Trust Services” was adopted, which is essentially a technical translation of the European Regulation on eIDAS regulation.

The next step in the development of the digital economy was the development in 2018 of the conceptual framework of the "Digital Agenda of Ukraine - 2020", which identified the main tasks, priorities, initiatives and projects of "digitalization" of Ukraine for the next three years. In the same 2018, the government approved the Concept of Development of the Digital Economy and Society of Ukraine for 2018-2020 and approved an action plan for its implementation [2]. The main goal of the Concept was to implement the Digital Agenda of Ukraine 2020 initiatives in order to remove barriers to the digitalization of the national economy in the most promising areas. It was also about the implementation of the initiatives of the "Digital Agenda of Ukraine 2020" in order to remove barriers to the digital transformation of Ukraine in the most promising areas [2].

In accordance with this Concept, a set of measures was envisaged in the field of digitalization of Ukraine's economy, public and social spheres, acquisition of digital competencies by citizens, development of digital infrastructure; identified projects to digitize the country's economy, stimulate national production, use and

consumption of digital technologies. It was noted that the path of formation of digital economy and information society in Ukraine is through the use and consumption of information and communication and digital technologies, the formation of consumers (government, business, citizens) motivations and needs in digital technologies [2].

An important direction in the digital transformation of the national economy, identified in the Concept, was the attraction of investment, deepening cooperation with the EU in the digital sphere and overcoming digital inequality. Particular attention was paid to the digitalization of the real sector of the economy through the creation "Digital workplace", "smart factories", the development of digital literacy of the population [2].

Thus, the concept of development of the digital economy of Ukraine approved by the government in 2018:

- laid the foundations for the development of the digital economy in Ukraine;
- defined the principles of state policy in the field of digitalization of the national economy;
- identified priorities for the development of the digital economy in Ukraine for the next three years;
- highlighted government initiatives to build digital infrastructure and bridge the digital divide;
- emphasized the need to develop digital skills of citizens and specialized education of citizens;
- outlined priority areas for stimulating the development of digital technologies in the country and the creation of high-tech industries;
- identified the most important areas for the implementation of digital transformation projects on a national scale [2].

One of the latest and fundamental steps towards the digital transformation of the national economy was the development of the conceptual framework of the "Digital Agenda of Ukraine - 2020", which identified key tasks, priorities, initiatives and projects "digitization" of Ukraine's economy. This document identifies key tasks, priorities, initiatives and projects of digital transformation of the national economy for the next three years. These developments were presented to the public and held relevant hearings in the Committee on Informatization and Communications of the Verkhovna Rada of Ukraine.

Today, the Digital Agenda 2020 is a strategy, action plan, initiative, roadmap for "digital transformation" and development of Ukraine's digital economy, digital society, digital infrastructure, which will contribute to relatively cheap, fast and high-quality achievement of Ukraine's goals. both in the economic and social spheres through the use of digital technologies. That is, the recently adopted strategic documents for the development of the digital economy in Ukraine provide for measures aimed at creating the necessary conditions for the formation and

development of the information society. World experience convinces in the prospects of such a vector of economic development of Ukraine, as countries that invest heavily in new technologies and conduct economic

reforms receive digital dividends.

The purpose of these transformations of Ukraine's economy is the digital transformation of existing and creation of new sectors of the economy, the transformation of all spheres of life in Ukraine into new, more efficient and modern. Creating a modern digital space and appropriate infrastructure benefits everyone: citizens, businesses and external investors. Therefore, the priority scenario of digitalization of the country is the removal of legislative, institutional, fiscal and other barriers that hinder the development of the digital economy. Another important task is to motivate the digitalization of society, namely: ensuring the affordability of digital technologies for consumers, creating conditions in various spheres of life to meet the needs of citizens and businesses to use new digital tools instead of the usual, traditional.

Thus, the digital transformation of Ukraine's economy is realized through the development and implementation of innovative digital technologies on an ongoing basis, the formation of appropriate socio-economic, legal, organizational and other conditions for the transition of economy and society to a new level of development.

As a conclusion, I`d like to say, that in today's global digitalization, it is necessary to take into account that the digitalization of the economy has both positive (creating new business opportunities based on new technologies, increasing the competitiveness of the economy through the introduction and development of breakthrough business models and technologies, improving the business climate, etc.) and negative. polarization of workers in terms of mastering digital skills, deepening social stratification of society, etc.) socio-economic consequences.

In this regard, an important task facing every country in the world is to explore all the opportunities and risks of digitalization and achieve a reasonable balance between them in the use of digital technologies for economic growth and competitiveness.

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STRENGTHENING THE REQUIREMENTS FOR BANK CAPITALIZATION AS A CHALLENGE FOR THE COUNTRY'S ECONOMY

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The issue of maintaining economic stability in the country is quite important and relevant at any time, and especially in the conditions of the global pandemic of COVID-19, war and other socio-political challenges. It is necessary to monitor various spheres of the state's life, identify weaknesses and develop appropriate crisis reform plans at this time.

First, when developing state economic policy, it is necessary to take into account the influence of the following factors: the quantity and quality of natural and labor resources, the amount of the country's capital and the availability of technologies. The presence and effective combination of these factors will contribute to the country`s economic growth. It is worth analyzing in more detail the importance of the labor, capital and technological components of economic policy, which is especially relevant in the conditions of war.

Despite the automation of many processes, people do the maintenance of information systems. Without sufficient labor resources, these processes cannot be efficient enough. Since the beginning of the war, more than 7.7 million people left, 2.559 million returned (UKRINFORM; Obidjon, Zakharkin, Zakharkina, 2017; Hoxhaj, Muharremi, Nushi, 2022). Among the migrants, specialists in the financial, banking, and service spheres constituted a significant share. In the first days of the war after February 24, 2022, 10th part of bank employees remained on the ground, and this especially applied to the operational centers located in Kyiv. This problem was also compounded by the mass withdrawal of cash, which destabilized the banking system. Thus, the economic policy of Ukraine was influenced by the labor factor and the capital factor, and then the technological factor. Figure 1 shows a structural and logical diagram of the influence of the main factors on the economy of Ukraine since the beginning of the war.

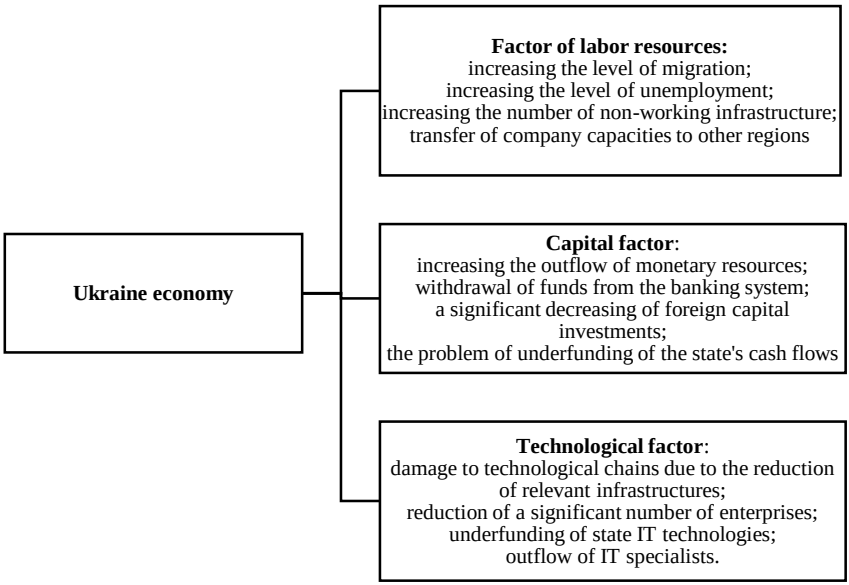

Figure 1. Structural and logical diagram of the influence of the main factors on the Ukrainian economy since the beginning of the war

Source: compiled by the author on the basis of Hayetska, 2019; Kozlovskyi, Mazur, 2017; Tiutinyk, Mazurenko, 2021; Demkiv, 2018; Goncharenko, 2020; Karaye, Ahmad-Zaluki, Badru, 2022; Melnyk, Kuchkin, Blyznyukov, 2022;. Zarutska, Pavlova & Sinyuk, 2018)

Referring to the above, it can be concluded that a rational combination of labor, capital and technological factors contributes to the economic stability of the state. Thus, it is necessary to single out the main problems of the specified economic components and develop appropriate anti-crisis measures to reduce the impact of negative economic effects.

Since an important place among the factors is capital, we should consider its features in more detail. Among the problems of the capital factor of economic stability, which Ukraine faced, were an increase in the outflow of monetary resources, the withdrawal of funds directly from the banking sector, and the problem of underfinancing of the state's cash flows (Pimonenko, Radchenko, Palienko, 2017; Kotenko, Bohnhardt, 2021; Samoilikova, Kunev, 2020).

The main economic system that can solve these problems is the banking system. It ensures an efficient and uninterrupted flow of funds and is responsible for the financial maintenance of state payments.

At the current stage of economic development, one of the main problems of the banking system is maintaining its financial stability and reliability (Rizk, 2022). This

is the basis for further performance by banks of their functions of providing the country's economy with a sufficient amount of resources.

Capitalization is the main factor that has the ability to positively influence the economic processes of the state, expand the range of banking services, improve their quality, preventing significant risks and at the same time maintaining the stability of the system. Therefore, we will consider the main requirements for bank capitalization as challenges for the economy of Ukraine.

According to international standards, from January 1, 2022, banks must keep capital to cover not only credit, but also operational risks. The importance of capital requirements to cover operational risk is only increasing given the new opportunities for fraud due to the shift of business online. In order to protect customers, banks must also develop appropriate policies and operational risk management systems, which is especially relevant in times of pandemic and war (National Bank of Ukraine).

Figure 2 shows the changes in capitalization requirements of the banking system and the corresponding economic effects.

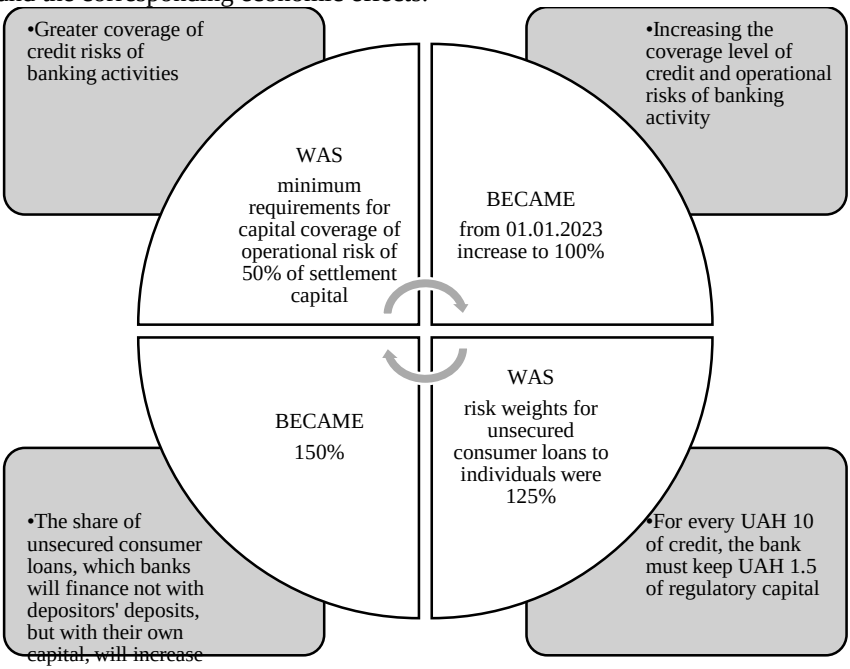

Figure 2. Scheme of increasing the requirements for bank capitalization as one of the components of the capital factor of the country`s economic stability

Source: created by the author based on data from the National Bank of Ukraine; Bakari, Idi & Ibrahim, 2018; Paskevicius, Keliuotyte-Staniuleniene, 2018)

It is worth noting that the two-stage increase in risk weights during 2021 from 100% to 150% created an additional capital reserve to cover possible losses on consumer unsecured loans in the event of adverse conditions, to which we can include the COVID-19 pandemic (from 2019) and the beginning full-scale war in Ukraine (from February 24, 2022).

Also, the next step is to increase the risk weights for domestic state loan bonds in foreign currency to 50% with a further increase to 100% from July 1, 2022. According to the Basel standards, government securities in foreign currency are assigned risk weights depending on the international rating. For government bonds of the Ukrainian government in foreign currency, the risk weight should be 100% (Taraniuk, D'yakonova, Taraniuk, Qiu, 2020; Minchenko, Demchuk, 2021). In order to gradually bring domestic requirements into line with international standards, the risk weights are being increased gradually and only for those securities that banks buy from April 1, 2021. This design enables banks to plan their investment policy and positively influence the capital factor of Ukraine's economic stability (Vasylieva, Harust, Vinnichenko, Vysochyna, 2018; Masharsky, Azarenkova, Oryekhova, Yavorsky, 2018).

Thus, the banking system is the financial basis of the economic policy of any country. This is a collection of various types of national banks and credit institutions operating within the general monetary mechanism. Having identified the main problems of the capital factor of a stable economy of Ukraine, it can be concluded that the significant outflow of monetary resources and insufficient financing of state payments are the spheres of responsibility of the banking sector (Serpeninova, Makarenko, Plastun, Babko, Gasimova, 2020). Therefore, strengthening the requirements for the specified system will contribute to the effective regulation of cash flows and the rational conduct of financial transactions. The increase in requirements refers to capitalization as the main indicator of the financial stability of the banking system.

Among the new challenges regarding bank capitalization, the following are highlighted:

• increasing the minimum requirements for capital coverage of operational risk from 50% to 100% of settlement capital;

• increasing the risk weights for unsecured consumer loans to individuals up to 150%;

• increasing the risk weights for domestic state loan bonds in foreign currency to 50% with further growth to 100% from July 1, 2022.

Implementation of the specified requirements in the activity of Ukrainian banks will contribute to the financial stabilization of both a specific bank and the banking system as a whole, which will have a positive effect on the national economy.

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ORGANIZATION OF ACCOUNTING OF COMMERCIAL ACTIVITY ON THE INTERNET: PROBLEMATIC ASPECTS

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The modern conditions in which the economy of Ukraine functions, the development of information technologies and the comprehensiveness of the Internet contribute to the active development of commercial activities on the Internet.

The relevance of the chosen topic requires the study of the organization and accounting methods of operations in the field of Internet trade, in particular, the study of the accounting of settlements with buyers and distribution of costs.

The purpose of our work is to study the peculiarities of conducting operations in the field of commercial trade over the Internet, as well as the peculiarities of accounting and taxation of trade on the Internet.

The analysis of scientific literature sources indicates that the foreign and domestic scholars addressed their studies on the various aspects of international trade, internet trade, model and Internationalization of Fintechs and strategic development of internet trade (Akpoviroro, 2022; Naser, 2021; Skrynnyk, 2021; Kibaroğlu, 2020; He, Shuquan 2019 et al.).

Revealing different aspects of international trade, including internet trade, scientists focused on particular issues. Thus, Mujtaba, Pellet and Sungkhawan. (2019) analyzed and structured arguments and counterarguments within the academic discussion on the issue of international trade and various barriers that hinders it.

Davies et al. (2021) studied SMEs' role (Small and Medium Enterprises) in the trade policy with an emphasis on technological transformation and economic recovery.

In turn, Kyrychenko et al. (2021), Antonyuk et al. (2021), Tiutiunyk et al. (2021) studied the impact on Business Sector Activity in the EU Countries.

Shkarlet et al. (2019), Degtjarjova et al. (2018), and Hammou et al. (2020) assessed and analyzed the innovation, education, research components of the evaluation of information economy development.

Skrynnyk (2020, 2021) assessed the corporate investment behaviour in digital technologies for organizational development, analyzed the dominant research perspectives on the acceptance of digital changes in organizations.

Such scientists as F. Butyntsia, O. Zolotukhina, I. Balabanov, D. Chaffey, A. Maievska were engaged in researching the problems of accounting and taxation in commercial trade via the Internet.

In turn, Sak et al. (2020) assessed and analyzed the main problems, disadvantages and advantages of e-commerce and further trends in retail development through the use of Internet resources.

According to a 2020 study by the CBR company, one third of Ukrainians regularly made purchases on the Internet. Online shopping offers a number of advantages to the consumer: convenience, accessibility and time saving. For the seller, due to the fact that the main place of activity takes place in a virtual environment, it causes a number of collective questions regarding the organization of accounting for payments with buyers for goods that were purchased or ordered in online stores.

The main issues that create problems when organizing accounting are:

1) Features of cost accounting when establishing and registering an online store;
2) Peculiarities of settlements with clients when buying and selling goods;
3) Necessity of applying PRO when selling goods via the Internet.

We will consider each aspect of the feature in more detail below. Thus, when implementing a new store, the main costs that arise are related to the creation of a website, filling and presentation of goods, patenting of copyrights, acquisition of the site's own domain, so we believe that it is appropriate to attribute it to intangible assets, which in future periods will be amortized according to IAS 38 "Intangible assets" ((IAS 38). It is also important to recognize that the copyright of the site belongs to the company.

The next feature is conducting settlements with buyers via the Internet by payment method and delivery method. According to para. 2 clauses 1 of Art. 13 of Law No. 675, payments in the field of electronic commerce can be made in the following way:

- by transferring funds in non-cash form (bank transfer);
- using Visa, MasterCard, LiqPay payment cards;
- cash payments in compliance with the legislation on cash settlements;
- in other ways permitted by the legislation of Ukraine.

The most common payment method used by consumers on the Internet is payment by Visa, MasterCard, LiqPay and other payment cards. This form of payment entails the obligation to issue a check to the PRO (or settlement document of the established form).

In accordance with the Law of Ukraine (Law of Ukraine No 265/95-VR (1995, June 06)" we can draw the following conclusions:

- settlement operations on the Internet using electronic non-cash means of payment, but only on the condition of drawing up and delivering the corresponding settlement document to the buyer;
- all calculations must be carried out using the register of settlement operations (PRO), even non-cash transactions via the Internet.

But at the same time, according to according to Art. 296 of the Tax Code of Ukraine may not be applied by natural persons - taxpayers of the first group of single tax, individual entrepreneurs on the single tax, who carry out retail trade in the territory of the village (except excise goods). However, not to infinity, but until reaching the volume of income in one point of sale of 167 minimum salaries, established on January 1.

Therefore, the modern direction of the sale of goods creates both new opportunities and problematic issues regarding accounting and taxation. In the course of the research, it was found that accounting of settlements with buyers should be kept according to the types and methods of settlement. Costs associated with the development of an online store should be reflected in the accounting as capital costs, that is, the online store should be recognized as an intangible asset of enterprises. The rapid pace of development of Internet trade encourages constant monitoring of the legal framework and regulatory acts to achieve profitability and competitiveness of the enterprise.

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MANAGING DIGITAL DEVELOPMENT OF ENTREPRENEURSHIP IN TOURISM IN UKRAINE

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The article evaluates and defines the features and main problems of developing small and medium-sized businesses in the tourism industry of Ukraine.

The goal is to analyze the researched aspects: specificity of activity; identify development trends, determining factors affecting the formation of trends and clusters; determine the priority areas of development; consider the impact of European integration on the development of Ukraine; to assess the level of innovative potential of small enterprises of Ukraine from the point of view of types of economic activity - a small business in comparison with large, medium and small businesses of the tourism industry of Ukraine.

The methodology is based on an integrated approach to obtain a comprehensive overview of the investigator topic and ensure digital development performed by several types of swallows the first literature review about digital organization management or development system was concluded. The literature was analyzed and provided based on the Scopus data based which allows a better understanding of the trends in the digital development in the tourism industry in Ukraine. The literature research performed on customer relationship management illustrates how business evaluates customer review. Research highlights their strategies and how social media is used to understand customer satisfaction. This methodology is based on an accelerated program of digitalization of small businesses in technology and cooperation into clusters that will help to receive capital in combination with additional investment and innovation, which can lead to a rather sharp increase in business productivity. This approach will provide different opportunities for different channels of customer engagement and customer base development.

Therefore, promoting the development of digitalization infrastructure will significantly increase the attractiveness and investment of the tourism industry in Ukraine.

While efficient small and medium-sized businesses (SMEs) selected by more giant corporations were able to expand their business, inefficient SMEs lost customers. The regression results in this study suggest that a reduction in the number of enterprises - in particular, the exit of inefficient SMEs - can improve the overall rate of productivity growth. Traditionally, the business model depends on specific business conditions, subject to the introduction of formatting into clusters by choosing a certain cluster strategy, which can be used to solve a wide range of problems, in particular, the stimulation of innovative activities; in the development of regional development; as a basis for the interaction of all forms of

entrepreneurship in order to adapt to the new business environment. This is dictated by the possibility of SMEs reformatting their business, under the conditions of a more flexible division of labor. SME policy should encourage diversification and collaboration that cuts across traditional industry groups and creates a flexible division of labor.

The article considers the successive measures that the management system will be implemented in practice in stages. Prospects for innovation implementation are identified. The article also simulates intellectual potential. The main idea of this system is its successive logical stages of reorganization of the existing system and filling it with the necessary components, which will be thoroughly based on our research.

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ECONOMIC SECURITY: PROBLEMS AND WAYS OF SECURITY

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Economic security is a set of conditions and factors that ensure the independence of the national economy, its stability and sustainability, the ability for constant recovery and self-improvement. If we consider the international aspects of ensuring economic security of the state, they occupy an important place in the development of the country's economy in in general, as well as in the development of relations between industrialized and developing countries (Novikov, 2021; Balas et al. 2019; Kolosok et al., 2022).

Economic security is organically included in the state security system. As world experience shows, ensuring economic security is a guarantee of a country's independence, a condition for the stability and efficiency of society's vital activities, and the achievement of success (Obeid et al., 2020; Esmanov et al., 2017; Yarovenko et al., 2017). Therefore, ensuring economic security is one of the most important national priorities. In addition to numerous problems solved within the framework of civil society and the market economy, there are problems related to the exclusive prerogative of the state. Nobody else, except the state, simply cannot solve them. Ensuring the country's economic security is one of these problems. We agree with the opinion of Kwilinski et al., (2019), that economic security is one of the defining components of the national security system.

Today there are many approaches to the interpretation of the concept of economic security of the state using various characteristics. under national economic security such a state of the national

For example, an economy that maintains stability and capacity to adverse conditions of internal and external development processes. Ianchuk (2021) considers the key function of the state is to ensure the stability of society, its self-preservation and development, to repel possible threats to the country's security.

Ensuring economic security is essentially a long-term and strategic task. to the economic security of the state attribute those constituent elements that characterize only economic processes and phenomena related to them, these are: investment and innovation, financial, foreign economic, food and energy security.

The development of a program of priority measures to ensure the economic security of the country and practical steps in this direction should be based on a clear awareness of modern threats (Lyeonov et al., 2019; Harust et al., 2019; Matsenko et al., 2021).

1. Destruction of scientific and technical potential. A serious and very real threat to the country's economic security is the curtailment of fundamental research, the collapse of world-class research teams and design bureaus, and a sharp reduction in orders for fully competitive products. An equally serious danger is the departure of highly qualified specialists and workers from the sphere of their professional activity to sectors of the economy that turned out to be more prestigious and highly paid.

2. Growth of unemployment and weakening of labor motivation. The growth of unemployment, which is negative in itself, is especially alarming when unemployment becomes massive and stagnant. Unemployment increases the burden on the employed. First of all, everyone has to pay for mass unemployment with a decrease in the standard of living, because there is no need to count on an increase in labor productivity. Finally, unemployment eventually inevitably leads to a loss of qualifications and labor skills, which again causes serious damage to the economy.

3. Significant increase in foreign debt. In the conditions of the growing economic crisis and artificial restraint of business and investment activity, external borrowing is used more and more. It can also become a powerful lever for boosting the economy, its technical rearmament, and increasing the competitiveness of manufactured products. The whole issue is the targeted use of loans and the scale of the state debt.

4. Criminalization of the economy. In recent years, the criminogenic situation in the economic sphere has sharply worsened, which is already a real danger today. Criminalization covered almost all areas of economic life - property relations, financial and banking activities, production, trade and services, foreign economic relations.

We emphasize the basic role of the economy, because the production, distribution and consumption of material goods are primary for each of them, they determine the vitality and viability of society.

Economic security is ensured both by purely economic methods and by means of a non-economic nature: political; military and other, including protection of secrets. In turn, it should be emphasized that security in adjacent non-economic spheres is ensured not only by methods specific to them, but to a large extent by economic means, including always with the involvement of monetary and other resources of an economic nature.

Although the problems of economic security should be considered mainly within the framework of economic processes, deep catastrophic consequences are also found in the non-economic sphere. The biggest danger is political upheaval in society due to the dissatisfaction of the masses with their economic situation, as well as direct large-scale destruction of production potential, social infrastructure and the natural environment caused by economic reasons.

Studying certain aspects of national security, it is impossible not to take into account its economic aspects. Today, the country's economic security has become

one of the problems attracting the close attention of specialists of all profiles working in the fields of economics, politics, and international relations. Its most significant manifestations are connected with the growing waves of economic crime, which has become the subject of complex interdisciplinary scientific analysis.

Let's highlight the main problems of economic provision

security issues that need to be addressed as a priority:

- the presence and aggravation of the economic crisis in Ukraine in the context of armed aggression by the Russian Federation;
- growth of corruption;
- deterioration of the population's well-being and increase in the level unemployment;
- increasing shadowing of economic activity;
- sharp drop in real GDP;
- loss of investment attractiveness of our country.

Thus, the concept of the economic security of the country should be based on the accounting of all the variety of factors, including its main element - the growth of the efficiency of the economy. Based on this, it can be said that economic security is a set of internal and external conditions that contribute to the effective dynamic growth of the national economy, its ability to meet the needs of society, the state, and the individual, to ensure competitiveness in foreign markets, which guarantees protection against various threats and losses.

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PROBLEMS AND PROSPECTS OF CONDUCTING M&A AGREEMENTS WITH THE PARTICIPATION OF UKRAINIAN ENTERPRISES

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Activity on the M&A market of Ukraine is one of the indicators of the country's development. This indicator allows you to evaluate everything: the success of structural reforms, the quality of work of regulators, the adequacy of the legislative framework, the importance of political stability, the level of education, and the presence of a business culture.

Based on the activity of investors, the speed of reaction of investment funds to emerging opportunities, and the flexibility of Ukrainian sellers, an experienced lawyer can immediately determine whether the direction of development is correct. Calculating points according to the Doing Business system is a useful tool in theory, but not entirely useful if evaluated from the point of view of its algorithm, because it does not take into account a number of practical nuances. But M&A statistics are concrete data. Even if these statistics are based only on some data, the same approach in dynamics immediately shows the real picture.

With regard to M&A operations in Ukraine, the research of the law firm Aequo together with the information and analytical resource in the field of mergers and acquisitions Merger market determined the so-called "bottom" of the conclusion of agreements - 2014-2015. In 2014, their number decreased sharply, although the opposite trend was observed around the world.

It is obvious that Ukraine needs time and systematic efforts to stop the downward movement and reach at least the average pre-crisis level. A quick return of business activity to the country is problematic, because Ukraine is at war, and the national currency is devaluing. Despite the complexity of such a task, its implementation is still possible. This is evidenced by the statistics of the last eight years, given below:

1. In 2018, in terms of the number of transactions, Ukraine managed to catch up with the volumes of 2013, but the transaction amounts differed by an average of three times. They started buying and selling again, but many times cheaper. However, neither the war nor other destabilizing factors froze the activity. If there is a quality asset, there will be a buyer.

2. First funds, then strategies. The appetites of investment funds are commensurate with the risks available in Ukraine. In 2015, the George Soros Fund for the Development of Ukraine conducted merger negotiations with the Danish IT outsourcing company Ciklum, which has the largest development office in Ukraine, and became its co-owner. The fund bought the entire stake of Horizon Capital and

part of the stake of Ciklum founder Torben Maigard. In the following years, Dragon Capital and Horizon Capital, using funds raised outside of Ukraine, continued to invest in the middle segment of the market - in export-oriented or simply high-profit industries: IT, processing, logistics, commercial real estate. During this period, Horizon Capital made significant investments in the international product IT company Genesis, the global IT outsourcing company Intellias and the leader of e-commerce in Ukraine - Rozetka. In 2019, Dragon Capital acquired a stake in Ciklum in partnership with Soros. Thus, the number of transactions increases, and the price is also attractive to the buyer. Bolder funds are traditionally followed by more cautious strategists.

3. Foreign buyers are back, but local players are more active. There are examples of good strategic investments. In 2019, POSCO Daewoo, an international corporation with South Korean roots, made its first investment in Ukraine: it bought 75% of the grain terminal in the Mykolaiv seaport from the Orexim group. It was solemnly signed in the presence of the first person of the country, because this example should be followed by others. The successful completion of the story with the Mriya agricultural holding in 2018 sent the right message. The buyer was Saudi Agricultural and Livestock Investment Co. (SALIC). The investment amount is about 300 million dollars.

However, there are few such examples. Foreign buyers are wary, especially if there are cultural differences. Their speed is completely different from local players. In a volatile market and country, only local players can keep pace by quickly analyzing risks and trends. Transparency and stability are important for foreign investors.

4. Traditional industries for Ukraine are still ahead. Agriculture and the food industry, natural resources and IT are traditionally Ukrainian strengths. It is difficult to clearly distinguish the leaders of the industry in eight years - it changes from year to year, depending on the number of transactions or their amount. The most stable is agriculture, which almost every year leads both in terms of the number and volume of M&A transactions.

5. Ukrainians rarely buy outside of Ukraine. The Ukrainian buyer is rare on the world market. In February 2019, Myronivsky Hliboprodukt agricultural holding concluded an agreement to purchase the Slovenian Perutnina Ptuj, a vertically integrated poultry meat production company in Southeast Europe.

Summing up, it is worth noting that Ukraine is taking the right steps to restore business relations within the country, including M&A transactions. However, this is still not enough. Whether this guarantees positive dynamics in the future depends only on Ukraine. So far, it is clear that Ukraine is a buyer's market now, and will remain so in the near future.

THE DEVELOPMENT OF DIGITAL BUSINESS COMMUNICATIONS AND INNOVATION TRANSFER AS A CHALLENGE OF THE COVID-19 PANDEMIC

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The development of ICT and innovation transfer has significantly changed people's lives over last decade and provided great opportunities both for business, public management, education and especially consumers. E-commerce, which should be understood as mobile commerce, is becoming increasingly relevant to consumers worldwide, and it should be used to facilitate economic development and growth based on new digital technologies and connected devices that contribute to the consumers' well-being. The COVID-19 pandemic has undoubtedly affected business communications and e-commerce, giving it a significant advantage over offline commerce. Today these impacts can contribute to the strengthening of international coopetition and purchases-deliveries on the Internet. E-commerce is an engine for economic growth, the level of international trade increasing the economy's competitiveness, it is an important tool and support for small business, and it is a good solution for consumers.

This problem is widespread in scholars' circles [1, 2, 3], but it is still actual and significant, especially for small and medium business. Digital adaptation of business both in Ukraine and abroad has particular importance. The COVID-19 pandemic has significantly accelerated the mechanisms of introducing innovation technologies and foreign e-commerce standards into Ukrainian economic activity, slowed down by variable economic factors. At the same time, the study of European positive practice on this issue will allow to consider the possibilities of adaptation of domestic business and will accelerate the entry Ukraine into the list of electronic commerce markets. However, markets are still dynamic and can undergo rapid transformations over a small period.

Small business with low level of cash flow or its instability struggle to be profitable in times of crisis. They need a sufficient financial base and strong strategy, especially with marketing and entrepreneurial targeting, finding opportunities and organizing resources. Retailers that have not adapted their operations to new challenges are facing a crisis now. However, such merchants can minimize such business impacts due to some key emergency situations: 1) to re-access and optimize existing business models, ICT, and coopetition channels; 2) to prioritize the most important business directions and make contingency plans; 3) to understand financial opportunities; 4) to improve the quality and service in the relationships with customers and facilitate secure interactions with them (online support chats, etc.).

In Ukraine the acceleration of adaptation processes leads to some significant mistakes. Among the most critical violations, attention should be paid to the following: 1) the choice of a trademark name leads to violations of the rights of third parties to the trademark; 2) use of intellectual property objects - images, videos, photographic works, literary works, etc. (on the website or in social media) without the permission of the right holder; 3) underestimation of information security on the Internet; 4) improper protection of the customer database; 5) low functionality and inconvenience of site navigation; 6) incorrect documentation of online sales; 7) failure to take into account the peculiarities of Internet acquiring; 8) imperfect offer posted on the website or its illegal copying and others.

Taking into account the above, some issues of the legal regulation of goods and services sale on the EU e-commerce market should be implemented by representatives of domestic business, based on a high level of consumer protection, target of joining Ukraine to one single innovation and digital market, the legal certainty increasing, and reducing business operation costs. The markets due to impacts of the COVID-19 pandemic will be irrevocably different. Businesses will need to reassess long-term vision of doing business, change goals to consider changes in stakeholders, customers, competitors, etc. A top aspect of such transformations is the exponential increase in digital communications and change. Moreover, on the positive side, the COVID-19 pandemic offers great opportunities for small and medium businesses to actively interact with their strategies, coopetition programs, corporate social responsibility, and sustainable development.

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NATIONAL CYBER SECURITY EFFICIENCY: DATA ENVELOPMENT ANALYSIS

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Cyber security is a crucial determinant of the digital age, which is extremely important for both individuals and companies, enterprises, banks, and large and small businesses (Novikov, 2021a). A high level of national cyber security and the effectiveness of cyber protection systems guarantee the stability of the state's economy. Therefore, a relevant and urgent issue today is a comprehensive assessment of the quality of national cyber security systems, which would guarantee the support of the state's financial activities (Yarovenko et. al., 2020a). The state and level of the modern digital world directly depends on unauthorized access to information, the implementation of fraudulent cybercriminal, cyberespionage schemes and the degree of protection of information systems (Novikov, 2021b). In terms of each state, the strengthening of information cyber protection systems, determination of the effectiveness of the national cyber security system, and deepening of international cooperation in this area is an extremely important issue (Oteh et. al., 2021). At the international level, the national cyber security index is defined by the e-Governance Academy as an integrated indicator covering the components of cyber security policy, cyber threat analytics, digital information protection, electronic authentication, data and user identification, response speed to cyber attacks, cyber crisis management programs, military cyber operations (Muradov, 2022). And the level of digital development of the state is defined by the Academy of Electronic Government as the arithmetic mean of the indices of the development of information and telecommunication technologies and network readiness (Khaliq et. al., 2021). At the same time, if the difference between the assessments of national cyber security and digital development is positive, then the country's cyber security development corresponds to or is ahead of its digital development. A negative result shows that the country's digital society is more developed than the national sphere of cyber security (Obeid et. al., 2020; Yelnikova et. al., 2020). Therefore, the question arises regarding the possibility of determining the most effective countries in terms of the organization of a high-quality cyber information protection system, the organization of a high level of cyber security, the identification of "reference" countries and the identification of potential opportunities for each country to strengthen the cyber security policy, especially in the field of financial and monetary transactions (Tenytska, et. al., 2020). Measuring

the effectiveness of financial monitoring procedures and strengthening measures for productive cyber security of socio-economic business units in the conditions of exponentially growing transformation of the digital environment requires the use of powerful analytical tools (Esmanov et. al., 2017). At the moment of the development of the electronic circulation of documents, it is necessary to have the security of all possible types of data and to highlight the category of security of medical data, because the distribution and creation of forgeries about individual people can cause significant indignation and a change in the social situation (Letunovska et. al., 2020). The risk of data leakage exists and will always exist regardless of the field of activity and regulatory norms (Levchenko et. al., 2019; Zhuravka et. al., 2021). The personal data of patients of the institution is an important category of cyber security in general and should be regulated and controlled by the rules of data handling.

To compare indices and performance indicators of the object under study, we suggest using the data envelopment analysis method (Data Envelopment Analysis, DAE), which is based on the methods of multi-criteria optimization modeling (Serpeninova, 2020; Yarovenko et. al., 2020b). DAE analysis allows you to determine the relative effectiveness of the research objects based on the values of the necessary factors and indicators in comparison with the reference indicators that represent the best practices, as well as to determine the rating and the marginal optimal value for the potential improvement of each research object. So, for example, the relative efficiency of an enterprise (bank, firm, financial institution) is defined as a share of the weighted sum of all output parameters by the weighted sum of all input parameters (Levchenko et. al., 2018):

$$Ef = \frac{\sum_{r=1}^{s} u_r y_{jr}}{\sum_{i=1}^{n} v_i x_{ji}} \quad (1)$$

where Ef – efficiency of the object under study, y_j – output parameters, s – number of output parameters, x_j – input parameters, n – number of input parameters, u_r, v_i – the weighting coefficients of the output and input parameters, respectively, and $\sum_{r=1}^{s} u_r = 1, u \geq 0$; $\sum_{i=1}^{n} v_i = 1, v \geq 0$.

The basic models of DAE analysis are primal and duality input-oriented CCR-model (2) (model developed by Charnes, Cooper and Rhodes), primal and duality input-oriented BCC-model (3) (model developed by Banker, Charnes, Cooper), binary cumulative VarMulti-model (4) (Table 1):

Table 1.

Basic models of DAE analysis

Functional presentation of the model	№
$\sum_{j=1}^{s} u_j y_{j0} \to max$ при $\sum_{i=1}^{r} v_i x_i = 1$, $u_j, v_i \geq 0$	(2)
$\sum_{j=1}^{s} u_j y_{j0} + a_0 \to max$ при $\sum_{i=1}^{r} v_i x_i = 1, u_j, v_i \geq 0$	(3)
$\sum_{j=1}^{s} u_j \log(y_{j0}) - \sum_{i=1}^{r} v_i \log(x_{i0}) \to max$ при $\sum_{i=1}^{r} v_i x_i = 1$, $u_j, v_i \geq 0$	(4)

Source: developed by the authors

In formulas (2-4) x_i are input indicators, the total number of which is r; y_j – output indicators, the total number of which is s; v_i, u_j – weight coefficients of input and output indicators, respectively, a_0 – constant (constant value, without restrictions). The division of countries into 8 clusters is based on the application of the Sturges formula (2) and the agglomeration protocol of cluster analysis performed in the Statgraphics 19 software:

$$k = 1 + 3{,}322 \cdot \lg(N), \quad (2)$$

where k – the number of clusters, N – the volume of the total number of countries (equal to 97). According to the results of the calculation, $k = 8$, which determines the optimal number of countries to be divided into clusters.

Recognition of a country as effective (reference) is achieved on the condition that it achieves 100% of the value of the target parameter, countries with an average level of efficiency have 90 to 99.99 points. Otherwise, they are ineffective (Sotnyk et. al., 2020). Therefore, the application of multi-criteria linear programming using the methodology of data coverage, DEA analysis and Frontier Analyst software allowed to identify the most effective countries in terms of the organization of the national cyber defense system (Harust et. al., 2019; Skrynnyk, 2020). In order to take into account the peculiarities of the economies and the socio-political situation of the studied countries, a clustering procedure was carried out, as a result of which 7 clusters covering 12 countries and 1 cluster covering 11 countries were obtained. Reference countries in the first cluster are two countries – Estonia and Greece; in the second cluster – Saudi Arabia, Sweden, Croatia, and Ukraine; in the third – Bulgaria and Bangladesh; in the fourth – Philippines, Benin, Slovenia, Ireland, India, Zambia, Egypt, in the fifth – Turkey, Dominican Republic, Uganda, Argentina, in the sixth – Pakistan, Colombia, Uruguay, Brazil, in the seventh – Montenegro, Vietnam, Nicaragua, Ecuador, Bolivia, Trinidad and Tobago, in the eighth – Malawi, Bahrain, Cambodia, Lao PDR, Mali, Botswana, Guatemala. The criteria for defining a country as relatively effective were used as strict as possible: a country is considered effective when it achieves 100% of the effectiveness of the national cyber security system, provided it covers the level of digital development, ease of doing business, and the Basel index of combating money laundering and terrorist financing. The obtained results can be used by the National Security Councils of countries that have a low level of national cyber security, cyber police departments in order to study the best practices of reference countries and strengthen their own cyber defense strategy and the global importance of digital development.

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IMPACT OF COVID-19 ON FINANCIAL STATEMENTS

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The pandemic caused by COVID-19 has affected all countries of the world. The full impact of COVID-19 on most companies can only be assessed after a gradual return to normal business conditions.

One of the indicators that is calculated on the basis of financial statements and used to assess the profitability of the company without depreciation is EBITDA. This is a non-GAAP financial indicator, i.e. an indicator calculated using alternative methods compared to the rules of calculation provided by the Generally Accepted Accounting Principles (GAAP). This indicator has gained popularity among foreign companies, but given the international cooperation of domestic companies, it is also of interest to Ukrainian companies that carry out accounting according to international standards. This indicator was also affected by the pandemic and transformed into EBITDAC (earnings before interest, taxes, depreciation, amortization, and coronavirus). Some companies have already used this indicator in the preparation of interim financial statements in 2020. For example, the German manufacturer of measuring equipment Schenck Process has included the term EBITDAC in the glossary of its quarterly reports. The company estimated the negative effect of the crown virus on the results in the first quarter of 2020 at 5.4 billion euros [2].

There is no unequivocal opinion of experts on this indicator. Obviously, there is no mention of EBITDAC in the regulatory documents on the impact of COVID-19 on financial reporting. However, there are requirements for the reliability and informativeness of non-GAAP financial indicators, as they can potentially mislead and lead to incorrect management decisions of users of financial statements of enterprises [2]. The use of non-GAAP financial indicators should not be the only goal to make a better impression on users.

The analysis shows that EBITDAC has been widely criticized by economic and financial analysts for questioning its objectivity. After all, this indicator can hide the effects of various factors, not just the COVID-19 pandemic.

The problem is obvious - the pandemic has significantly affected the performance of enterprises and this impact should be taken into account when forming indicators of their financial statements, ie to adjust the relevant indicators [8,9,11,12]. And what type of adjustments should be depends on the professional level of the analyst. Subjective adjustments have recently taken place, such as those for lost profits. These elements are quite difficult to isolate and quantify, and

therefore substantiate. Businesses have been forced to suspend and need to work remotely, and this could have led to a loss of income, but it is not easy to quantify all this and distinguish the coronavirus factor from other factors.

There are certain costs and revenues that are directly related to COVID-19. KPMG's auditors suggest that the following criteria be met: “In determining the impact of COVID-19, we believe that the company should consider COVID-19-related only those revenues and expenses that are additional and directly related to COVID-19. These are revenues and expenditures that would not have been earned or incurred if the COVID-19 pandemic had not occurred and are not expected to recur once its effects have significantly diminished” [13].

As for the costs directly related to the COVID19 pandemic, in order to take them into account when determining the results of an enterprise, it should be borne in mind that the increase in their size is caused by the pandemic and the business operations that caused them are different from normal operations. Such costs include additional costs for cleaning and disinfection, personal protective equipment; costs associated with canceling a pandemic; allowances for employees to work in conditions related to health risks, etc. These costs must be unusual, unique, ie the operation that causes them must have a high degree of deviation from the norm and be clearly unrelated to the normal activities of the enterprise or only accidentally associated with it. Only then can they be used to adjust non-GAAP financial performance.

Thus, the US Securities and Exchange Commission (SEC) prohibits the classification of non-recurring, infrequent, or unusual expenses and income when they are likely to recur within two years or have existed for the previous two years. And the European Securities and Markets Authority (ESMA) does not set certain criteria, but only points out that "elements that have affected past periods and will affect future periods" should not normally be labeled as unique, infrequent, or unusual.

However, most analysts consider it unacceptable to adjust GAAP to the amount of income not received during the pandemic, as noted in the income statement. Of course, there will be some subjective judgment on the part of the analyst in determining the costs and revenues caused by a pandemic, so users of financial statements will need to be very critical of the information they provide. An explanation of the criteria used to identify such costs and revenues may be helpful here if they are included in the financial statements.

In addition to using non-GAAP financial indicators to reflect the impact of the COVID-19 pandemic on the company's operations, descriptive data can be used to explain the situation, including quantitative estimates and qualitative explanations in the descriptive part of the reports. If the costs or proceeds of a pandemic are significant, they may be disclosed in additional financial statements that do not conflict with the requirements of IAS 1 Presentation of Financial Statements [14].

However, it should be noted that the effects of the pandemic have also affected domestic companies that prepare and submit financial statements in accordance with national accounting standards. They should also be able to explain certain indicators of their activities that have been affected by the pandemic. According to "General requirements for financial reporting", the purpose of financial reporting is to provide users with decision-making complete, truthful, and unbiased information about the financial condition and results of the enterprise [5]. In addition, in accordance with the principle of accounting and financial reporting "full coverage" in the Law of Ukraine "On Accounting and Financial Reporting in Ukraine", financial statements should contain all information about the actual and potential consequences of business transactions and events that may affect decisions made on its basis [6].

Therefore, there are all legal grounds to justify the costs and revenues generated by the COVID-19 pandemic. How to assess the impact of the pandemic on the results of the enterprise, of course, will determine analysts, and management. However, we believe that it will be quite informative to provide quantitative and qualitative indicators in the descriptive part of form № 5 "Notes to the annual financial statements" or in the explanatory note to the annual financial statements.

The COVID-19 pandemic has significantly affected the activities of businesses around the world. As a result of work in the difficult 2020, companies prepare financial statements, according to which interested users make their assessments and make appropriate decisions. Therefore, companies have every reason to provide information on costs and revenues caused by the pandemic, using both non-GAAP financial indicators and quantitative estimates and qualitative explanations in descriptive forms that do not contradict international accounting standards. National accounting standards also give businesses the right to provide the necessary information about the actual and potential consequences of their activities. The main thing is that the information provided is not too subjective and contains only the necessary data. In any case, users of financial statements should critically analyze their performance.

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PECULIARITIES OF THE ACTIVITY OF INSURANCE COMPANIES IN CONDITIONS OF INSTABILITY OF THE MARKET ENVIRONMENT

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The insurance market is an important element of the economy of any country. A necessary condition for the existence of the insurance market is the presence of a general need for insurance services and the presence of insurers capable of meeting these needs. In addition, insurance as one of the effective market risk management mechanisms creates conditions for the accumulation of long-term investment resources and their redistribution among various sectors of the economy. Effective activity of insurance companies allows to ensure stable socio-economic development of the country, to protect the activity of business entities from existing and potential threats, as well as to increase the welfare of the population.

For the purpose of stable functioning of the insurance market, taking into account its importance in the socio-economic development of the country, various normative and legal requirements for the activities of its participants have been established. In the context of strengthening integration and globalization processes, clear borders between countries are actually blurring in the process of circulation of financial resources. The connection between the domestic insurance market and the global one is explained by the participation of companies with foreign capital in insurance and reinsurance of risks, the involvement of the services of international rating agencies, and cooperation with international organizations in the field of insurance (Oliinyk, 2015).

Currently, the list of functions performed by an insurance company in the market is so wide and diverse that in the end they can rightly be called universal participants of the financial market. In addition to the implementation of the main function of insurance - the protection of property interests of legal entities and individuals from a certain range of insurance risks, insurance companies can act in the market as: institutional investors, financial intermediaries, issuers, risk managers and institutions of social protection and security.

In addition, in the conditions of intensive development of the world economy and strengthening of convergent processes in the financial market, insurance companies play the role of intermediaries, distributing banking or investment products among policyholders, that is, actually engaging in cross-selling. Nowadays, in the conditions of intensifying competition on the market, insurers go beyond the scope of carrying out only the main activity, providing a wide range of additional services: informational, consulting, investment, etc. Thus, insurance companies are

turning into powerful participants in the financial market, offering clients complex financial products.

The global trend is the strengthening of interdependence and interpenetration of the insurance and banking sectors. Such a form of convergence as mutual investment in capital, i.e. when banks are the founders of insurance companies, and the latter are shareholders of banking institutions, has become very widespread. A situation where an insurance company and a banking institution are part of a single holding is also possible.

In addition, it is worth noting that the presence of multivariate interrelationships between the insurance, banking, and investment sectors and the financial crisis, which has covered all links of the financial market, make it necessary to address the issue of their state regulation. The combination of insurance and banking supervision from the point of view of their activity on the investment market is of particular importance. The similarity in products, tools and methods of risk management allows applying similar approaches to the field of regulation. The practice of creating a single body of state supervision over financial markets - a "mega-regulator" to ensure macroeconomic stability - has become widespread in the world. Institutional independence from political influence, efficiency, integrity and transparency of activity are the important features that determine the need to create a consolidated financial body.

Thus, insurance is a unique mechanism for guaranteeing and stabilizing the financial system, which contributes to the development of the national economy, ensuring sustainable socio-economic development of society. It is worth noting that today insurance companies operate in conditions of an unstable external environment and pressure from competitors and regulatory bodies, which makes it difficult to make timely and balanced management decisions. Factors influencing the activity of insurance companies and their financial condition are of both external and internal origin.

In the conditions of instability and uncertainty of the external environment, insurance companies, as guarantors of the financial reliability of policyholders, must quickly and effectively respond to the objective challenges of modern times in order to maintain the necessary level of financial stability.

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UKRAINE'S DEBT SUSTAINABILITY DURING THE WAR

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The war in Ukraine has dealt a significant blow to the country's economy and has led to massive human losses and a humanitarian crisis, financial instability, acceleration of inflation, reduction of investment in sustainable development, rising prices for food, fuel, etc.

For Ukraine, the war is a disaster for its sustainable development.

Since the first weeks of the Russian invasion, it became apparent that the recovery of Ukraine would require enormous resources and the development of a «Marshall Plan – 2». Implementation of the recovery plan requires significant amounts of financial resources. The Ukrainian government and an international expert team estimated the realization of the Marshall Plan for Ukraine at 765 billion dollars until 2032, of which 65 billion US dollars should be attracted already this year.

All this financial support, however, implies significant obligations because the loans will have to be returned with interest. Doing so will obviously not be easy, as the level of the debt burden has been a cause for concern since before the war. Ukraine's total public debt (figure 1) has increased by UAH 867.5 billion in seven months since the beginning of the year (and as of the beginning of August, it was 3 539.29 UAH billion) (Ministry, 2022). Note that such an increase in public debt is also due to the devaluation of the hryvnia; in particular, USD 1 now costs 37 hryvnias, compared to 26.50 – a year ago.

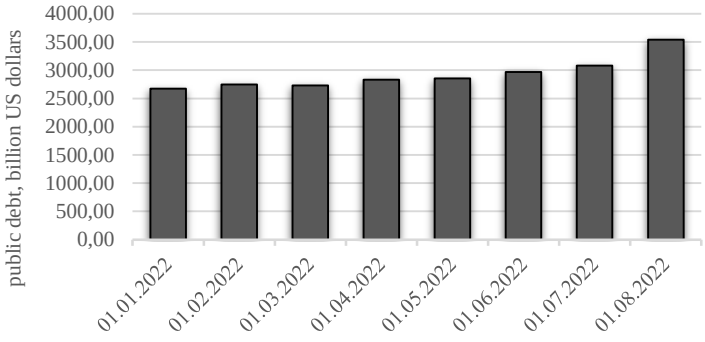

Figure 1. Public debt of Ukraine in 2022, billion US dollars

The external debt of Ukraine (as of August 1, 2022) amounted to 60.53 billion US dollars, and it has expected that the country will pay off 14 billion US dollars between 2022 and 2023. Debts that Ukraine has accumulated since the February 24,

2022 invasion include both multilateral and bilateral loans to Ukraine, as well as «war bonds» that the Ukrainian government is issuing to help pay for war-related costs.

The increase in the budget deficit and the growth of public debt in Ukraine inevitably increase the vulnerability of public finances to the impact of shock factors.

The tendency toward the growth of the national debt of Ukraine has been traced over the last several years; it is determined by the significant currency risks of foreign debt, the unstable situation with the refinancing of the obligations of previous years, as well as the pressure of debt payments on the public finances. Even before the Russian invasion, there were fears about Ukraine's debt sustainability even in the IMF office.

It should be noted that one of the world's largest credit rating agencies, «Moody's Investors Service», lowered Ukraine's credit rating to the third lowest level at the end of May 2022, noting the instability of the debt. Lenders are generally reluctant to lend money if there is a risk that they won't get it back. Still, the political situation and statements of support from Western powers mean Ukraine is more likely to get the money to prevent another default.

Currently, Ukraine is discussing the possibility of restructuring the foreign public debt at the negotiations of the International Monetary Fund and several other international financial organizations since the budget in wartime has extremely limited sources of financing, part of which is diverted to pay interest on the debt. And also, in August, a request for a two-year freeze on international bond payments worth nearly 20 billion US was approved.

The war is pushing Ukraine to default on debts, which is why ensuring the stability of the financial system and keeping the debt burden within safe limits are the primary tasks of the country's debt policy. Given the existing zones of vulnerability to the influence of crisis factors generated by debt processes, the state must consider the complex interrelationships between debt policy, the degree of financial stability, and the socio-economic and investment-innovative development of the country.

In general, for the recovery of Ukraine from the devastating war, the priority areas should be:

– solving the problems of inflation and macro-financial stability;

– restoring the business's ability to function normally. After all, with small inflows of money, it will be difficult for Ukraine to fulfill its obligations, which is why business in the country must work. To save the business industry during the war is a tough and extremely necessary task.

It is also possible to define the following components of an effective system of ensuring Ukraine's debt sustainability: an outline of the main goals of the state's debt policy with an indication of the critical parameters of the debt situation in the country; a systematic analysis of debt sustainability indicators with identification of

potentially dangerous destabilizing factors; determination of exogenous and endogenous factors of the socio-economic sphere that affect the change in the debt situation; forecasting possible threats to the country's debt sustainability, their causes, and consequences; development of standardized algorithms for settling the debt situation; assessment of the effectiveness of measures taken to ensure debt sustainability.

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MANAGEMENT OF THE TRANSPORT SYSTEM IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT OF THE CITY

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The dynamic development of the socio-economic systems of cities cannot be imagined without an effective urban passenger transport system. The transport component is no less critical in the city's sustainable development system and social, economic and ecological dimensions. The social significance of the proper functioning of city passenger transport deserves special attention under conditions of rising fuel prices. The transport system is an essential infrastructural component in the structure of the economy of Ukraine, which creates and realizes the requirements for the functioning of production and life activities of the population. Effective management of the city's transport system makes it possible to optimize emissions of harmful substances into the air and ensure the city's environmental sustainability.

Today, the city's sustainable development is the main component in the management planning and organization of the fundamental processes of the city. Many scientists studying the issue of sustainable development of municipalities identify the critical directions of effective management (Bouyacoub, B., 2022; Constantoglou, M, 2020; Dkhili, H., 2018; Gadi, I., 2022; Kasemi, S., Kotenko, S. et al., 2021; Mishenin, Ye. et al., 2020; Sambo, H. et al., 2022; Shipko, A, et al., 2020; Yiu, L, 2020 Ziabina, Ye. et al., 2021). Among them, the management of the transport system takes a prominent place.

Based on the concept of sustainable development, we protect ourselves and our future and develop in an ecologically correct and economically stable way. There is a problem with the improper organization of urban transport, namely the use of non-environmentally friendly vehicles, crowding people in urban space, emissions, atmospheric pollution, etc. All this leads to social, economic and environmental problems. Smart, analyzed and justified management of the transport system, which is based on sustainable development, will provide high-quality public transport services and help to solve the main and severe problems (Too, L., Earl, G., 2010).

Also, the effective management of the transport system will increase the tourist attractiveness of the city, the importance of which has been studied by several scientists (Das, K., Naskar, K., 2018; Tovmasyan, G., Gevorgyan, M., 2022).

The city's sustainable transport infrastructure, in turn, is part of the city's overall sustainable infrastructure system. Among the main advantages of sustainable infrastructure in the context of achieving the Sustainable Development Goals, it is

worth mentioning obtaining economic benefits, protecting the natural environment, supporting social development and the overall level of sustainability (Нєшева et al., 2020).

With the help of proper management of the transport sector, the following Sustainable Development Goals can be achieved: promoting healthy lifestyles and well-being, empowering women and girls, building resilient infrastructure, ending poverty, taking action to combat climate change and its impacts, ending hunger, making cities sustainable, promoting healthy lifestyles and well-being, ensuring sustainable and modern energy, making cities sustainable (United Nations, 2015).

But how can these SDGs be achieved, and what needs to be done for this? Let's take the problem of overcoming poverty, which exists, unfortunately, in many countries. This problem is severe and urgent. Effective planning of the organization of the transport system can help solve this issue by creating new jobs. Solving the second problem, namely taking action to combat climate change and its impacts, can be carried out by measuring the level of pollution from transport, using more environmentally friendly vehicles, and using bicycles. Therefore, it can be said that based on stable development, the new planning of the transport system management organization will solve several significant problems and issues.

The problem of forming a sustainable transport infrastructure is directly related to the concept of social responsibility of business, which several scientists studied (Boronos, V. et al., 2020; Chygryn, O., Krasniak, V., 2015; Formankova, S. et al., 2018; Kasych, A., Taliouris, E., 2017; Masharsky, A. et al., 2018; Vochozka, M., 2017).

Creating and improving the city's sustainable transport infrastructure is advisable using a project approach. Considering such projects' social and environmental significance, it is worth involving stakeholders, including the city population and local businesses. The mechanism of intersectoral partnership for the implementation of ecologically oriented projects can involve three main stages. In the first stage, the community forms a social order to solve a specific problem, for example, transport connections to a small city neighbourhood. The second stage involves determining the ways to solve the problem, the role of each subject in this process and the coordination of their interests. The final step of the process involves implementing a specific project within the framework of solving the set tasks. The control and educational function should be performed directly by the public during implementation (Бондар, Смоленніков, 2016).

So, we noticed the importance of sustainable development in the formation of the management of the transport system and considered the Sustainable Development Goals that will be achieved when planning the management of the transport system, based on the concept of sustainable development, and provided arguments for the importance of the idea of sustainable development in the organization of the work of the transport system. Particular indicators may be

developed that will help measure the true sustainability of the transport system and its pollution of the environment. Large-scale research is needed, which has recently been done in science and is moving in the right direction (Colvile, R. et al., 2004).

Thus, effective management of the city's transport system based on sustainable development is one of the critical foundations of sustainable development of the city in general. This is highly important in the context of achieving the Sustainable Development Goals.

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MATRIX OF COMMUNICATION INTERACTION AND BEHAVIORAL PATTERNS OF STAKEHOLDERS IN THE INNOVATION COMMERCIALIZATION CHAIN

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The modern concept of economic activity in conditions of intensive globalization processes and total informatization of society is due to the intellectualization of the main factors of production (land, labor, capital, information, and entrepreneurial abilities). Under such conditions, changes in the ratio of material and intellectual assets in favor of the latter are becoming increasingly widespread. It plays a crucial role in creating innovations and ensuring their success in the market (Yevtushevska, 2019). According to a McKinsey investigation, 84% of executives say that innovation is significant to a company's growth strategy (Innovolo, 2022).

According to (Perminova, 2020), the commercialization of innovations is a process related to the practical use of scientific research and development results to bring new or improved products, services, or processes to the market with a commercial effect. It begins after the completion of scientific research, the introduction of a product or service to the market, and the approval by consumers of innovative products. Completion of commercialization occurs when the product is successfully marketed and the break-even point is reached, i.e., sales revenue exceeds operating costs. The commercialization of innovative technologies should be considered a new type of activity; the effectiveness of the process of innovative technologies commercialization determines the speed and scale of technological modernization (Komelina, 2014).

Organizational elements of the development of commercialization of innovations are intellectual product exchange, innovation brokers, organizations-accelerators of knowledge and technology transfer, united technological Internet platforms, online research platforms, patent funds, and crowdfunding (Poltoratska et al., 2021). They increase the effectiveness of the participants' interaction in the commercialization of innovations.

According to the definition of Komelina A. (2014), the mechanism of commercialization of innovative technologies at the regional level is a holistic, integrated model of the interaction of the state, regions, and economic entities regarding the creation, movement, and introduction into economic circulation of an

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intellectual product and innovative technologies, and also includes mental models, management models of scientific and technical and innovative and investment activities, business models and innovative technologies that ensure the technological modernization of the regional economy. The communication model of the relationship between stakeholders is described in (Melnychenko, 2021).

Stakeholders of innovation commercialization are stakeholders (individuals or institutions) who can directly or indirectly, positively or negatively influence or be influenced by the commercialization of innovation.

Stakeholder analysis includes four stages (Genrego et al., 2018; Shcherbachenko, 2022): identification of stakeholders; determining the impact of the initiative on stakeholders; identification of possible types of cooperation between stakeholders; build a stakeholder engagement plan based on the type of cooperation and initiative.

The main stakeholders in the process of commercialization of innovations are producers of innovative products, consumers, higher education institutions, innovation entities (venture funds, business incubators, technology parks, crowdfunding, and information platforms), society, government agencies, financial institutions (Shcherbachenko, 2022).

Matrix of stakeholders is compiled in the form of a table, where experts assess both the degree and strength of the stakeholder's influence on the business, as well as its interests in the aspect of the business entity's activity, as well as possible strategies of interaction are determined (Table 1).

Table 1

Matrix of stakeholders of innovation commercialization (build by authors)

Stakeholder influence	**The importance of stakeholders**			
	Significant	Certain	Insignificant or absent	Obscurely
Significant	developer, producer, consumer,	suppliers		
Certain	partners, creditors	government, mass media		
Insignificant or absent		competitors	society	
Obscurely	owners			environment

Source: built by authors

During the interaction of stakeholders, the following methods of commercialization of innovative products can be identified: investing in startups, engineering, industrial cooperation, technology transfer within joint ventures, technical assistance, franchising, and leasing.

The main directions of cooperation within the scientific and technical strategic alliances framework are joint R&D; mutual exchange of scientific achievements;

mutual exchange of production experience, and training of qualified personnel. There are several types of international strategic alliances. The most common are: consortia, joint ventures, joint scientific, technical, and production activities (keiretsu). Scientific and technical collaborations are horizontal, which consist of firms of the same industry, and vertical, which include firms of different sectors. The alliance is managed by one of the leading participating members or by a specially created coordination committee.

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LOGISTICS ACTIVITIES OF TRANSPORT ENTERPRISES AND SUPPLY CHAIN MANAGEMENT IN INTERNATIONAL BUSINESS

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In the conditions of market competition and globalization of the world economy, the concept of integrated logistics, which is based on the consolidation of system participants to ensure continuity, reduce total costs in all links of the logistics chain from the producer to the consumer, while satisfying consumer requests regarding the quality of goods and services, stands out as a priority direction of economic development. as well as maximizing the overall economic effect. Supply chain management is a complex and systematic approach that requires simultaneous consideration and accounting of many supply and sales operations. Therefore, there is a need for further research into problems related to the formation of complex supply chains, the creation of new chain management technologies in the conditions of international business, and the outline of prospects for further development.

The goal of a logistics solution in global logistics is to optimize the movement of material, information, and financial flows at the enterprise by ensuring effective management of production, transport, relations with logistics centers, the use of information systems for decision-making support and modern warehousing technologies. All logistics decisions during the construction of global supply chains are reduced to the following parameters: changing consumer needs and the emergence of new expectations; network economy; globalization and complexity of logistics processes; environmental instability; sustainability of system development; growing risks; lack of reliable infrastructure; growing government restrictions and barriers (Bowersox, 2019).

Today, supply chain management includes a complex of various types of flow and automated processes, improves delivery services and increases operational efficiency, reduces inventory and ensures optimization of consumer demand, expands the network and increases business in general.

When building their logistics system, enterprises should be guided by three key principles - clear management, transparency of operations and long-term support.

Logistics risks are associated with the risks of carrying out logistics operations of transportation, warehousing, cargo processing and inventory management and the risks of logistics management at all levels, including risks of a managerial nature that arise during the performance of logistics functions and operations(Nikishyna, 2020) .The Fung Global Institute identified 5 key sources of risk that affect logistics chains in today's integrated global economy, namely (Naboka,2020):government

factors (trade policy; regulations and regulations; fiscal policy; financial policy); dynamics of consumer demand (local preferences and tastes; sufficient income level; relation to social/environmental influences); natural disasters (earthquakes, floods); artificial displacements (military conflicts; trade union unrest; terrorism); innovation (technology; know-how organizations; new business models).

With the expansion of international trade, the needs of logistics in lengthening the logistics chain, growing uncertainty, and increasing the amount of necessary documentation are correspondingly increasing. But while these driving forces encourage organizations to overcome national boundaries, management faces market and financial barriers, obstacles caused by distribution channels. Among the barriers to the development of global logistics, the main share falls on customs barriers (41%), legislative (32%) and informational barriers (27%) (Naboka,2020). Current obstacles are grouped into 5 areas: export/import time, export/import costs, legal issues (imperfect legislation), information issues (lack of information transparency), and implementation issues.

International transport corridors (ITC) are objects of international infrastructure of pan-European significance on the territory of Ukraine.

The implementation of electronic computing systems is especially relevant for solving the problems of Ukraine's integration into the system of functioning of the Ministry of Internal Affairs and Communications. In particular, the SAP system is popular in the field of logistics.

In the conditions of the operation of the MLS of enterprises, the logistics factor, as an important element that directly affects the cost of products, plays an important role in justifying the expediency of one or another foreign trade operation, influencing the establishment of the price of goods, making it possible or impossible to carry out a foreign trade agreement. Investigating the influence of the logistics factor on the prices of goods, it is worth making a clear distinction between the logistics component included in the price of the goods and logistics costs - general logistics costs for the delivery of goods. The logistics component is a contractual specific amount of costs stipulated by the seller or buyer when concluding a sales contract and included in the price of the product (Burkynskyi B.V.,2020). It is intended to cover the costs of organizing the delivery of the goods to the buyer in accordance with the basic terms of the contract. Logistics costs are the sum of all costs associated with the delivery of a given product. These costs, depending on the arrangements, are borne by either the buyer or the seller, and most often both, depending on the basic terms of the contract.

Given the importance of stocks for successful foreign economic activity in the construction of MLS, the enterprise needs to solve the following issues that will allow optimizing both the international logistics system itself and many production processes: determine the level of stocks that must be kept to ensure high standards of customer service; determine whether the products should be shipped directly from

the enterprise, bypassing the warehouse; what should be the optimal level of all types of stocks at the enterprise coming from abroad; how the dynamics of inventory management costs change depending on the established norms of their maintenance and criteria for customer service.

An important problem of optimization of inventory management in foreign economic activities is the definition of a profitable order quantity. The cost-effective size of the batch of goods supplied and, accordingly, the optimal frequency of delivery depend on the following main factors: the volume of demand , costs for transportation and storage of stocks.

Outsourcing of logistics services has become widespread in Ukraine for many reasons: firstly, enterprises are not fully competent in many areas and therefore are forced to resort to outsourcing logistics, due to insufficient preparation for the formation and ensuring the functioning of MLS; secondly, the growing intensity of competition in all spheres of the economy implies the need to achieve the highest efficiency of all operations, including logistical ones; thirdly, at the current stage of business development in Ukraine, most enterprises are characterized by geographical expansion of their activities within the country and access to foreign markets. Under these conditions, it is simply unrealistic to ensure all business processes, including logistical, on your own and with funds at once throughout the entire territory, and even more so abroad; fourthly, the established trend of the development of the world economy over the past forty years or so is the establishment of long-term permanent partnerships between enterprises and logistics providers that are able to provide logistics services to their clients not only within the framework of individual countries, but also on a global scale, which makes it impractical for enterprises to try to solve logistics problems on their own (Shpak,2018).

Management logistics, according to experts, represents no more than 1% of the total market volume. According to estimated data, the payment for the services of logistics providers in Ukraine is approximately 15-25%, and for individual operations up to 60% (for special regime cargoes), of the price of the work performed. In the countries of Western Europe, the rate is much lower - 7-11% (Berestenko,2022).

It was established that Ukraine is at the stage of formation and consolidation of the industry, significantly inferior to Western countries, both in terms of their quality and complexity. At the same time, the lag in the general level of development of logistics is 5-6 years behind even Eastern European countries.

Logistics operations allow enterprises to achieve market growth, significant savings due to the scale of operations and increased profitability. On the global market, the role of logistics is increasing every year and the importance of logistics management is increasing. Successful implementation of logistics management and

restructuring of supply chains will contribute to identifying all available market opportunities and improving the decision-making system.

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INNOVATIVE MARKETING TOOLS FOR PREVENTION THREATS IN THE HEALTH SECTOR

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Due to the COVID-19 pandemic in 2020-2021, the field of public health has experienced a significant strain. Ministers of health and delegates from 53 World Health Organization member countries adopted the first-ever Regional Action Plan in digital health. Its main goal is to promote the digital transformation of medicine in the European region and Central Asia. This plan recognizes digital tools' critical role and potential in the health sector, particularly experiencing COVID-19. It envisages the widespread use of telemedicine and artificial intelligence (European countries, 2022). The following trends can characterize the state of affairs in the health care: due to quarantine measures, a significant number of patients stopped visiting doctors directly in medical institutions, which caused a drop in the volume of purchases of prescription drugs; digital marketing in the health care has undergone considerable development; more active use of social media platforms to maintain communication with clients of medical institutions; the growing popularity of the concept of social responsibility in the field of medical institutions; activation of telemedicine with the consultation of doctors by e-mail or through mobile communication with the patient (according to (Sventickyte, 2022) 88% of those patients who used such services answered in the survey that they want to continue using telemedicine services for consultations, which does not require direct medical intervention (operations, procedures, etc.)). (Mrabet et al., 2022; Probst & Kasztelnik, 2020; Rajan, 2018; Kraft, 2021; Gallo et al., 2019; Druzhynina et al., 2018; Kyrychenko et al., 2018; Antosova et al., 2019; Mohsen et al., 2018; Vasylieva et al., 2020; Letunovska et al, 2020; Oteh et al., 2021; Serpeninova et al., 2020; Lazorenko et al., 2021; Kyslyy et al., 2021) analyzed various aspects of innovativeness in the health care sector in their research. The authors of (10 healthcare, 2022) noted that the aggregate annual growth rate of the telemedicine market reached 21.4% in 2021. Various digital health startups (e.g., Healables) are offering AI-enabled developments for remote healing through the synergy of technologies to work with the patient's body, promoting positive thoughts and successful marketing, promoting the formation of human habits for healthy lifestyles and productive behaviors. A clear example is an innovation on the market that is becoming increasingly widespread, especially in countries with arid climates – motivational water bottles that encourage their users to drink enough water to

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prevent diseases and ill health. Another example is door-to-door medicine delivery services (an exciting innovation is the Ukrainian Internet service "Liki24". It is an aggregator for the search and delivery of medical drugs). It is not a pharmacy (because it does not sell anything) but an intermediary to whom the user gives the task of going to the pharmacy, buying medicines, and bringing them. And, for example, in the USA, unlike in Ukraine, online pharmacies are allowed. Such services as "NowRx" and "Capsule" are representatives of a new type of online pharmacy that deliver medicines directly to the homes of customers (Marketing in, 2021). Another innovative marketing tool is virtual doctors' recordings that are implemented to promote medical clinics (in such recordings, doctors and medical institutions are presented through story retailing, vlogs, video presentations, etc.). In Ukraine, a well-known example of video distribution, which gained particular popularity during the COVID- 19, became a children's doctor E.O. Komarovsky with a school that was actively distributed in open access "Doctor Komarovsky's School").

Modern marketing of medical institutions can be characterized by combining four components (Fig. 1): digital tools, creative marketing, an increasingly high level of consumerism, and post-pandemic marketing. All parts are adjacent to each other and complement each other.

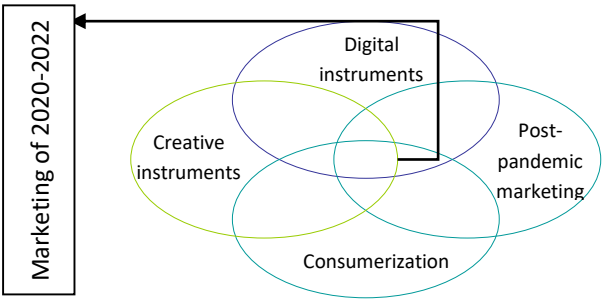

Figure 1. Components of modern marketing in the public health system

As for marketing product policy, European manufacturers are massively interested in developing new products. Growing demand for health and nutrition products, along with changing dietary habits, environmental concerns and sustainability factors, are driving the growth of the European alternative foods market. Europeans are health conscious and often check the ingredients on food labels before purchasing (Shkarupa, 2020). This high level of education stimulates

their demand, for example, in the food sector for lactose-free or reduced-lactose products, low-calorie and low-fat products.

Since the pandemic, approaches to the promotion of medical products and services have changed regarding the modernization of marketing strategies. For example, you can see when representatives of the medical business advertise themselves on products of daily household consumption (breakfast mixes, milk packets), because advertising there can reach a target audience and reach a wide range of target consumers (Brandari, 2018). Discounts and other forms of promotion of medical products also take place in 2020-2022 due to the significant importance of "word-of-mouth" marketing in this area. Through special offers on services and products, health businesses attract new customers and retain existing ones. Significantly changed moods in Ukrainian society since the beginning of hostilities in 2022 led to the emergence of many projects that combine humanitarian and medical goals. For example, the Glovo company has made available throughout Ukraine in the application of the same name the chat "Health" with options for ordering online medical consultations: an informational opportunity with contact numbers of doctors who provide free consultations and a chance for online consultations (Sudolskyi, 2022).

Thus, the healthcare sector has a high innovation potential. In particular, in the marketing system, medical services and goods permanently modernize marketing and a set of tools for working with the target audience – existing, new and future customers (Vasilyeva et al., 2021; Letunovska et al., 2021). Health care crises and so-called health risks associated with such dangers as COVID-19 cause a significant reorientation and modernization of marketing policy measures taken at various health system levels. As a result, society and business circles receive a kind of advantages and invaluable experience of working under different conditions of market functioning.

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GLOBAL FOOD SECURITY AND UKRAINE'S ROLE IN ENSURING IT

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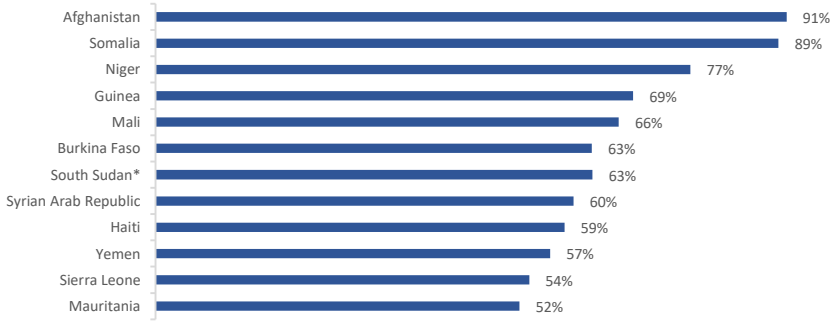
Ensuring national security is one of the main tasks facing the governments of the vast majority of countries in the world. Because of this, it is appropriate to study issues related to ensuring food security as an essential component of the country's national security.

As defined by the United Nations' Committee on World Food Security, food security means that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life (World Food Summit, 1996; Shaw, 2007).

To monitor the food security situation, the World Food Program has developed an interactive map called HungerMap Live. Based on the latest indicators of conflict, climate shocks, demographics, and weather forecasts, this real-time tool can identify areas that are already experiencing or will experience hunger soon.

According to HungerMap Live on September 9, 2022, 595 million people from 89 countries do not consume enough food (HungerMap Live, 2022), which is 7.5% of the world's population. Figure 1 shows the 12 countries with the worst food security situations.



* The total population displayed here is less than the national population. This is attributed to not every region being covered by near real-time food security monitoring systems.

Fig. 1. Prevalence of insufficient food consumption, % of the total population (developed by the authors based on the resource HungerMap Live)

Analyzing Figure 1, it can be seen that about 90% of the population of Afghanistan and Somalia are experiencing hunger. These 12 countries account for about 25% of the world's total number of undernourished people.

In addition to the HungerMap Live tool, the state of food security in the world is assessed using the Global Food Security Index (GFSI), which is developed by the Economist Intelligence Unit with the support of the agricultural company Corteva Agriscience. This index allows you to assess the country's food security based on the following components: economic and physical availability of food products, their quality, and safety, natural resources, and sustainability (FAO, 2022). GFSI is calculated for 113 countries of the world. Figure 2 shows the dynamics of the average overall GFSI score for 2012-2021 (Global Food Security Index, 2021).

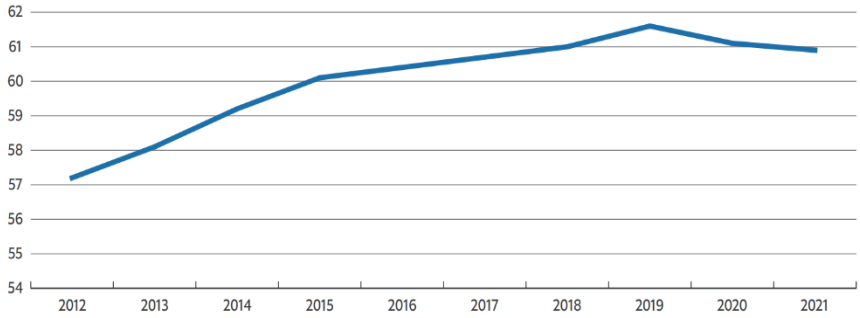


Fig. 2. GFSI average overall score, global 2012-2021 (Global Food Security Index, 2021)

Figure 2 shows that the average GFSI for 113 countries improved by 2019, but already in the following years, the food security situation in the countries worsened, which may have been caused by the global Covid-19 pandemic.

The tendency to decrease the average value of the index can be observed in the following years as a result of conflicts taking place in the world, in particular, the war that began on the territory of Ukraine in 2022.

Since Ukraine is mainly an agrarian country, the majority of its agricultural products are exported, and military actions significantly disrupt the supply chains of agricultural products abroad, causing fluctuations in food prices in the world. In particular, according to the results of the 2021-2022 marketing year, Ukraine ranks seventh in global wheat production, fifth in corn production, and first in global sunflower production (Latifundist, 2022).

Thus, based on the fact that about 7.5% of the world's population experiences a lack of food products, it can be concluded that ensuring food security in the world is an important issue that needs urgent attention. Considering the war in Ukraine,

which can be called one of the guarantors of global food security, the question arises of finding new ways to support food security in the world.

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PREDICTING THE RESULTS OF ESPORTS MATCHES BY MEANS OF MACHINE LEARNING

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The outbreak of COVID-19 pandemic impacted the growth of the global esports market. According to the latest research by SkyQuest Technology, the global esports market was valued at USD 1.08 billion in 2021, and it is expected to reach a value of USD 2.8 Billion by 2028. Machine learning technologies continuously change the esports market. They improve player performance, conversational assistants, discover new approaches to build game strategies. Nowadays esports analytics platforms provides coaching that can assess player statistics, and suggest better strategies in computer games like for League of Legends and Dota 2. Artificial intelligence (AI) coach advises players on how to attack and defend, and shows how alternative approaches can increase the odds of winning. Developers train AI agents by means of enforcement learning alghoritms to learn specific games.

The relevance of researches in the field of esports using machine learning technologies, is confirmed by a significant number of last scientific publications (Jadowski, R., Cunningham, S., 2022; Yadav J. et al., 2022; Bátfai N., Szabó, M., 2021; Hodge V. et al., 2021; Kuzmenko, O. et al., 2021; Lettieri E., Orsenigo, C., 2020; Melentev, N. et al., 2020; Ani, R et al., 2019; Vinyals, O. et al., 2019). For the query "computer gaming and machine learning" in the Scopus database were found 1802 documents published by 4766 scientists over the past five years. Computer games are the ultimate test lab for AI because we can observe the results. It is necessary to note the significant contribution to the study of practical aspects of socio-economic and culture phenomenas, which was carried out by such scientists as Oteh O. et al., 2021; Poghosyan K., Tovmasyan G., 2021; Zhuravka O. et al., 2021; Baranauskas G., 2020; Kasztelnik K., Brown D., 2020; Kasztelnik K., Brown E., 2020; Kasztelnik K. Frederick D., 2020; Letunovska N. et al., 2020; Miskiewicz R., 2020; Njegovanović A., 2020; Serpeninova Yu. et al., 2020; Skrynnyk O., 2020; Sotnyk I. et al., 2020; Tenytska T. et al., 2020; Yelnikova Ju., Barhaq A., 2020; Cosmulese C., 2019; Kirichenko L. et al., 2017; Logan W., Esmanov O., 2017; Zakutniaia A., Hayriyan A., 2017.

Our research was conducted on a dataset describing 7620 professional matches from the online computer game League of Legends (LoL), obtained from the analytical resource Kaggle (kaggle.com). We chose the SAS Enterprise Miner package, which is designed to detect in large data sets the information needed for decision-making. To build predictive models of esports matches results, we used the tools of decision trees, regression analysis and neural networks (Fig. 1).

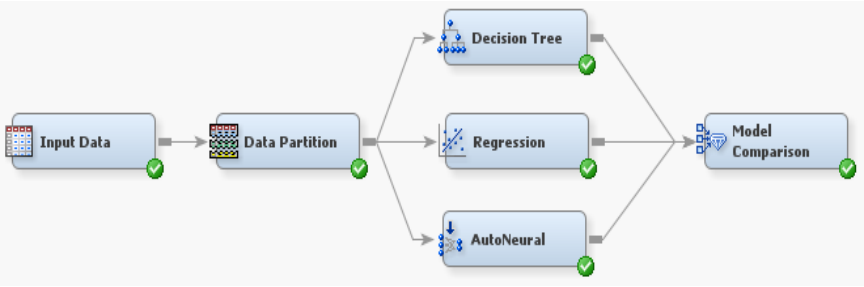

Fig. 1. ETL-diagram of the process of modeling the results of esports matches

Source: author's elaboration using SAS Enterprize Miner toolkit

The *Input Data* node of the ETL process diagram contains a set of input data consisting of 14 interval input variables (performance indicators of teams) and 1 binary output variable (number of the team that won the match). The *Data Partition* node of the ETL process diagram uses the tool Data Partition, with which the entire input data set (100% - 7620 matches) is randomly divided into two parts while maintaining the proportion of response distribution of the target variable (*winner*): 60% (4571) is the training data on which the model is based; 40% (3049) is the validation data, which checks the quality of possible variants of the model specification and selects the best of them. Then, using Model Comparison tool, a comparative analysis of the constructed models (decision tree, logistic regression, and neural network) was performed and the best one was selected. To optimize the model of logistic regression, the method of stepwise exclusion of insignificant factors was chosen, the significance of which was determined by the statistical criterion of Chi-Square.

The best model was selected on the basis of the Misclassification Rate, the Average Squared Error and the Gini Coefficient (Fig. 2). The lowest values of the Misclassification Rate, the Average Squared Error and the highest values of the Gini Coefficient are characterized by the neural network (*Auto Neural*). In second place is the logistic regression (*Reg*). The last place is occupied by the decision tree (*Tree*).

According to the presented results, it can be conclude that the neural networks is the best Machine Learning technology recommended for the practical implementation of the predictor of the esports matches results. The proposed approach to modeling the results of esports matches can be successfully used in other areas than esports. The main advantage of our approach is that it improves the forecast accuracy using chosen best machine learning model.

Statistics	Auto Neural	Reg	Tree
Valid: Kolmogorov-Smirnov Statistic	0.97	0.97	0.95
Valid: Average Squared Error	0.01	0.01	0.02
Valid: Roc Index	1.00	1.00	0.99
Valid: Average Error Function	0.04	0.04	.
Valid: Bin-Based Two-Way Kolmogorov-Smirnov Probability Cutoff	0.78	0.82	0.83
Valid: Cumulative Percent Captured Response	21.94	21.94	21.53
Valid: Percent Captured Response	10.94	10.94	10.80
Valid: Divisor for VASE	6098.00	6098.00	6098.00
Valid: Error Function	268.16	263.22	.
Valid: Gain	119.35	119.35	115.23
Valid: Gini Coefficient	1.00	1.00	0.98
Valid: Bin-Based Two-Way Kolmogorov-Smirnov Statistic	0.97	0.96	0.95
Valid: Kolmogorov-Smirnov Probability Cutoff	0.48	0.32	0.24
Valid: Cumulative Lift	2.19	2.19	2.15
Valid: Lift	2.19	2.19	2.17
Valid: Maximum Absolute Error	1.00	1.00	1.00
Valid: Misclassification Rate	0.01	0.02	0.02
Valid: Mean Squared Error	0.01	0.01	.
Valid: Sum of Frequencies	3049.00	3049.00	3049.00
Valid: Root Average Squared Error	0.11	0.11	0.14
Valid: Cumulative Percent Response	100.00	100.00	98.12
Valid: Percent Response	100.00	100.00	98.72
Valid: Root Mean Squared Error	0.11	0.11	.
Valid: Sum of Squared Errors	71.87	71.72	112.89
Valid: Sum of Case Weights Times Freq	6098.00	6098.00	.
Valid: Number of Wrong Classifications	42.00	.	.

Fig. 2. Results of quality assessment of constructed models

Source: author's elaboration using SAS Enterprize Miner toolkit

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THEORETICAL FUNDAMENTS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

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Education system is a background and a key instrument for achieving sustainable development at the same time. Therefore, it is necessary to consider the main periods of founding of the concepts of sustainable development (SD) and education for sustainable development (ESD) in chronological order.

The modern understanding of the concept of sustainable development is traditionally based on the 17 Sustainable Development Goals (SDGs) created by the UN in 2015. In particular, ESD is in Goal 4 of the SDGs. However, it was preceded by many scientific works and international reports. Sustainable development was a concept dating back to the 1970s and has long been within the environmental context. In 1992, Mitlin linked economic growth with sustainable development for the first time. The paper work of Tilbury (2002) showed that basic education depended on the ability of a nation to develop and achieve sustainability in general. In other words, it could be reached by the ability to be open to new opinions, new debates among educators, and discussions about SD and ESD. Because there is a risk of turning these two determines into a mindless and autocratic repetition of official definitions and restrictive standards by Wals, A., and Jickling B. (2000). Education for Sustainable Development was a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the Earth's natural resources. Arjen E. J. Wals Geke Kieft (2003) highlighted aspects of learning that: improve the transition to sustainability, within future education; education of citizenship; fostering a culture of peace; gender equality, for protection and management of natural resources and respect for human rights; sanitary and population education; and education for sustainable consumption. Furthermore, in 2004, Dinda defined economic growth as necessary to eliminate environmental harm. Plus, Naredo raised the issue of the interpretation of terminology in the academic field due to excessive and inappropriate use. There was also established the term "education for sustainable development" in UNESCO documents of the UN, which was aimed at the dissemination and development of potential in the education system for the SDGs.

Gadotti (2008) saw that education for sustainable development essential continue to enhance with environmental education. It has brought a new perspective on human relationships with the environment. Sartori, Latronico, and Campos (2014) made this point of view wider. To be more specific, sustainable development was directly

related to the field in which it was applied: economic, social, environmental, etc. These fields depended on the interests and needs of different human groups. In 2016, a bibliometric study was conducted on the Web of Science and Scopus platforms from 1993 to 2015, where there was lack of publications on "education for sustainable development". But there was a popularization of sustainable development in interdisciplinary aspects of environmental sciences. The majority of the articles belonged to Social and Environmental Sciences. A high concentration of papers was published by a limited group of authors, of which a third of the authors were academics from Australia, related on topics about primary education.

In 2017, the important role of Higher Education Institutions (HEIs) in the development and dissemination of sustainable development ideas began to be taken into account. Thus, education, awareness raising, and behavior changes were among the key elements to reducing the environmental impact of high-growing population. For instance, in the Baltic countries' universities (BUP of Latvia, Lithuania, and Estonia) there were the principles of the sustainable development course based on the National Strategies on Sustainable Development of these countries, and data were collected and summarized every year. The most popular course was the course that provides knowledge about local ecology and sustainable development.

Klarin, T. (2018) believed that ESD contributed to improve the progress of science paradigms since the concept of sustainable development focused on the "balance between social, economic, and natural resources" at center of which was human capital. Sustainable development at universities was a continuous process of harmonizing interactions of internal stakeholders regarding the coordination of educational and research activities in social, environmental, and economic spheres.

El-Jardali F., et al. (2018) understood the need for a shift in focus from data collection and monitoring of SDG progress to proactively shaping better policies and actions in support of the SDGs. The authors encouraged for a change in the role of universities and start their cooperation with the governments. In addition, governments musted recognize the unique role of universities to overcome global challenges. Since universities were responsible for training and shaping the future leaders of sustainable development, they can provide students with the knowledge and skills necessary to solve them.

According to Webb, S., et al. (2019), sustainable development must be spread through the education system, including lifelong education. Such type of education has been identified as crucial for achieving sustainable development as determined in the SDG Agenda for 2030. It will provide an opportunity to more people consciously participate in making complex decisions for expand sustainability in world.

Moreover, modern business models of higher education institutions should be focused on informational and communicative support between stakeholders for the generation of new knowledge about sustainable development, and their

transformation into a valuable resource for the workable functioning of the world as determined by Davydov P. G., et al. (2021).

In summary, sustainable development for education (ESD) is the basis for the advance of sustainable wellbeing in the world. Thus, the science of sustainable development should be spread throughout the entire education system, including universities and lifelong learning. Universities (HEIs) are key in the implementation of ESD development, which must take on the unique role of sustainable development to improve the welfare of society. However, courses in educational institutions currently focus on sustainability, are usually not prioritized in educational strategies, and focus in particular on the social and environmental sciences.

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LIFELONG LEARNING CONCEPT DEVELOPMENT AS A GUARANTEE OF SOCIO-ECONOMIC STABILITY

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In the twenty-first century, the success or failure of an individual and a country is defined not by physical or material talents and resources but by knowledge. All of this heralds the start of a new era in the knowledge economy, which makes its own adaptations to society's accepted standards, the operation of national economic systems, and socioeconomic stability.

The concept of lifelong learning is the most significant and revolutionary educational trend in the international community in the twentieth century. Although the seeds of this concept were there in Ancient Greece, Ancient Rome, and Ancient China, and a few researchers proposed some simple notions of lifelong learning in the early twentieth century, a broader understanding of this phenomenon emerged after the 1960s.

Paul Legrand, a French educator, was acknowledged as the pioneer of the field of lifelong learning when he delivered a speech titled "Education Throughout Life" in 1965 at the "III International Committee for the Promotion of Adult Education" hosted by UNESCO (P. Lengrand, 1970). This scientist also underlined that forces from all walks of life must support and participate in education because it is a collective issue and individuals with an emphasis on education alone cannot advance.

The renowned research report "Learning to Be" was written in 1972 under the direction of Edgar Faure, chairman of the International Committee for the Development of Education. He emphasised that the committee should review the primary education system and establish a new learning environment in order to "reach the realm of learning society," which promotes the notions of "continuous education" and "learning society". In such a culture, the adage "live until you're old and learn until you're old" has come to represent a practical guideline for ensuring people's survival, with continual learning serving as one of the primary strategies (Fore, E, 1972).

UNESCO received the landmark report "Education: The Treasure Within" from the International Commission on Education for the 21st Century in 1996. The committee's former chair, Jacques Delors, referred to education as "an asset that cannot be missing" and "an indispensable aspect of the committee's pursuit of the objectives of peace, freedom, and social justice" in the report. Education is the best

means to raise humanity and unveil the vast learning potential that is innate in every person; it is not a miracle or a form of magic (Delor, J. et al., 1996).

Despite this, the idea of lifelong learning has been the subject of numerous discussions in recent years, and there is still no definitive consensus regarding its fundamental principles and general character. This fact demonstrates that the thorough justification and rigorous arguments required for the construction of a scientific concept are insufficient since there is a disconnect between theory and practice as well as the level of interest in the new educational paradigm around the world.

Nevertheless, a number of ideas about continuing education have developed (table 1). Paul Legrand thought learning was an inevitable part of life, Dave thought it was designed for personal growth, and Turby thought it was crucial to society. These three viewpoints differ in how they are expressed and how they are emphasised, but they all agree on one thing: they think that all of the knowledge a person has ever received qualifies as a lifetime learning.

Table 1.

The main world concepts of lifelong learning

No	DEFINITION	AUTHOR
1	What lifelong learning means refers not to a specific object, but to a general idea or principle, or to a series of research methods. In a nutshell, it refers to the sum total of the education of one's personal and social life	(P. Legrand, 1970)
2	Lifelong learning should be a human, social and professional process through which individuals or groups go to improve their standard of living throughout each person's life. It is aimed at inspiration and ascension and includes all formal and informal learning at all stages and in all walks of life	(R. H. Dave, 1976)
3	Continuing education should be a combination of school education and after-school education and training; it is not only the development of the ratio of formal and informal education, but also the development of personality (including children, youth, adults) through life experience. Only then does society achieve its maximum cultural and educational goal and is the central element of educational policy	(E. Turby et al., 1972)

In a manner of speaking, learning can occur in a variety of settings and contexts, including the many modes of schooling we discussed before. In contrast to traditional, academic education, the system does not always help pupils adjust to

their demands for ongoing learning as they grow and develop in society. Table 2, which you can find below, was made in order to help you better comprehend the distinctions between these two procedures.

Table 2

Comparison of general features of traditional education and lifelong learning

TRADITIONAL EDUCATION	LIFELONG LEARNING
A limited share of knowledge about life experience	An unlimited amount of knowledge about life experience
Adaptation to student categories (junior grades, high school, post-university and dropouts, etc.)	Adaptation to the interests, professions and age of students (advancement of qualifications, adult education, clubs, etc.)
Emphasis is placed on a standardized learning mechanism and formal education (assessments, certifications and incentives)	Emphasis is placed on non-academic and even informal learning methods (personal conversations, flexible programs, connection with practice)
There is a closure within the framework of the educational classification developed in advance by the state and the ministries of education	Freedom of self-expression is observed, with a bias towards the mechanism of mutual communication and communication

The concept of lifelong learning is important because it provides a guaranteed socio-economic stability for the population. It does this by providing opportunities for lifelong learning that can be leveraged for personal growth or for advancing in a career path.

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THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE PREVENTION OF SHADOW ECONOMY AND INCREASING THE TAX COMPETITIVENESS OF THE COUNTRY

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A modern feature of the functioning of the economies of most countries is the high level of the shadow economy. This has a destructive effect on the country's economic and social development indicators and threatens to reduce the level of its economic attractiveness to international partners. In addition to the direct impact of the shadow economy on tax revenues, which reduces the country's capacity to finance economic and social programs, reduce spending on social protection, investment development, a high level of shadow economy negatively affects the country's attractiveness in terms of starting or expanding business. To maximize their own revenues, economic entities increasingly prefer shady economic activities (while minimizing the cost of fulfilling tax obligations) compared to the implementation of operations within the legal field.

The COVID-19 pandemic has led to a significant transformation of the forms and conditions of doing business, affecting both qualitative and quantitative components of its operation. One of the features of doing business (both official and shadow) in these conditions is the active use of digital technologies. The above updates the study of the relationship between the levels of shadowing of the economy and information and communication technologies development in terms of determining the tools to minimize the negative impact of the shadow sector on the country's performance.

Significant rates of dissemination of information technologies in all sectors of the economy form the preconditions for the growth of the number of scientific papers and guidelines aimed at the role of information and communication technologies (ICTs) in the economy.

Today, there are numerous studies that reveal some aspects of the functioning of the economy in the context of digitalization of society. Various studies mainly focused on the link between the ICTs development and level of its digitalization, macroeconomic stability, institutional development, indicators of financial market social and environmental indicators.

One of the most acute problems of the world economy is the high level of the shadow economy. This poses a number of threats to the macroeconomic stability of most countries, reduces their level of investment attractiveness and economic security. Given this, the governments of a significant number of countries are implementing measures to reduce the shadowing and legalization of illegally

obtained income. Today, one of the most common modern tools for de-shadowing the economy is the development and active use of information and communication technologies.

However, the relationship between the advancement of information and communication technologies and the shadow economy still calls for more comprehensive research.

Garcia-Murillo and J. A. Velez-Ospina (2017) denied the close link between ICT development and the shadow economy. According to the authors, innovative and new ICTs are rarely used in the shadow operations due to their high acquisition and costs.

The authors explore whether information and communication technologies can move people from the informal to the formal sector. Authors claimed that ICTs technologies are multipurpose technologies that provide people with information about education, employment opportunities and government services. Authors based on a panel data set of 170 countries for a period of five years made a conclusion that ICTs empower people, but not always have a positive impact on society. The access to cell phones and broadband was attributed by the authors to indicators of information and communication development, which have the greatest impact on the level of shadowing of the economy. These instruments are the main mechanisms through which individuals in the informal sector can obtain information.

There are several studies that emphasize the role of ICTs technologies in de-shadowing economy and at the same time identify trends in digitalization of economy. R. Remeikienė et al. (2021) considers the ICTs as an instrument to reduce cash flow and greatly simplifies the monitoring of financial transactions. At the same time, according to the authors, ICTs have a significant impact on economic growth and reducing the level of informal economy.

According to Garcia-Murillo and Velez-Ospina (2017) ICTs reduce the level of shadow economy by increasing the level of employment and education of population, reducing the number of bureaucratic processes.

These results are in line with the results provided by Esselaar et al. (2007) and Bhattacharaya (2019) who state that ICTs are rarely used in the informal sector due to their high acquisition and maintenance costs as well as low expected returns to investment.

Rangaswamy (2019) contends that information and communication technologies compounded informality in the context of informal employment and shadow business activity in general. The author notes that the active use of digital technologies and Internet resources contributes to the creation of a new segment of informal workers who operate exclusively through digital platforms.

Ilavarasan (2019) emphasizes the lack of significant impact of information and communication technologies on the level of the shadow economy in countries with low levels of economic development. Usage of information and communication

technologies in these countries is still in the nascent stages, due to the low level of access to these technologies. At the same time, the introduction of emerging automation technologies in the future will deepen the linkage between ICTs and informal enterprises.

At the same time, a considerable number of previous papers is devoted to the investigation of some aspects of information and communication technologies developments and its impact on the economic indicators of the countries.

This paper aims to investigate the link between ICTs and the level of the shadow economy based on the hypothesis about the inverse linear dependence between them.

The study of the link between the level of the information and communication technologies development and shadow economy is based on the ICT Development Index. This index provides a comprehensive assessment for 167 economies based on 11 ICT indicators, grouped in three clusters: access, use and skills. The information base of the study is World Bank data and official reports of the International Telecommunication Union for the period of 2000-2019.

At the first stage we will conduct a comparative analysis of the average level of the shadow economy in the EU countries and indicators of information and communication technologies development.

Shown in Figure 1 results demonstrated a direct relationship between indicators. The increase in the number of subscribers to fixed broadband access and mobile communications (per 100 people) is accompanied by a decrease in the level of shadowing in the country.

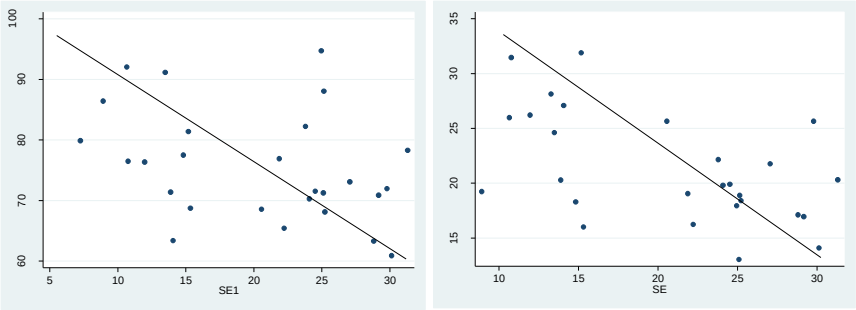

Fig. 1. The link between cell phone and broadband subscriptions and the level of the shadow economy

Source: authors' calculations

In the second stage, we will perform a correlation analysis of the relationship between indicators using the Ordinary Least Squares method. The results of calculations confirm the link between the indicators of information and communication technologies development and shadow economy in terms of EU countries. Most results are statistically significant at 0.05%.

Table 1

OLS test for CITs and SE (fragment)

Country	**Value**	**Statistic**	**Cons**
	Critical Value	2.0517	1.6763
Austria	Prob.	0.4885***	0.1423***
	Critical Value	1.0836	0.9664
Belgium	Prob.	0.2071**	0.0839**
	Critical Value	0.6694	2.7759
Bulgaria	Prob.	0.2462*	0.3613*
	Critical Value	0.7092	2.3735
Switzerland	Prob.	0.4532**	0.5887**
	Critical Value	3.1822	2.3863
Cyprus	Prob.	2.9721**	0.6028**
	Critical Value	2.0178	1.9203
Czech Republic	Prob.	0.4624***	0.1040***
	Critical Value	2.1559	5.5452
Germany	Prob.	0.9878*	1.7188*
	Critical Value	0.8389	2.7305
Denmark	Prob.	0.3223*	0.4911*
	Critical Value	0.3886	0.6680
Spain	Prob.	0.2582**	0.5987**
	Critical Value	0.9226	2.6675
Estonia	Prob.	0.0737**	0.1731**

Source: authors' calculations

At the same time, the results of the Dickey-Fuller test showed a close relationship between the indicators in the long run. The increase in lag was accompanied by an increase in the correlation coefficient between the indicators. For most EU countries, the strongest link between the information and communication technologies development and the shadow economy is observed with a lag of 3 years.

The study shows that there is a statistically significant link between the level of information and communication technologies development and the shadow economy for all EU countries. Thus, increasing the level of digitalization of society and information and communication development of the country can be defined as

one of the prerequisites for combating shadow financial flows and reducing the level of the shadow economy. Digitization of most financial transactions will improve the efficiency of cash flow control.

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TRENDS OF DEVELOPMENT OF INSURANCE INNOVATIONS

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The concept of Big data is one of the promising and differentiated areas of innovation development for the financial sector and for insurance companies as its leading elements. Personal financial and actuarial customer data, claims data, risk data, manufacturers, etc. are the basis for almost every critical decision of an insurer. Insurance companies often deal with large consumer and commercial consumer groups, each with large data sets, different types and attributes.

Today, the insurance sector of the economy has made significant progress in collecting and analyzing a large amount of structured information related to products and policyholders (Ianchuk, 2021; Dudchenko, 2020). Agents, brokers, underwriters, claims managers, call center representatives, manufacturers, wholesalers and many other employees who work in the front and back offices of insurance companies are not always ready to learn the complex process of data processing (Goncharenko, 2020; Didenko & Sidelnyk, 2021; Gatsi, 2020). Therefore, it is extremely important to correctly formulate the directions of innovative development of insurance companies and the financial sector as a whole.

The popularization of the use of innovative digital technologies in the financial sector in general and in the insurance sector in particular is due to the global processes of digitalization of society in the world. The concept of development and popularization of digital technologies in the financial sector is at the basis of the formation of a new vector of the organization of financial flows - fintech. Along with this concept, the category insuretech (from the English "insuretech") appeared and became widely used.

According to the KPMG company, the number of commercial deals concluded in the insurance sector has been constantly increasing for eight years.

The number of deals concluded in the insurance technology sector in 2021 is the maximum during the period under study and, in particular, exceeds the corresponding value of deals in 2014 by more than four times.

As of 2021, the USA (46%), Great Britain (8%) and China (5%) are the leaders by a large margin among the countries where the most active financial support of the othertech sector is observed. Also, the list of countries where the insurance technology sector is actively financed includes a number of other countries (Australia, India, Sweden, Israel, Indonesia, Canada, South American countries).

The biggest share in the financing of the othertech sector is taken by personal financing, the amount of which has increased more than 9 times over the past five years, from $904 million. in 2017 to 8,160 million dollars. in 2021.

Personal insurance is followed by commercial insurance, which became the second source of funding for the insurance sector after personal insurance and increased by 6.1 times over the course of five years. The third largest share of insurance technology sector funding is other insurance operations, which also increased more than ninefold in 2021 compared to 2017.

At the moment, the field of other technology is in the so-called state of "cooling off", as modern digital technologies fully cover the financial sector and it is becoming increasingly difficult to introduce new approaches. This is clearly manifested in the dynamics of the number of start-ups in the field of other technologies during the last decade in the world.

Since 2008, the number of start-ups in the field of other technology has gradually increased and reached its peak in 2016, when 215 start-ups were registered in this field. After that, their number began to decrease sharply, which somewhat "cooled" the sector of insurance technologies.

In the context of this study, several main vectors of the development of the concept of innovation in the insurance sector can be identified. It is these areas that are prioritized when choosing financing for startups.

The first direction concerns machine learning. This method of processing allows insurance companies to work efficiently and accurately with customer databases. This technology allows the organization to work with so-called historical data, the processing of which allows you to maximize the return on investment in insurance and form realistic forecasts for the future in the direction of the company's pricing strategy, advertising content, customer claims. processing system and others.

The use of so-called "unstructured data" is also a type of innovation. These are data collected from unofficial sources: social networks, various multimedia content, written reports, etc. In this way, you can collect personal information about the client, which will allow you to better understand his interests and create an individual package of insurance services. .

Another popular innovative tool in the field of insurance is artificial intelligence. It is a valuable tool in the big data space as it acts as a central power host characterized by powerful automated processes. It helps to increase the speed of working with clients, optimize work processes, and generate new approaches.

Blockchain technology is also being actively implemented in insurance. As this type of data is partially non-degradable, it is a convenient and secure way to transfer data between the customer and the insurance company.

Telematics is an innovative sensor technology designed to collect and transmit real-time data over long distances. This technology is already actively used in auto insurance, when the owner can choose a plan to analyze personal data and choose the most profitable insurance policy with the lowest premiums.

Thus, other technologies are drivers not only of the insurance sector, but also of the financial system as a whole. Therefore, these innovations require constant

development and improvement of the methods of implementation in the activities of insurance companies.

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THEORETICAL BASIS OF UNDERSTANDING THE ESSENCE OF DIGITAL INCLUSION

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In the era of the active transition to the Fourth Industrial Revolution, a radical transformation of the fundamental principles and organizational framework of business development is taking place. Digitalization disseminates to economic system, social sector, and institutional environment. However, population is the most sensitive these changes. One of the key vectors of these transformational processes is the rapid expansion and large-scale implementation of digital technologies both in everyday business processes and in people's lives.

Thus, according to the "Digital Economy Report 2021" [1], which is formed annually by experts of the United Nations Conference on Trade and Development (UNCTAD), the flagships of the world digital economy are the United States and China, which manage half of the data centers in in the world, have the highest 5G adoption rate in the world, allocate 94% of the total funding of artificial intelligence (AI) startups in the last five years, employ 70% of the world's leading AI researchers, and generate almost 90% of the market capitalization of the largest digital platforms.

Development of digital technologies and their application for improvement business processes and people's lives have become especially relevant within the COVID-19 pandemic. In particular, the digitalization of business allowed to continue business activities in the conditions of lockdown. In addition, experts [4] note that students who have access to a computer are 6-8% more likely to graduate from high school, households with access to the Internet can save significant amounts of money by shopping online, and job seekers with digital literacy skills benefit from 82% of middle-skilled jobs requiring digital skills.

There are several definitions of digital inclusion, but in general terms it can be characterized as the ability of the population to use ICT to improve their daily lives, which is ensured by the availability of these goods and services to the population, as well as the existence of skills for their effective use.

Digital inclusion of the population has several important components, including the availability of broadband Internet, digital literacy, institutionalization, etc [2, 3].

Thus, one of the most important pillars in the context of ensuring digital inclusion of the population is the availability of broadband Internet. The lack of a stable connection to the Internet prevents the full use of available technologies. It is worth noting that the problem of insufficient broadband Internet coverage is more specific to developing countries. However, rural areas in developed countries may also experience lack of the Internet connection. That is why, expansion of broadband

Internet coverage is one of the most important issues in the context of increasing the level of digital inclusion of the population.

The next pillar of ensuring the digital inclusion of the population is the growth of digital literacy. The development of adult education centres is an important aspect of ensuring the digital literacy of the population, because it is the older generation that has the most problems in the context of using digital technologies. The development of digital competences involves several vectors of professional development, including self-education, education in professional centres, mentoring, etc. Self-education involves acquiring relevant knowledge and skills independently, without the direct mediation of specialists. In particular, online courses, educational materials and tutorials are possible tools for achieving the given task. Education in professional centres involves the active use of networks of adult education centres and life-long education centres. The mentoring tool allows helping the population in acquiring digital competences.

The third pillar of ensuring digital inclusion of the population is the development of the institutional environment. The key direction in the context of solving the task is to increase the availability of computers for the population (for example, by providing them for rent). An equally important vector is the promotion of inclusiveness of digital services (in particular, websites and mobile applications) for socially vulnerable categories of the population, including people with disabilities.

It is also worth noting that an important prerequisite for ensuring the balanced and progressive development of all three pillars of digital inclusion of the population is the sufficiency of financial support for these areas, as well as the synergy of efforts of various participants in social relations to achieve these tasks. Financing of these tasks can be ensured both within the mechanism of financial support of programs of international organizations and financial support of private donors. In particular, the use of public-private partnership mechanism is appropriate.

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