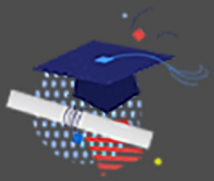
SUSTAINABLE DEVELOPMENT: MODERN THEORIES AND BEST PRACTICES



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Materials of the Monthly International Scientific and Practical Conference (July 28-29, 2022)

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The collection consists of materials from the Monthly International Scientific and Practical Conference “Sustainable Development: Modern Theories and Best Practices”. They represent scientific research results in such scientific areas as financial and economic, managerial and legal, social and cultural, ecological and technical, educational and pedagogical issues of sustainable development on local, regional and international levels.

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FINANCIAL AND ECONOMIC ISSUES OF SUSTAINABLE DEVELOPMENT

COMPARATIVE ANALYSIS OF DEFINITIONS OF THE TERM «DIGITAL ECONOMY»

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Currently, digital technologies are one of the main engines of growth and technological development of the world economy. The introduction of digital technologies contributes to increasing the competitiveness of various sectors of the world economy, creating new opportunities for business in terms of connecting to digital global value chains, the emergence of new markets and niches, and the accelerated introduction of new digital goods to the world market. The process of digitalization does not occur simultaneously in different countries of the world, therefore there is a certain gap in the degree of digitalization of national economies, which gives rise to digital inequality and, as a result, increased dependence of countries on developed countries. Politics, legal norms, traditions and culture, the achieved level of economic development, the level of education and own technological base, as well as many other factors play a significant role in the process of digital transformation of a country's economy.

Let's analyze the definitions of digital economy terminology that exist in modern scientific literature.

The term «digital economy» was introduced back in 1995 by Don Tapscott. In the scientist's understanding, this is an activity in which digital data (binary, informational, etc.) play a key role. That is, the digital economy is a type of economy characterized by the active implementation and practical use of digital technologies for the collection, storage, processing, transformation and transmission of information in all spheres of human activity. The digital economy refers to a wide range of economic activities that use digitized information and knowledge as key factors of production.It is not a separate sector of GDP, but permeates all sectors of the economy, creating new segments and even industries. This stimulates the transformation of the traditional economy into one that creates resources rather than consuming them (Tulchynska, 2021).

«Digital economy», «digital economy», «on-demand economy», «GAFAnomics» – these terms describe modern trends in the development of economic and informational relations. In general, all these terms describe a type of economy where the main means of production are digital data – numerical and textual. In practice, the digital economy manifests itself primarily as an economy focused on the consumer (on-demand economy), that is, the state's ability to provide various types of services. In particular, citizens receive information, requests, statements, answers to requests in electronic form, without even leaving home, electronic payments, etc. In addition, it is a market of instant orders and an unlimited choice of goods and services through the use of online stores, internet banking, messengers or other social networks. Digitalization of the economy

occurs both through digital reforms in the spheres of social life – education, medicine, public administration, and directly in business (Zhekalo, 2019).

Digitization is the saturation of the physical world with electronic and digital devices, means, systems and the establishment of electronic communication exchange between them, which actually enables the integral interaction of the virtual and the physical, that is, creates a cyber-physical space. The main goal of digitization is to achieve the digital transformation of existing and create new sectors of the economy, as well as the transformation of spheres of life into new, more efficient and modern ones. Such an increase is possible only when ideas, actions, initiatives and programs related to digitalization are integrated, in particular, into national, regional, sectoral strategies and development programs of our country. Digitization is a recognized mechanism of economic growth due to the ability of technologies to positively influence the efficiency, effectiveness, cost and quality of economic, public and personal activities (Strutynska, 2019).

Digital transformation is the process of transition to new ways of enterprise activity through the introduction of digital technologies and digital services, which is based on the strategic partnership of all interested parties and the simultaneous development of software, digital transformation and assessment of the level of digital transformation of the enterprise (Nikitin, 2019).

Digitization is the introduction of digital technologies into all spheres of life: from interaction between people to industrial production, from household items to children's toys, clothes, etc. This is the transition of biological and physical systems into cyberbiological and cyberphysical ones (combination of physical and computational components). Transition of activities from the real world to the virtual (online) world (Petrenko, 2020).Digital economy (English: Digitaleconomy) is an economy based on digital computer technologies. The digital economy is also sometimes called the internet economy, the new economy, or the web economy. Increasingly, the "digital economy" is intertwined with the traditional economy, making a clear distinction more difficult. The digital economy refers to the production, sales and supply of products through computer networks (Kolyadenko, 2016).

The term "digitization" today tends to be used to describe a transformation that goes beyond simply replacing an analog or physical resource with a digital one. For example, books are not just converted into e-books, but provide a whole range of interactive and multimedia resources. Accordingly, processes can already become online dialogues between different parties of the educational process. Digitization is a kind of paradigm shift in how we think, how we act, how we communicate with the environment and each other, and technology here is more of a tool than a goal. If we speak in simple language, digitalization contributes to the simplification of the educational process, making it more flexible, adapted to the realities of the modern day, which in turn ensures the formation of competitive professionals (Karpluk, 2019).

The digital economy is a type of economy where the key factors and means of production are digital data (binary, informational, etc.) and network transactions, as well as their use as a resource, which makes it possible to significantly increase the efficiency and productivity of activities and value for the products and services received. Digitization is the saturation of the physical world with electronic and digital devices, means, systems and the establishment of electronic communication interaction between them (Ukraina, 2020).

The digital economy is an economy based on digital computer technologies and information and communication technologies (ICT), but, unlike informatization, digital transformation is not limited to the introduction of information technologies, but fundamentally transforms spheres and business processes based on the Internet and new digital technologies (Pyshchulina,2020).

From a scientific point of view (of course, there is no unity in the scientific community on this issue), digitalization is a process of evolution of economic, social, production, technical-technological, organizational, managerial, and other relations within society, a change in their subjective-objective orientation, which is caused by the development of information and communication (digital) technologies. For the vast majority of practitioners and businessmen, digitalization is a mechanism for changing the general business model of doing business in order to obtain new and improved work characteristics for the purpose of mastering competitive advantages, creating additional value and increasing the efficiency of existing business processes.State authorities, namely the Cabinet of Ministers of Ukraine, interpret digitalization as the physical saturation of society with electronic and digital devices and the accelerated exchange of information between them, which allows to gradually erase the border between the virtual and physical world. Society sees digitalization as a completely new paradigm of the nation's development, based on the everyday and widespread use of digital technologies, which will ensure the efficiency of data exchange and the speed of access to information and the knowledge base. The conducted analysis of the scientific literature allows us to assert that the specificity of the interpretation of the category «digitalization» directly depends on the subject of the definition, which causes ambiguity in the interpretation of the studied concept and emphasizes the debatable nature of certain provisions and statements (Rudenko, 2018).

The digital economy is an innovative dynamic economy based on the active implementation of innovations and information and communication technologies in all types of economic activity and spheres of life of society, which makes it possible to increase the efficiency and competitiveness of individual companies, the economy and the standard of living of the population (Havryliuk, 2021; Lychkovska,2019).

Thus, after analyzing various definitions of the term «digital economy», we can conclude that, in general, «digitalization» refers to the process of transferring functions and business processes that were previously performed by people and organizations into the digital environment, which involves the introduction of information technologies into each individual aspect activity Accordingly, digital transformation (Digital Transformation) is fundamental and comprehensive changes in production and management processes, associated with the total replacement of analog systems with digital ones, as well as the wide application of digital technologies, which cover not only production and management activities, but also lead to changes in the organizational structure and business models of manufacturing companies. That is, in order to maintain competitiveness, enterprises should transfer their production, management and business processes into a digital format as soon as possible.

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DIAGNOSTICS OF THE STATE AND DEVELOPMENT TRENDS OF THE IT SECTOR IN UKRAINE

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Today, the Ukrainian economy is in the most acute phase of a protracted economic crisis. The main reason for this is the military attack of a neighboring state. The mechanism for bringing the country's economy out of this crisis should be based on two fundamental principles. First, the end of hostilities with the return of all occupied and annexed territories. Secondly, the launch of all types of economic activity, the functioning of which should provide the national and regional economies with sufficient funds. Together, this will make it possible to fully satisfy the needs of the population of the country. This should be the main condition for the return of Ukrainians who fled the war from abroad. Since more than 6 million people left Ukraine, their return will become an additional factor in the development and recovery of the country's economy.

By rebuilding the economy and infrastructure in the post-war period, Ukraine will build its own future. The degree of progressiveness of this future will depend on the development of the IT sector in the country. Therefore, it is important to establish the trends that have been observed in the development of the IT sector in Ukraine in recent years. IT is at the heart of transformational change and innovation in business technology. Therefore, the development of the IT industry is decisive for all types of activities in the national economy.

An important condition for the development of the IT sector and building the information society in the country is the involvement of business entities in e-commerce operations. In Ukraine, the number of enterprises engaged in e-commerce increased from 2476 units in 2018 to 2494 units in 2020[1]. This amounted to no more than 5.0% of the total number of economic entities in the country. Therefore, we can state that this level is insufficient for an innovative breakthrough. In addition, the use of traditional trading schemes entails additional costs, which is unproductive and inefficient.

The largest number of businesses taking advantage of the benefits and opportunities of e-commerce was observed in:

wholesale and retail trade; repair of vehicles and motorcycles – from 914 units in 2018 to 929 units in 2020;

wholesale trade, except for trade in motor vehicles and motorcycles – from 651 units in 2018 to 653 units in 2020;

information and telecommunications – from 204 units in 2018 to 209 units in 2020.

The smallest number of companies use e-commerce in the field of repair of computers and communication equipment – only 6 units in 2020.

According to the share of enterprises that carried out electronic commerce operations in their total number, the leading positions are occupied by [1]:

temporary accommodation and catering – from 9.4% in 2018 to 10.1% in 2020;

information and telecommunications – from 9.4% in 2018 to 9.5% in 2020;

information and communication technologies - from 10.9% in 2018 to 9.1% in 2020.

The smallest share of enterprises engaged in e-commerce was typical for the Real Estate Operations sector – from 1.1% in 2018 to 0.8% in 2020.

Consequently, in the business environment of Ukraine today, e-commerce procedures are not sufficiently developed. This significantly reduces the possibility of increasing the turnover of working capital of each enterprise. And also, it practically makes it impossible to increase the level of innovative activity of economic entities of Ukraine.

In Ukraine, the volume of sold products received from e-commerce increased from 3.5% in 2018 to 5.0% in 2020. At the same time, three types of economic activity are significantly above the average level of this indicator and its significant growth time. For enterprises "Transport, warehousing, postal and courier activities", the share of the volume of sold products from e-commerce increased from 7.1% in 2018 to 31.1% in 2020. For enterprises "Temporary accommodation and catering" value indicator increased from 6.8% in 2018 to 11.6% in 2020. For enterprises "Information and Communication Technologies", the value of the indicator increased from 7.7% in 2018 to 9.3% in 2020. [37]. However, this progress is not massive. Therefore, there is a delay in possible trends in the economic development of Ukraine.

The situation in the country is more positive in terms of the use of big data analysis technologies by enterprises. The share of enterprises using this tool in the total number of enterprises increased from 12.5% in 2018 to 12.7% in 2020 [1]. At the same time, the highest level of this indicator was typical for the enterprises “Advertising and market research; other professional, scientific and technical activities”. In 2020, the indicator reached a value of 23.6%, while in 2018 its value was only 14.0% [1].

Big data sources are dominated by data obtained from smart devices or sensors. 5.9% of enterprises used this option in 2018 and 5.7% in 2020. In terms of types of economic activity, the R&D sector led by this source with an indicator value of 19.9% in 2020. The source “geolocation data obtained from portable devices” was most used in the production of coke and refined petroleum products – 12.5%. The source “data generated from social media” was used to the maximum by the enterprises “Publishing; production of films and video films, television programs, publication of sound recordings; activities in the field of radio broadcasting and television speech” – 9.2%.

Among enterprises that use big data tools, enterprises with 250 or more employees predominate. It is large enterprises that have a need and real opportunities for using the latest data processing tools.

An important point is the presence of specialists in the enterprise who are able to use modern methods of information communication and have IT skills. The share of Ukrainian enterprises for which big data analysis was carried out by external service providers in the total number of enterprises amounted to 4.2% in 2020. A high level of the indicator is typical for the sphere "Activities of travel agencies, tour operators, provision of other booking services and related activities" - 7.8%. This indirectly indicates that this activity requires the most IT specialists. This will allow independently, without the involvement of external specialists, to carry out any operations on information communications and increase efficiency.

An analysis of the ratio of the share of enterprises that sell or buy big data in 2020 made it possible to establish that enterprises of only four types of economic activity carried out more operations to sell big data than they bought [1]. These are “Production of coke and refined products; production of chemicals and other non-metallic mineral

products", "Metallurgical production, production of finished metal products, except for machinery and equipment", "Telecommunications (electrocommunications)" and "Real estate operations". Enterprises in the sphere of "Water supply, sewerage, waste management" are the largest consumers of external services for the purchase of big data.

The situation with the sufficiency of providing enterprises with specialists and trends in the accumulation of knowledge and skills in the field of ICT in Ukraine is also unsatisfactory. This happened due to the low involvement of business entities in these processes and the lack of funds allocated by the management of enterprises for the development of knowledge in the field of ICT directly from specialists and all other employees.

The share of enterprises that provided ICT training in the total number of enterprises for ICT specialists during the study period increased from 3.7% in 2018 to 4.5% in 2020, while for other employees - in accordance from 4.1% to 4.4% [1]. This level is quite low, even though more than 20.0% of these enterprises are large with more than 250 employees.

The share of enterprises that hired ICT specialists in the total number of enterprises was also insignificant - 6.4% in 2020. Of this number of enterprises, more than 30.0% belong to the category of large enterprises. At the same time, enterprises of the sphere "Computer programming, consulting and related activities; provision of information services" – 35.8%. This type of activity is most dependent on the latest information technologies and, in order to continuously develop the industry, it must constantly increase the army of specialists in ICT and IT. The construction industry is the least developed, where this year only 2.6% of enterprises hired ICT specialists. The reason for this state is outdated schemes and technologies used by most construction companies in the country at the level of management and administration.

The share of enterprises where ICT functions were performed by external service providers in the total number of enterprises decreased from 14.4% in 2018 to 14.1% in 2020 during the study period [1]. The highest level of the indicator is typical for the sphere "Activities of travel agencies, tour operators, provision of other booking services and related activities" and was equal to 25.5%. The lowest level of the indicator of 3.1% is characteristic of the Telecommunications (telecommunications) sector. Such levels are usually insufficient to achieve noticeable results in informatization of the Ukrainian economy and increase its efficiency.

The degree of progressiveness of the production activities of the country's companies can also be illustrated by the share of companies that used the 3D printing tool in their production and economic activities. The share of such enterprises in Ukraine is insignificant, only 2.3% in 2020. Of these enterprises, only 1.4% used 3D printing in their activities using their own 3D printers (including rented ones) and 1.3% of enterprises used the services 3D printing provided by other enterprises [1].

By purpose, Ukrainian enterprises more often use 3D printing to create prototypes or models for their own use - from 1.1% of enterprises in 2018 to 13.5% of enterprises in 2020 [1]. At the same time, this variant of 3D printing is most actively used by enterprises in the field of "Production of computers, electronic and optical products" - 12.3%. Enterprises of this type of activity are leaders among all fields of activity in all areas of 3D printing.

Consequently, the analysis of the penetration of advanced information and communication technologies into the activities of Ukrainian enterprises indicates the low

activity of these processes. This significantly hinders the potential for innovative growth of the regional and national economy and building a reliable platform for the development of the IT sector.

The study allows us to conclude that today in Ukraine there is an urgent need and shortage of IT specialists who would be able to raise the efficiency of the functioning of business entities of all types of economic activity to a new level. Ukraine today is in dire need of increasing the level of involvement of all possible information tools in production and economic activities. This should become a condition for the progressive development of its economy and the first step to overcome the crisis.

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FEATURES AND FACTORS OF SOCIO-ECONOMIC INSTABILITY IN UKRAINE

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The main characteristics of modern society and its economy are instability and a constant increase in the rate of change. Some scientists and practitioners believe that the stability of the modern world is almost impossible.

At the end of the past and the beginning of the present century, economic science and management practice proposed several concepts of an unstable world, in particular the VUCA- world and the BANI- world (Honey, 2010; Grabmeier, 2020; Chaliuk, 2022) . The names of the concepts use acronyms formed from the first letters of words that are used to define the signs of an unstable world. The VUCA concept presents the modern world as an unstable, ambiguous environment in which it is difficult to make accurate forecasts, implement defined plans and set goals. According to the VUCA concept, society and its economy (socio-economic development of the state) are hindered by volatility, uncertainty, complexity and ambiguity. The VUCA- world is being replaced by an even faster, more complex and unpredictable one – BANI-world. The BANI- world concept presents society and the economy as not just unstable, but chaotic, where outcomes cannot be predicted because they are unexpected. According to the concept of BANI, socio-economic development is determined by brittle, anxious, nonlinear and incomprehensible.

The socio-economic development of any country in the world is significantly influenced by both external and internal factors (exogenous and endogenous). All-encompassing processes of globalization cause both positive and negative phenomena in the economies of countries, which significantly depends on their current level of development, sectoral structure, technological structure, government efficiency, etc. (Adaptatsiinyi, 2021).

An important feature of the development of the society and economy of Ukraine at

the current stage is the permanent passage through a state of crisis, when there is a high probability of the threat of all characteristics of socio-economic relations and processes reaching critical values, and the level of instability reaches extraordinary values (Naumova, 2020) .

Based on the results of the analysis of the entire period of existence and development of independent Ukraine (1991-2022), we found several unstable and crisis periods. The instability of the first decade of the existence of independent Ukraine (1991-1999) is caused by its transition to a market economy and the violation of established social and economic ties. The global economic crisis of 1998 became an additional external factor of instability for Ukraine in the same period. The result of these internal and external destabilizing factors was a sharp deterioration of all indicators of the socio-economic development of the country (inflation and unemployment, the hryvnia exchange rate, real wages, the number of bankruptcies of enterprises), which led to a significant decrease in the standard of living of the population. The period of 2008-2009 turned out to be the next critically unfavorable for the socio-economic development of Ukraine. The main external factor of instability in this period was the world financial and economic crisis of 2008, which negatively affected the results of the economy and the quality of public life. The main internal factors of instability of this period were the ineffectiveness of national legislation, the imperfection of the regulatory policy of the state, the high level of corruption in public authoritiesand the significant scale of the shadow economy. The complex impact of these factors (together with the lack of any fiscal discipline and the absolute opacity of financial processes, with galloping inflation and devaluation of the national currency) caused a rapid growth of the state budget deficit and the accumulation of internal and external state debt. With such problems, Ukraine approached the extremely unstable decade of its existence – 2013-2022. The period of 2013-2014 is characterized by the manifestation of socio-political and financial-economic crisis phenomena, as well as the resolution of the military conflict on the territory of Ukraine by Russia. As a result of Russian aggression in 2014, Ukraine lost: 13.1% of its territory, which was home to 18.8% of the country's population and provided 19.7% of the total gross regional product; 36.1% of the national volume of gross added value of extractive industry and 31.4% of processing industry, 24.8% of export of goods and services; deposits of such minerals as bromine (100% of the total volume of reserves located on the territory of the state), hard coal (90.45%), germanium (85.45%), mercury (63.64%), silver (50.0%), table salt (35.72%), iron ores (26.16%) (Prodanova, 2016). The main destabilizing external factor in the period 2019-2021 should be recognized as the coronavirus pandemic; internal factors include the change of political leaders and the slowing down of reforms initiated by the previous president and government.

Since February 24, 2022, Ukraine has been experiencing an extremely difficult period of socio-economic instability, the main factor of which is Russia's large-scale military invasion of Ukraine, which caused a real collapse in society and the state's economy. According to the estimates of the Ministry of Economy of Ukraine and the analytical division of the Kyiv School of Economics, the total losses of the Ukrainian economy due to the war (equivalent to a decrease in GDP, cessation of investments, outflow of labor, additional costs for defense and social support, etc.) range from 564 billion to 600 billion dollars USA. According to estimates of the International Organization for Migration, more than 11 million Ukrainians are forced to move to safer

regions of the country or abroad.

Thus, for almost the last ten years, Ukraine has been in a state of permanent instability. Features and factors of Ukrainian socio-economic instability are best described and explained by the BANI-world concept, according to which: society and the economy are fragile and unprotected and can be destroyed at any moment; the whole society is in a constant state of anxiety due to uncertainty and the threat of losing all opportunities; in the conditions of such a world, it is impossible to establish a clear connection between cause and effect, and in order to achieve a result, multidirectional and numerous actions are required; members of society and subjects of the economy lack knowledge and data, they cannot form a clear picture of the events taking place, and therefore are forced to make decisions "blindly".

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INNOVATIVE DEVELOPMENT OF CLUSTERS AS THE BASIS OF ECONOMIC RECOVERY OF UKRAINE

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During the studied period of 2010-2020, the number of R&D organizations gradually decreased. This is a negative trend. Let's consider statistical data on the dynamics of R&D expenditures in Ukraine (Fig. 2).

Innovative development is an important component of the country's economic growth. The development of innovative industrial high-tech clusters for successful

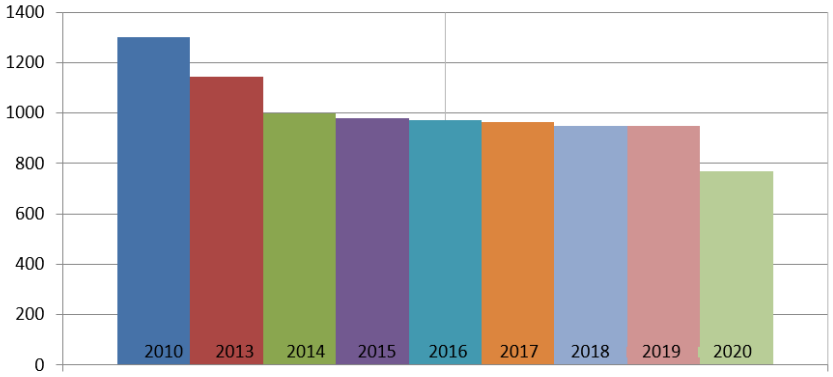
integration into the global economy is important for Ukraine. Clusters consolidate the existing potential of companies in order to obtain synergies. Clusters also make it possible to reduce the negative consequences of mistrust and competition within local territories.

Scientific research and innovation are important factors that influence the place of countries in the Global Innovation Index. Ukraine has a high educational and scientific potential, innovative system. Such potential is capable of producing various innovations in the form of ideas, scientific developments and patents.

The knowledge economy is an important realization for human potential in the innovation system. The formation of the innovation system is based on the close interaction of structures involved in the production and commercialization of scientific knowledge and technologies. Therefore, their collaboration is important to achieve common goals. At the same time, knowledge is exchanged and consensus is reached (Karpenko, 2018).

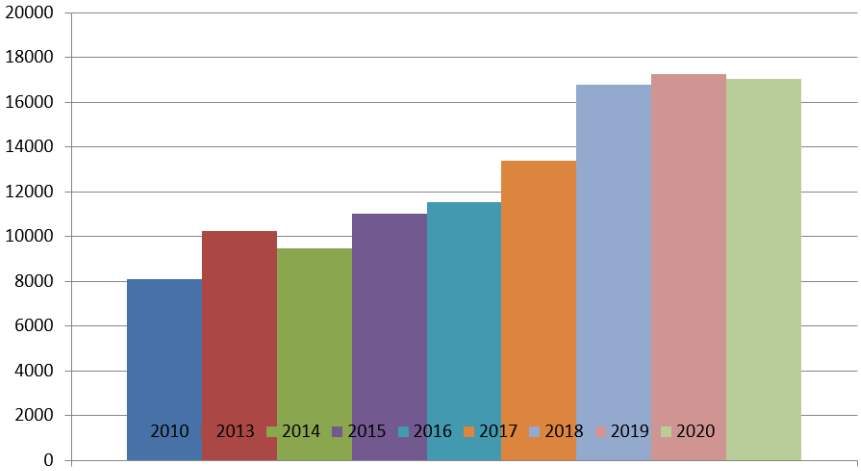
Ukraine has a high educational and scientific potential. The development of these potentials is a prerequisite for the creation and implementation of innovations in the form of ideas, scientific developments and patents. Among the competitive advantages of Ukraine, one can single out market capacity, quality of higher, secondary and professional education.

Among the main barriers to the development of innovations in Ukraine, the authors single out the imperfection of regulatory institutions and insufficiently developed innovation infrastructure. In fig. 1 shows the number of organizations R&D.



formed by the authors on the basis of information from the State statistic service of Ukraine (State,2022)

Fig. 1. The number of organizations in Ukraine that carried out R&D work for the period 2010-2020



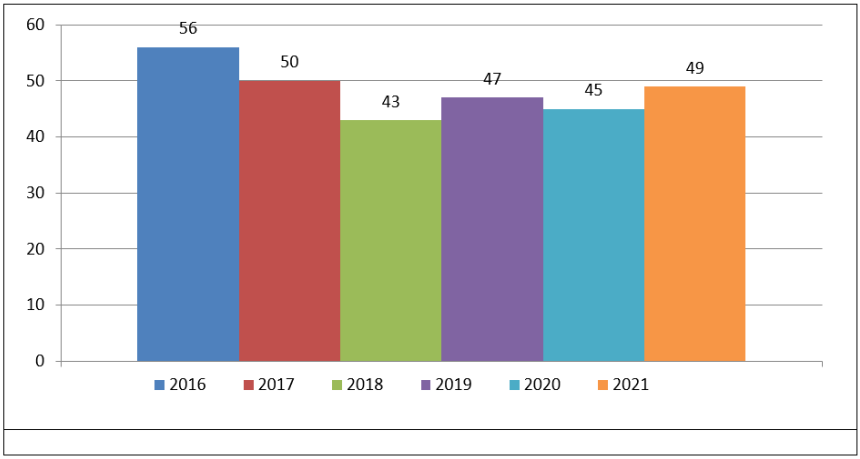
formed by the authors on the basis of information from the SSC of Ukraine (State,2022)

Fig. 2. R&D expenses in Ukraine for the period 2010-2020, million UAH

In 2010-2020, there is a trend of growth in the R&D expenditure indicator. However, the devaluation and inflation processes in 2018-2020 did not allow fundamentally improving the innovation system.

In Ukraine, there is a Strategy for the development of the sphere of innovative activity for the period until 2030. The dynamics of costs for the implementation of scientific research and development in the dollar equivalent did not even reach the level of 2010.

Consider the indicator of the Global Innovation Index. It highlights the productivity of innovation ecosystems of 132 countries and tracks global innovation trends (Fig. 3).



formed by the authors on the basis of information from the World Intellectual Propery Organization (Global, 2020)

Fig. 3. Ranking of Ukraine in the Global Innovation Index

In 2020, Ukraine ranked 45th in the Global Innovation Index. The best year according to this indicator is 2018 with a rating of 43. Until the 2022 war, Ukraine was unable to fundamentally improve its innovation activity and kept its position in the range of 40-60 places in the Global Innovation Index.

Economic losses as a result of the military invasion of Russian troops in Ukraine are deepening the crisis in the economy. Therefore, the authors propose to consider economic growth mainly on an innovative basis with the active use of the potential of cluster development. Clusters are formed with the aim of strengthening the own positions of mainly small and medium-sized businesses, obtaining more significant advantages on the market.

Clusters allow to combine and coordinate all levels of innovation policy. Clusters ensure the concentration of resources and the creation of a favorable environment for economic development in the form of innovations. Interaction and synergy of scientists, business, authorities and the public can be achieved in clusters.

In order to solve the tasks,National University "Zaporizhzhia Polytechnic" participates in the cluster development of the Zaporizhzhia Cluster "EAM" (Engineering-Automation-Machinery). The implementation of this project contributed to the development of cluster processes in the specified regions. There have also been positive changes in innovation ecosystems and influence on the development of the cluster movement in Ukraine.

The National University "Zaporizhzhia Polytechnic" is a member of the Zaporizhzhia Cluster "Engineering – Automation – Machinery" (EAM Zaporizhzhia). This organisation is based on a collaboration of a wide variety of players in engineering as well as automation and machinery. Members of the cluster include the Zaporizhzhia Chamber of Commerce and Industry, industrial enterprises (Triada Ltd Co., Roll Grand, Blysk metal service pro), IT companies (Infocom Ltd), industrial parks (Konecranes), and other organisations. At 2021 was the signing of the Memorandum of Cooperation between the EAM cluster and the INDUSTRY CLUSTER 4.0, an important Czech

association of engineering and IT companies. Such measures are relevant in terms of developing global and regional value chains in the context of Ukraine's cooperation with the EU's countries.

Table 1

Structure of regional cluster of Zaporizhzhia regional Cluster "Engineering – Automation – Machinery" (EAM) as of 2022 (Compiled by authors from open sources)

Name	Brand	Services	Official site
ZAPORIZHZHIA CLUSTER "ENGINEERING – AUTOMATION – MACHINERY"	EAM Zaporizhzhia	A platform for companies in the Zaporizhzhia region working in the Engineering, Automation and Machinery sectors to share best practices and create a consolidated industry position	https://www.iamcluster.zp.ua
NATIONAL UNIVERSITY "ZAPORIZHZHIA POLYTECHNIC"		Basic and applied research; training. The university prepares specialists for the aviation, aerospace, electrical, electric power, metallurgical, machine-building, radio-electronic industries	https://zp.edu.ua
ASSOCIATION OF INDUSTRIAL AUTOMATION OF UKRAINE (APPAU)	АППАУ	Development of the local market through set-up of professional standards in technical field and in business development. It represents the interests of the Ukrainian industrial automation community	https://appau.org.ua
ZAPORIZHZHIA CHAMBER OF COMMERCE AND INDUSTRY (CCI)		Certification of origin of goods. Customs broker services. ATA carnets. Legal Services. Translation agency. Organization of international economic cooperation. Implementation of quality management systems. Certification of commercial documents. Educational programs. Conference service. Conference halls for rent. Public procurement. Commodity expertise. Price examination. Patent and license services. Definition of codes	https://www.cci.zp.ua
WELDING ENGINEERING COMPANY LLC "TRIAD LTD. AND CO."	TRIADA WELDING	Development and creation of welding technologies, design of robotic technological complexes. Laser cutting, Metal casting, Metal forming, Plasma cutting, Electroplating services	http://www.triada-welding.com
LLC "GLOSS METAL SERVIS PRO"	БМСК МЕТАЛ СЕРВІС ПРО	Production of polypropylene equipment for galvanic processes, supply of voltage rectifiers	http://bmservice.pro
LLC "ROLL GRAND"	RG	Manufacturer of components for all types of gates	https://rollgrand.com/
PLANT OF METAL STRUCTURES LLC "PC KOTLOMONTAZH"		Boilers utilizers, deaerators, gas cleaning equipment, building metal structures	https://steel-work.com.ua
PRIVATE SMALL INDUSTRIAL AND COMMERCIAL ENTERPRISE "ASSOL"	ASSOL	Production of bulldozers, modernization and overhaul of equipment	https://assol.com.ua/
LLC "LIZMARK"	LIZMARK	Production of freight elevators and cottage elevators	https://lizmark.in.ua
LLC "SATURN"		Production of auto parts and spare parts for agricultural machinery; service services for the production of equipment and machining of metals	https://saturnavto.com.ua
LLC "TERMOLIT"		Production of innovative equipment for melting, heating and hardening of metals	https://termolit.com
LLC "TAVRIA FOUNDRY COMPANY "TALCO"	TALKo	Foundry production of aluminum alloys	https://talko.com.ua
LLC "THERMO-ENGINEERING"		Design and construction of industrial and civil construction facilities; modernization or repair of industrial equipment	http://uniterm.com
PRIVATE ENTERPRISE "YUZHTRANSPOLIS PLUS"		Gates of various levels of complexity for domestic and industrial purposes	https://www.vorota-utp.zp.ua
LLC "GREEN SYSTEM"	GREEN SYSTEM	Turnkey solar power plants, service in the field of alternative energy and energy efficiency	https://greensystem.com.ua https://heplonasos.biz https://electro-auto.com.ua
LLC "INFOCOM"	INFOCOM Ltd	Automation software development (MES, ERP)	https://ia.ua
LCC "IT PROGECT"	Atiko	Design and implementation of IOT at facilities of industrial complexes, agriculture, transport, housing and communal services	https://www.atiko.com.ua
HR COMPANY "WORLDWIDE OPPORTUNITIES"	WorldWide Opportunities	Employment, training and retraining services for specialists	https://wwop.com.ua
"ECOTECHNOLOGY COMPANY "GRANIK" LLC	ГРАНІК	Collection and removal of various types of garbage and waste in Zaporizhzhia and Ukraine (separate waste collection)	https://granik.com.ua
"BRIGHTMEDIA COMPANY" LCC	brightmedia	Brightmedia is the agency that creates values: from creating a name to shooting a commercial featuring (rebrand, launch new product, roadmap for the project)	https://brightmedia.ua
LCC "UKRSTANDARTSERTIFIKATCIYA"		Company services: CE certification (for export to the EU), a full range of work on CE marking; Consulting on ISO standards; Certification in accordance with standards; Assessment of conformity of products in accordance with the technical regulations of Ukraine; Product testing; Production attestation; Certification of internal auditors	www.ukrstandart.net

Zaporizhzhia Cluster "EAM" is included in the regional development strategy until 2027. The draft action program for the development of small and medium enterprises in the city of Zaporizhzhia for 2022-2025 has been included in the action plan.A joint innovation ecosystem of the region was also created for the purpose of innovation and R&D (research and development), production of new generation products ("Industry 4.0"), as well as joint implementation of engineering projects. Enterprises and organizations of the cluster created more than 1.6 thousand jobs and paid about 70 million UAH taxes (2020). The basis of the cluster formation is the coordination and

synchronization of cooperation of participants in the following areas: definition of common goals and needs; building trust through networking and regular communications; launching a specific action plan, etc.

In September and November 2021, cluster representatives visited Lithuania and the Czech Republic and signed 2 memoranda of cooperation with two clusters (INDYSTRY CLUSTER 4.0 and Lithuanian Automotive Export Association LAuGEA Cluster) on cooperation and development of global value chains with more than 50 participating companies.The INDUSTRY CLUSTER 4.0 presents the Czech association of engineering and IT companies. Such measures are relevant in terms of developing global and regional value chains in the context of Ukraine's innovative cooperation with the EU's countries (Karpenko, 2022). The purpose of the INDUSTRY CLUSTER 4.0 is to create an important center of business in engineering, strengthening competitiveness and innovation activities, in particular through the implementation of the concept "Industry 4.0" (Digitization and automation of manufacturing processes (Industry 4.0); Preparation of human resources in technical fields; Improvement of export capabilities of companies). The cluster is currently composed of leading production or technological companies and research facilities from the region (Indystry, 2022). Cooperation with the Lithuanian LAuGEA Cluster also seems promising.This cluster presents companies related to the automotive industry and science. **LAuGEA** Cluster members are actively involved in international research and innovation program projects, international exhibitions and business missions, as well as collaborating with various companies, government agencies, non-governmental organizations, research and product development partners, and other institutions of similar activity. Research, development and innovation (R&D&I) activities are carried out by taking advantage of laboratories owned by cluster members and partners (LAuGEA, 2022).

In order to integrate the economy of Ukraine into the global economy, it is necessary to ensure the innovative development of enterprises. It seems important to support international cooperation between enterprises on global business platforms.

Innovative activity of Ukraine in 2010-2020 changed at a slow pace. The lack of tangible progress is related to the reduction of research and education costs as a percentage of GDP. The level of development of innovative infrastructure is insufficient to ensure the intensive growth of Ukraine's economy. The protection of intellectual property rights and the development of clusters should be considered important components of the innovation infrastructure.

In order to intensify the development of the innovative economy, it is important for the state to use financial incentives for the development of clusters, promote the modernization of production, involve scientific institutions in the implementation of innovative projects, etc. Clusters should ensure readiness for the introduction of innovations. Clusters should also be open to participation in new projects related to the restoration of Ukraine's infrastructure. The activities of the Zaporizhzhia Cluster "EAM" are aimed at the development of the economy of Ukraine in the field of innovative activity.

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THE MECHANISM FOR ACTIVATING ENTERPRISES TO INVEST IN HUMAN CAPITAL

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The innovative way of development of the Ukrainian economy is one of the most promising and fastest options for stabilizing the situation in the post-war period. It should be based on the acceleration of technological re-equipment of production and the introduction of the latest socio-economic methods of management. This significantly increases the requirements for the quality of personnel working at enterprises in all areas of activity. The higher the professional level of the staff, the higher the productivity and profitability of the enterprise. Achieving a high professional and competent level of staff will depend on the recruitment strategy and the sufficiency of funds invested in the professional development and social security of each employee. Therefore, the issue of selecting those methods that can encourage employers to invest in their own employees for the accumulation and development of human capital is relevant.

With globalization and high competition between producers, the way out for enterprises regarding the accumulation of human capital should be the attraction and education of talents and the introduction of a system of continuous training of employees. Only under such conditions it is possible to achieve an increase in the organizational and technical level of production and an increase in the share of innovative products. The intensive development of science is immediately observed, which even more actualizes the need for the employer to invest in human capital.

Undoubtedly, investing in human capital in an enterprise is a rather costly process. Especially during the period of exacerbation of the crisis conditions in the country. Therefore, most business leaders ignore the opportunities for achieving economic growth through investment in human capital. Especially this negative process manifested itself today during the war. Those enterprises that did not close or were not destroyed, all without exception, are in a rather difficult economic situation. The cost of raw materials is increasing due to the disruption of supply chains, the cost of fuel and other resources used in production and business processes is increasing. Under such conditions, the majority of Ukrainian enterprises are on the verge of survival and cannot allocate funds for the purpose of investing in the professional development of personnel. And if this is not done today, then positive changes in the future in the country's economy can not be

expected. Therefore, the state should play an important role in these processes.

In conditions when there are significant restrictions on funds at the level of the state budget, enterprises should not expect financial state support for the development of their own personnel. At the same time, the role of the state in enhancing investment in human capital is decisive through the implementation of regulatory and stimulating functions. At the state level, financial, organizational, legal and motivational measures aimed at enhancing investment in human capital at the enterprise level should be carried out. The most effective tool in this area is the tax policy of the state.

Scientists and practitioners have proven that the same amount of funds aimed at developing the human and strengthening the technical and technological components of the enterprise's activities have different sizes and payback periods. Thus, the funds invested in equipment will be returned in a shorter period. However, the funds invested in the professional development of the staff will make it possible to obtain a greater socio-economic effect, although delayed in time. That is why the use of tax levers should financially support the management of the enterprise in the feasibility of investing in human capital. That is, management should form an opinion that if an enterprise makes a choice in favor of investing in human capital, it acquires competitive advantages.

The tax mechanism for enhancing investment in human capital is widespread in the developed countries of the world. Thus, in the UK and France, enterprises that invest in the professional development of their staff are stimulated by the state through the tax scheme “tax + subsidy”. In accordance with the scheme, a fixed tax is established on the vocational training of employees from the general wage fund of the enterprise. Employers' expenses for the professional development of personnel are returned by the state upon the provision of reasonable invoices. If an enterprise allocates less funds for the professional development of employees than provided for by a flat tax, the difference in funds remains in the budget [1]. In Belgium, Denmark and the Netherlands, employers, together with trade unions, with the assistance of the government, form specialized funds for the professional development of workers, the terms of use of which and the amount of contribution are stipulated by collective agreements. In Denmark, such a fund is formed by contributions from employers in the amount of 8% of the tax from the wage fund, trade union contributions and government subsidies [1]. In the United States, enterprises that finance the professional development of young people are entitled to full tax exemption [2, p. 145].

A generalization of the experience of the developed countries of the world in stimulating employers to invest in human capital made it possible to formulate the main components of this process. First, fixing at the state level a mandatory fixed tax of enterprises on the training of workers from the general fund of their wages. Secondly, the creation of special funds for the professional development of personnel, in which the enterprise and other stakeholders will be investors. Thirdly, the introduction of a mechanism for the return of funds paid through taxes, aimed at the professional development of staff and youth. Orientation of Ukrainian legislation to the above provisions will create conditions for enhancing investment in human capital in the business environment of the country. For the same purpose, it is advisable to introduce a favorable investment and tax regime at the state level for enterprises that constantly invest in the development of human capital. To do this, it is advisable to provide enterprises-investors with preferences, subsidies, subsidies and tax credits. At the regional level, it is expedient to substantiate the possibility of creating funds for financial

support for professional development programs for enterprise personnel. It is also important to stimulate manifestations of social partnership and social entrepreneurship at the state and regional levels. Taken together, such measures will help to achieve faster stabilization of the country's economy.

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ИНВЕСТИЦИИ В ЧЕЛОВЕЧЕСКИЙ КАПИТАЛ НА ПРЕДПРИЯТИИ

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Инвестиции в человеческий капитал можно представить как метод и средство с помощью которых бизнес может увеличить человеческий капитал, повысить его стоимость и улучшитьс точки зрения качества. Без таких инвестиций сегодня было бы невозможнодостичь минимальной эффективности трансформационных процессов в предпринимательстве тем самым одновременно повысить свою способность конкурировать на рынке. Технический прогресс не остановить, как и развитие конъюнктуры рынка и ожидания клиентов. Суть создания или увеличения стоимости человеческого капитала заключается во вложенииденежных и неденежных средств в настоящее время с целью достижения доходов в будущем, а не с целью удовлетворения текущих потребностей предприятия.

Расходование средств для создания человеческого капитала - это инвестиции, а не потребление. Все расходы, связанные с масштабированием, повышением эффективности и продлением функционирования этого капитала считаются инвестицией в человеческий капитал. Они могут быть разовыми илимогут быть реализованы как долгосрочные инвестиции, в любом случаерезультат всегда проявляется в течение более длительного периода времени (Vodák, Kucharčíková, 2011).

В расходовании средств на инвестиции в настоящее время и вытекающих из них выгодах в дальнейшем- заключается особенность инвестирования в человеческий капитал. Предприниматели вкладывают с расчетом на выгоду в виде более высокого качества выпущеннойпродукции в будущем, что ведёт к большему удовлетворениюкак собственных нужд предприятия такирастущего спроса потребителей , более высокой производительности, конкурентоспособности и тому подобное. Однако главная проблема заключается в количествеожидаемых выгод.

Инвестирование вчеловеческий капиталкак в производственный процесс может осуществляться предприятием по-разному. Предпринимательможет акцентировать внимание на:

• Улучшение здоровья сотрудников, в том числе организации оздоровления и санаторно-курортное лечении, обеспечении комплексного регулярного медицинского осмотра, посещении бассейна, строительство фитнес-центров на рабочем месте, обеспечении регулярного снабжения жидкостями, материальное участие в питании и т.д.

• Улучшении условий труда, когда компании обеспечивают своих сотрудниковболее современными и эффективныемизащитными средствами труда, тем самым предотвращая возникновение несчастных случев на производстве и причинение вреда здоровью работников. В эту область также входят расходына улучшение эргономики рабочей среды, чтоотражается на улучшении состояния здоровья работников и увеличении производительности труда.

• Улучшении и повышении рабочих навыков, умений и знаний, которые реализуются через систему корпоративного образования.

Повышение ценычеловеческого капитала может быть достигнуто различными способами, например образовательные курсы, самообразование, дистанционное обучение, открытое обучение и др. Все формы ведут к общему развитию личности, т.е. к приобретению новых знаний, навыков, с целью измения взглядов и поведения людей и повышении их квалификации.

В связи с анализом инвестиций в человеческий капитал,инвестиции в образование чаще всего оцениваются в экономической теории (Vodák, Kucharčíková, 2011), что также подтверждает в своих научных трудахРусс (2015), согласно которым, несмотря на отсутствие единого мнения в определении человеческого капитала, методов его оценка и измерений, ученые и авторы сходятся во мнении, что человеческий капитал характеризуется объединением инвестиций в направлении образования, здравоохранения и профессионального обучения, которые повышают производительность человека в организации или на рынке труда. Даное мнение близко ученюБеккера (2009), который пишет, что расходы на образование, обучение, здравоохранение и т.п. являются капитальными вложениями. Однако они производят человеческий, а не физический или финансовый капитал, потому что невозможно отделить человека от его знаний, способностей, здоровья или ценностей так, как возможно перемещать финансовые или материальные активы, не зависимо от их владельца. Далее он акцентирует, что образование и обучение являются наиболее важными инвестициями в человеческий капитал.

Несколько авторов в настоящее время рассматривают формы инвестиций в человеческий капитал с другой точки зрения. Согласно Фри (2010), современная теория человеческого капитала, относительно ключевых принципов Т. Шульца, Г. Беккера и Дж. Минсера, обращает внимание на концептуализацию преимуществ образования и на моделирование образования как инвестициив человеческий капитал.

В качестве первого шага к количественной оценке отдачи от образования, Шульц классифицировал список преимуществ от образования, в том числе преимущества в виде заработной платы и социальных пособий, которые носят временный характер, дифференцированы по отношению к экономике в целом (например, исследования и разработки для поддержания экономического роста и лучшей гражданской позиции). При количественной оценке затрат на образование к прямым издержкамотносим стоимость обучения, транспорта, книг и

вспомогательных средств, а ккосвенным расходам стоит добавить затраты упущенной выгоды и альтернативные издержки, понесенные при приобретении человеческого капитала в виде образования.

Голдин (2014) расширяет исследования с макроэкономической точки зрения. По ее словам оптимальные инвестиции в человеческийкапитал зависят от различных факторов, таких как определённый уровень при котором рынок капитала работает эфективно и определенная степень уверенности в экономике и политической стабильности.

Гартон (2017) утверждает, что существуют очевидные (явные) инвестиции в человеческий капитал в виде повышения заработной платы, образования и профессиональной подготовки или улучшения медицинского обслуживаниясотрудников. Однако он также определяет другие, менее очевидные формы этих инвестиций. Эти инвестиции заключаются в том, чтобы дать сотрудникам время и пространство для изучения новых идей и предоставление им возможностей для профессионального развития. Оправдывает такие вложения тот факт, что верхний квартиль компаний в исследовании, которое он провел с Манкинсом, был в состоянии высвободить на 40% больше производительной силы своих сотрудников за счет внедрения лучшей практики в управлении временем, талантами и энергией. Эколс (2005) добавляет, что развитие человеческого капитала на самом деле является многолетним процесом, хотя в бухгалтерском учете оно чаще всего отражается как расходы за один период.

При комплексном рассмотрении инвестиций в человеческий капитал необходимо учитывать, что многие из таких инвестиционных операций не имеют прямого и непосредственного финансового содержания. Инвестиции в человеческий капитал также можно осуществлять путем наставничества подчиненных, сотрудников и коллег, или это может быть время, которое сотрудники тратят на участие в самообразование и участие в различных современных онлайн формах образования.

Такие группы затрат могут быть косвенно выражены в виде заработной платы, которая поступает работникам в течение времени, посвящённого собственному развитию. Либо такие затраты можно рассматривать как работу, которая могла бы быть выполнена за тот же интервал времени. Вот почему так важно выявить связи между использованным человеческим капиталом, инвестициями в его развитие и между результатами, которые получает компания, и тем, что получит компанияв перспективе. Стратегический характер этих отдельных частей человеческого капитала основан на том факте, что если компания стремится к достижению будущих целей, она должна быть в состоянии оценить свои текущие возможности, представленные доступным человеческим капиталом. Кроме того, необходимо оценить, как используются эти возможности (аспект эффективности), а также какие другие инвестиции необходимы в этой области.

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MANAGERIAL AND LEGAL ISSUES OF SUSTAINABLE DEVELOPMENT

PRINCIPLES OF PERSONNEL SECURITY MANAGEMENT FOR BUSINESS IN THE REGION

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The stability and effectiveness of the regional economy is based on the financially successful activities of business representatives and enterprises. There are many factors behind this success, but the main one is the staff. Firstly, the quality of products and services, labor productivity and the amount of profit received will depend on the professional level and motivation of the staff to achieve. Secondly, the level of staffing of all production and business operations and the rhythm of business functioning will depend on the involvement of personnel in management processes and satisfaction of employees with working conditions. Thirdly, the level of innovation and competitiveness of the business will depend on the loyalty, talent and creativity of the staff. And all the components listed in the complex will achieve the characteristics of personnel security. Consequently, the management of enterprises should pay sufficient attention to the implementation in practice of all aspects of the personnel security of their own business. This will become a solid foundation for ensuring a high level of business competitiveness and achieving economic, technological and commercial security.

A certain set of principles must be at the heart of the implementation of all the above-mentioned conditions of business operation, focused on maximizing personnel security. These principles are the so-called unwritten rules, the obligation of which is determined by the management's desire to achieve the desired level of profitability and competitiveness in the market. Let's list the main ones from these principles. The orientation of business representatives to these principles will ensure a sufficient level of personnel safety and competitiveness of the enterprise and social and economic development of the region (Zakharova, 2019).

1. *Careful selection of reliable employees.* Sufficient attention should be paid to the implementation of this principle by the management of the enterprise. HR managers must establish reasonable criteria for selecting new employees for a particular position or workplace, which must not be violated. Depending on the type of activity of the enterprise and the level of the position, the following criteria may include: the presence of the required level of education in a particular specialty; work experience in the profession; availability of additional professional competencies, special practical skills and knowledge; marital status, age, gender, health status and appearance of the applicant; no recorded violations of the law; the level of empathy, the psychological and emotional state of the applicant, etc.

2. *Lifelong learning.* A favorable environment for the continuous professional and personal development of personnel should be created within the enterprise. To achieve

the highest impact from training procedures, management must draw on all possible sources of the latest and innovative knowledge - from internal mentoring to training in leading educational institutions in the developed countries of the world. The condition for the effectiveness of all training procedures should be the sincere desire of employees to acquire new knowledge and develop on an ongoing basis. It is possible to achieve such a level of employee loyalty by developing and implementing a mechanism for the fair distribution of tangible and intangible rewards, depending on the level of professional knowledge and experience achieved by a person. An atmosphere of healthy competition and respect for knowledge should be created in the work collective.

3 . *Talent development.* In a highly competitive marketplace, management must continually seek out, develop, or attract talent from outside. At the same time, talents should be considered any skills that are different from the average skills of people. The task of HR managers is to find a way to maximize the development and use of the talent of each employee. This will, firstly, increase the level of employee satisfaction with work at this enterprise and loyalty to its management. Secondly, to maximize the potential of each employee and increase the profitability of the production and economic activities of the enterprise.

4. *Comfort and economic interest.* In order to increase the motivation of employees to achieve high labor results, a flexible incentive system should be created at the enterprise. This system should encourage employees to vocational training, develop their talents, increase labor productivity and career growth. In this case, a whole system of incentives should be applied, the choice of each of which should be determined by specific conditions and circumstances.

If the management of the enterprise adheres to the listed principles as much as possible, then this will allow turning the labor collective into a team in a short time. The result of such transformations will be the growth of the employer's brand in society and an increase in the economic efficiency of the enterprise. The dissemination of such results in the business environment will become a condition for the growth of social security for the population of the region and the country.

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SEAPORTS IN THE POST-WAR RECOVERY OF UKRAINE'S ECONOMY

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In 2021, the work of transport, warehousing, postal and courier activities in the structure of GDP occupied 5.6% [1] (while back in 2013 – 9.3%); the volume of capital investments made was 7.1% of the total amount (in particular, the share of capital investments made by warehousing and auxiliary activities in the field of transport, which also includes port services - 1.6%) [2], and the amount of realized services of transport activities, communications, and warehousing in the overall structure was 39.3% (in particular, the share of the volume of warehousing services and auxiliary activities in the field of transport is 17.7%) of the total volume [3] (for comparison, in 2013 – 36.69%). We should also note that in 2020, the number of people employed in the field of transport, warehousing, postal, and courier activities amounted to 975,200 people, which corresponds to 6.1% of the total number of people employed this year [4].

In turn, the role of seaports is demonstrated by the share of cargo transshipment volume in seaports from the total amount of cargo transported by all modes of transport past the territory of Ukraine, which in 2021 amounted to 24.6%, among which the main cargoes are agricultural products (grain and oil), metallurgical products and goods in containers.

Therefore, in the region of the Azov-Black Sea basin, Ukraine was the undisputed leader until 2022 with rapidly growing rates of cargo and container transshipment. The war in the country led to a 35% reduction in the economy of Ukraine according to IMF forecasts [5] and the blockade and damage to the infrastructure of 10 out of 13 commercial seaports. Two factors - the destruction of seaport infrastructure due to shelling and their blocking - lead to significant losses for the economy of both coastal regions and the country as a whole, which were estimated at approximately $170 million per day by experts of the Kyiv School of Economics [6, 7].

Currently, the following consequences of the Russian military invasion of Ukraine and, in particular, of the blockade of the seaports of Ukraine for the world economy are already obvious: the blockade of the seaports of Ukraine threatens the global food security of the world since Ukraine is one of the main suppliers of grain, the export of which was carried out through the seaports. This causes an increase in prices on the world markets of agricultural products since the supply of wheat from Ukraine is more than 10% of the annual consumption of wheat for 15 countries in the world [7]. As a result, global economic growth has decreased by 1% [8] predicted by international financial organizations, such as the UN, the IMF, etc., namely, the global GDP growth forecast has worsened from 4.4% to 3.6% in 2022. That is why the most effective solution to ensure the food security of the world is the unblocking of the seaports of Ukraine [7, 9], which international organizations such as the WTO and the UN urge Russia to do. In addition, this will reduce the projected decline of the Ukrainian economy by 22-25% rather than by 30% [7].

Until February 24, 2022, 13 seaports in the Black and Azov Seas were operating in

Ukraine. Comparing their infrastructural potential (Table 1), we note the leading positions of the Odesa and Pivdennyi seaports, which allows these seaports to remain among the leaders also in terms of cargo transshipment volumes.

Table 1

Capacities of seaports of Ukraine

Seaport	**Number of berths,** *units*.	**Length of berths,** *m*	**The maximum depth of parking near the port berths,** *m*	**The total area of warehouses (covered and uncovered),** *thousand* m^2	**Volumes of cargo transshipment in 2021,** *mln t*
Berdyansk	9	1800	8,37	118,40	1,6
Bilhorod-Dnistrovskyi (incl. Bugaz port point)	8	1100	2,8	156,40	-
Izmail	24	2619	8,00	220,80	3,9
Mariupol	22	3900	9,75	277,80	6,8
Mykolayiv	23	3800	14,00	208,80	29,8
Odesa	**54**	**9000**	13,50	425,07	22,5
Olvia	7	1530	11,50	309,40	5,1
Pivdennyi	30	5900	**20,00**	187,50	**53,5**
Reni	30	3600	7,50	225,00	1,4
Skadovsk	5	800	6,00	11,30	-
Ust-Dunaiskyi	1	150	6	-	0,006
Kherson	10	1600	9,60	200,0	0,5
Chornomorsk	29	6000	15,00	**602,00**	25,6

Source: compiled by the author based on data from URL: http://www.sifservice.com, AMPU: Key Facts 2018. AMPU. URL: http://www.uspa.gov.ua/ru/press-tsentr/analitika/analitika-2018/167-russkij/glavnoe-menyu/o-predpriyatii/firmennaya-grafika-i-reklamnye-materialy-prezentatsii

At the same time, capital investments in the modernization of port infrastructure in the seaports of Chornomorsk and Mykolaiv allowed these four Ukrainian ports to become leaders in terms of cargo transshipment volumes among the seaports of the Azov-Black Sea basin (Fig. 1).

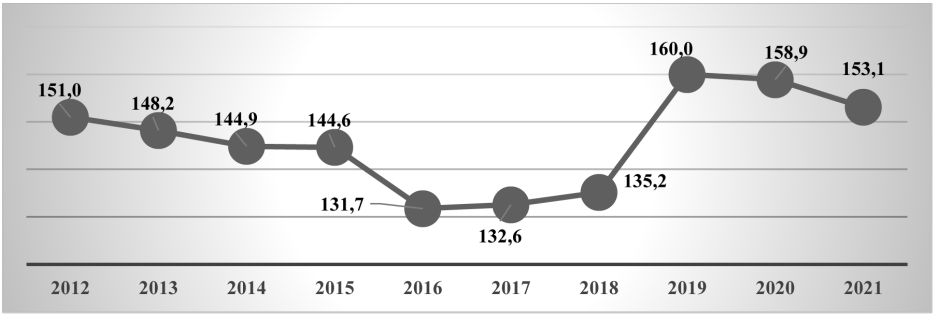

Fig. 1. Dynamics of volumes of cargo transshipment by sea ports of Ukraine for 2012-2021, million tons

Source: compiled by the author on the basis of the data of AMPU.

Direct losses from Russian military aggression in Ukraine as of July 2022 were estimated as part of the Kyiv School of Economics Institute project "Russia will pay", they amounted to $84.8 billion, of which the loss of transport infrastructure is $41.4 billion, and losses in the sector of ports and port infrastructure amount to $471 million. In turn, the World Bank estimated the physical damage to the buildings and infrastructure of Ukraine caused by Russia's military aggression as of the end of April at approximately $60 billion, while As of mid-May, the Ministry of Infrastructure of Ukraine estimated the damage to the transport infrastructure at $90 billion [7].

Due to Russian military aggression, as of July 2022 [7, 10, 11], we have**the following situation regarding damage to the infrastructure of seaports, their activities, the fleet, and cargo:**

I. Blockade of seaports of Ukraine (Fig. 2.):

Occupied seaports. Ukraine does not control the seaports of Mariupol, Berdyansk, Skadovsk, and Kherson. The entry/exit of ships is impossible, and on April 28, 2022, the Ministry of Infrastructure of Ukraine adopted an Order for the closure of these seaports, due to the impossibility of servicing ships and passengers, carrying out cargo, transport, and other related types of economic activities, ensuring an appropriate level of shipping safety, compliance with the requirements of international treaties of Ukraine [12].

Fig. 2. The situation regarding the functioning of seaports of Ukraine

Source: developed by the author

Blocked seaports. The Mykolaiv, Olvia, Pivdennyi, Odesa, and Chornomorsk seaports partially process the fleet available at the berths and ship by rail and road transport. Entry/exit of ships is temporarily impossible. Bilhorod-Dnistrovskyi does not work due to the lack of fleet and cargo in the port. Entry/exit of ships is temporarily impossible.

Working seaports. Receiving and sending cargo in Ukraine is carried out only by ports on the Danube River - Reni, Izmail, and Ust-Dunaiskyi; seafarers who are citizens of Ukraine as part of ship crews can also embark from these ports; the volume of processed cargo in the Danube ports increased 3 times since the beginning of the war. At the beginning of hostilities, the storage capacities of these ports were loaded with cargo that did not have time to be exported until February 24. However, today these ports are the main hubs for the transshipment of export cargoes, primarily grain, and oil. That is why there are urgent questions about the modernization of their port infrastructure, which, according to the estimates of the Ministry of Infrastructure of Ukraine, will cost $200 million.

II. Infrastructure damage in seaports:

Starting in March 2022, Russian troops launch missile strikes on the*Mykolaiv seaport*, as a result of which the port infrastructure suffered significant damage. In particular, the following terminals were affected: the oil transshipment complex of the "Avery" terminal (international agro-industrial company Viterra); terminal of "DSSK" LLC (COFCO International); SSZ "Nibulon"; the meal warehouse of MSS "Nika-Tera" burned down.

In March 2022, the *seaport of Olvia* was hit by a missile, as a result of which the port infrastructure and foreign-flagged merchant ships (Bangladesh) moored in the port's waters were damaged.

The Odesa region is subject to rocket attacks, in July the*Odesa seaport* was hit, however, the port infrastructure did not suffer significant damage.

The *Pivdennyi seaport* has not been damaged so far, but it is subject to attacks, so on April 23, 2022, the Armed Forces of Ukraine shot down two cruise missiles sent in its direction by the Russian occupation forces.

It is known that in occupied*Kherson, on the territory of the seaport*, the Russian occupying forces staged a robbery: tugboats and infrastructural land equipment were

stolen, and grain shipments were taken to Crimea.

Since the second week since the beginning of the war, the crane farm, warehouses, railway tracks, and some buildings of the *Mariupol seaport* have been under fire by the Russian military. As of March 21, the mooring line remained intact. Subsequently, after the full occupation of Mariupol since the second half of May after the robberies, the occupiers tried to restore the operation of the seaport, but they were hindered by the fact that the ship "Meotida" remained submerged in the water area.

The *Berdyansk seaport* has been captured, the state of the infrastructure is unknown, and explosions are periodically heard from the port territory, in addition, in March, the Russian naval force's large amphibious ship Saratov was sunk near the berths.

III. Seizure of cargo in port terminals and on merchant's vessels:

In total, almost 26 million tons of cargo are blocked in the warehouse terminals of the seaports of Ukraine, the main of which are: grain, oil, and metal products (Table 2).

Table 2

The situation with cargo in the seaports of Ukraine after the start of the war on February 24, 2022

	Grain	**Oil**	**Metal products**
Cargo is blocked in the port terminals	25 million tons are blocked (May 09)	500,000 tons are blocked (Ukroliyaprom association) (June 30)	234,000 tons of metal and cast iron worth over $148 million (Metinvest company, Azovstal plant) (June 29)
Cargo was removed from the port terminals by the Russian occupiers	$125 million 400-500 thousand tons (May 11) Berdyansk: 7 thousand tons (June 30)		30 thousand tons (Metinvest company, Azovstal plant) (June 29)
	more than $600 million worth of grain and oil were exported from Ukraine (July 14)		
Seaports from which it was exported	Mariupol, Berdyansk, Kherson	Mariupol, Berdyansk, Kherson	Mariupol
Where the goods are taken	Crimea, Syria, Lebanon, Egypt and Turkey through Crimea		

Source: compiled by the author based on data from: *"Ports of Ukraine" publishing house.* URL: https://ports.ua/

The Russian occupiers are taking the seized goods through the seaports of Crimea to the countries of Asia and Africa, which is confirmed by data from Maxar Technologies satellite images [13].

IV. Capture of merchant ships and crew in occupied seaports:

In general, according to the International Chamber of Shipping (ICS), more than two thousand sailors and 80 foreign ships and their crews were blocked in the ports of Ukraine due to Russian military aggression. As of May, it was possible to evacuate 1,500

crew members, but another 500 people remain trapped on board ships, in seaports that are under occupation.

In the *seaport of Berdyansk*, the Russian occupiers stole the port tug "Korets" and 5 sea merchant vessels - bulkers with grain.

In the *Mariupol seaport*, the Russian occupying forces took hostage merchant ships, their cargo, and crew members: Blue Star I (Panama flag); Smarta (flag - Liberia), 18 crew members - citizens of Ukraine; merchant dry cargo Azburg (flag – Dominicana), was damaged as a result of shelling, 12 crew members are citizens of Ukraine; and Lady Augusta (Jamaica flag), the crew consists of Syrian citizens, their number is unknown; Tzarevna (flag - Malta). In addition, there is a "nationalization of the port fleet", as of July 34 port vessels have been stolen by the occupiers.

A Brentix chemical tanker (Tanzania flag) was damaged by a single munition in the *Ochakiv seaport*.

"Nationalization of the port fleet" also took place in the*seaport of Kherson.*

Difficulties in sea freight transportation and their reorientation [11].

As already mentioned, part of the export cargo that was transshipped in the seaports of Ukraine has been reoriented to railway transport, and part of it is shipped to the ports on the Danube River, whose cargo turnover has increased 3 times since the start of hostilities. The port of Izmail and the Orlivka-Isakcha ferry crossing is used quite actively for the transshipment of containers, from where cargo is sent to the Romanian port of Constanta, where the first vessel has already been loaded with Ukrainian grain (71 thousand tons of corn). Previously, ore was transported through Izmail, now grain cargoes, coal (from South Africa for Ukrainian TPP, which goes through Constanta) and containers have been added. So, at the moment, it is necessary to build a container terminal in the port of Izmail and, if possible, to modernize the port infrastructure, since the Romanian port of Constanta does not have the free capacity, and therefore Ukraine may soon experience a decrease in the supply of fish, fruit and other goods.

Since the beginning of the war, many containers bound for Ukraine have been unloaded in Turkey, and today there are some problems with their export to Ukraine, namely: Turkish carriers refuse to go to Ukraine, due to security issues, because of this the cargo is brought to the border and further the question of its overloading on Ukrainian trucks arises; in addition, Turkey is not interested in allowing Ukrainian carriers into its market and regulates transportation prices, while transit permits for Ukrainian carriers have been canceled, but they are valid for empty entry and transportation to or from third countries; in addition, the large amount of cargo accumulated at the border is a problem.

The problems of ensuring security also concern transportation of the Danube River - European carriers do not want (are afraid) to enter Ukraine. Ukraine even had to guarantee coverage of possible damages to foreign ships, wagons, or trucks. In addition, the fleet of the Ukrainian Danube Shipping Company is lacking (there are only 4 barges) and there is a need to rent additional vessels.

Today, 90,000-110,000 Ukrainian sailors work on ships around the world. Problems due to the war: fights between Russian and Ukrainian sailors, arrests of Ukrainian sailors in Russian ports, difficult replacement of crews (new wave of Covid-19), trade unions asking to include sailors in the list of those who are not subject to mobilization.

Directions for the post-war restoration of the port infrastructure of Ukraine.

Transport infrastructure plays a key role in the recovery of the economy because the

prompt and comfortable movement of goods and passengers is a prerequisite for economic growth, social protection, and stability. In our opinion, the process of reconstruction and restoration of the transport infrastructure, as well as the post-war restoration of the country's infrastructure in general, ***should be based on a comprehensive strategic approach***, which will allow considering the entire infrastructure and its restoration as a comprehensive goal and not individual assets (elements) that require financing, and will also provide a centralized approach to managing infrastructure restoration processes, provide clear time and resource guidelines and prioritize tasks and, accordingly, funding.

A number of recommendations have been proposed regarding the post-war reconstruction of Ukraine's infrastructure, which has been systematized and presented in two groups of recommendations - regarding financial instruments and regarding organizational instruments.

I. Proposals regarding financial instruments for post-war reconstruction of Ukraine's infrastructure:

1. To speed up the integration into TEN-T – the trans-European transport network, through the fulfillment of all the necessary conditions for the organization of such a network, for the possibility of attracting funds for the restoration of infrastructure from establishing the Connecting Europe Facility [14], the resources of which Ukraine can claim because the EU already included Ukrainian logistics routes in TEN-T [15]. The distribution of 70% of funds from the Connecting Europe Facility will take place by December 31, 2023, on a competitive basis.

2. Monitoring the use of funds provided by donors to Ukraine for post-war infrastructure reconstruction is, in fact, Ukrainian anti-corruption guarantees. One of the ways of implementation is the *creation of a joint supervisory board to ensure transparency and accountability of the spending of funds that will come from donor countries for the post-war reconstruction of Ukraine's infrastructure.* In order to simplify the accountability procedure, it is necessary to standardize it for all donors. It is also necessary to involve civil society in this process, as the most interesting subject of receiving post-war aid [16].

II. Proposals regarding organizational tools for post-war reconstruction of Ukraine's infrastructure:

3. Development and implementation of the ***"Comprehensive Strategy for the restoration of the infrastructure of Ukraine: transport, social, production"***, in which it is necessary to take into account the involvement of Ukrainian producers of goods and services as much as possible, with an emphasis on the domestic producer. This will give impetus to individual industries and stimulate the recovery of local communities.

4. To restore the infrastructure "as before" or "do as best": during the post-war reconstruction of the damaged transport infrastructure and infrastructure facilities of seaports, in particular, it is necessary to take into account the newly created post-war conditions, for example, in the process of reconstruction, roads can be widened, new transport junctions can be built, lay new railway tracks in seaports.

5. In the process of reconstruction, it is necessary to take into account the possible repetition of military operations, and to restore infrastructure facilities using innovative technologies, so that the new infrastructure (taking into account the weak points discovered in our own experience) was designed and built taking into account the threats and requirements of wartime (strengthened defense systems/airport buildings, more

efficient approaches in the design of bridges and overpasses, runways; the mooring line is stronger, loading and unloading equipment that is able to move more quickly; the road surface is stronger; railways using new technologies - concrete tracks, etc. [17]), that is, to build a new, more viable infrastructure The principle of construction of the Kyiv metro is multi-functionality, endurance, security (underground facilities). Because in the future, in the presence of stable viable infrastructure, in the event of hostilities, all processes and life activities of the population, the army, and the country will be more effective and protected.

6. Involve engineering specialists with experience in planning seaport facilities in the planning of new infrastructural facilities, such as land infrastructure of seaports (railways and highways, warehouses, administrative buildings, etc.).

7. Based on the experience of Georgia, damage assessment was carried out mainly using satellite images with a high magnification - 50 cm. In Ukraine, there are already projects for the collection and systematization of data and damage assessment due to military actions (for example, the "Russia will pay" project), but for more effective planning reconstruction of the infrastructure, it is recommended to use accurate satellite images, which will give a spatial idea of the extent of damage and adjust possible engineering solutions, because it will provide an opportunity to determine objects of critical infrastructure and their possible correction during reconstruction. Aerial or satellite imagery is typically an interactive process, as each new piece of information either fills a gap or confirms/disproves assumptions about the extent of destruction and damage. Recent developments in satellite imagery, including multispectral, hyperspectral, and radiometric sensors, provide a more powerful analytical tool for infrastructure planners, and the data are generally commercially available. Satellite images with the appropriate extension can become the basis for a comprehensive analysis [18].

Therefore***, the financing of the post-war reconstruction of Ukraine's infrastructure, as well as investments in infrastructure, are by their nature quite capital-intensive.*** They ***provide for the creation of a large number of jobs*** for both highly skilled and unskilled workers. Accordingly, the ***multiplier effect of such investments during the post-war crisis can be quite high*** and exceed the initial amount of funding several dozen times, which will provide an impetus for the recovery of the Ukrainian economy. That is why, in our opinion, ***post-war recovery should be holistic and based on a strategic approach***.

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SUSTAINABLE HRM IN WAR AND PANDEMIC CONDITIONS

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The beginning of the 2030-s seemed like new global challenges for humanity: the COVID-19 pandemic and the war of the Russian Federation against Ukraine, which has an impact on the security and economic situation in the world. According to the forecast of World Bank, global growth is expected to slump from 5.7 percent in 2021 to 2.9 percent in 2022— significantly lower than 4.1 percent that was anticipated in January (Stagflation, 2022). Ukraine's economy is expected to shrink by an estimated 45.1 percent this year, although the magnitude of the contraction will depend on the duration and intensity of the war (Russian, 2022). The defined context of external conditions actualizes the search for models of sustainable HRM, which will help enterprises and organizations to face global and regional challenges.

The concept of sustainable HRM was developed as a response to the formation of the paradigm of sustainable development, which is declared as the goal of meeting the needs of current generations without threatening the needs of future generations, taking into account social and environmental implications of human and organizational activities. Many researchers (Podgorodnichenko, 2020; Aust(Ehnert), 2020) in the field of sustainable HRM insist on its much broader understanding than purely ecological (green) HRM (HRM practices and policies that take into account the impact of the organization and the environment), socially responsible HRM and employee-oriented HR practices (aimed at the development of human capital).

The research, provided by Podgorodnichenko et al., 2020 contributes to the sustainable HRM literature by providing support for the proposition that elevating the status of employees, as an organizational stakeholder, is best exacted through promotion of a sustainability agenda, and recognizes employees as an important HRM stakeholder in different roles, such as: i) a pivotal driving force of organizational performance; ii) recipients of organizational HR policies and practices; iii) members of a community (Podgorodnichenko, 2020).

The research of Guerci et al. claims that the members of the HR professional community can increase their job satisfaction and decrease their intention to leave by implementing sustainable HRM: when HR professionals and managers are involved in sustainable HRM perceive their job to become more meaningful as it has a broader

scope(Guerci, 2019).

In XXI century organizations must take into account that they cannot exhaust and exploit ecological, social, or human resources to achieve their organizational goals. Sustainable HRM is based on the pluralism of voices from the organization's stakeholders - shareholders, employees, trade unions, state bodies, environmental protection organizations, municipalities, representatives of public organizations that take care of social problems and ecology(Nuis, 2021).

The most interesting view on the conceptualization of sustainable HRM is offered by the study of Aust (Ehnert) et al., which proves the separation of the new concept of Common Good HRM from among the concepts of Green HRM, Social Responsibility HRM, and Triple Bottom Line HRM. The concept of Common Good HRM has a different direction of focus – not inside the organization to outside, but on the contrary – from the outside – the task of contributing to the solution of "grand challenges" – to inside – using HRM competencies, skills, knowledge, and attitudes to contribute to the common good. In this study, the authors provide examples of Common Good HRM practices in response to challenges: i) in-work poverty and exploitative working conditions in supply chains; ii) Lack of labor voice; iii) (youth) unemployment and job insecurity (Aust, 2020).

Let's see how the concept of sustainable HRM develops in new global challenges: the COVID-19 pandemic, the military aggression of the Russian Federation in Ukraine, and because of it, the strengthening of the energy crisis and migration of refugees in Europe.

As the pandemic went on, well-being remained paramount in organizational leaders' minds. Conversations about the toll of social isolation and economic recession on workers' mental and emotional health entered the public dialogue, and keeping workers physically healthy and safe continued to be a top priority. According to the 2020 Deloitte Global Human Capital Trends survey, well-being had the largest gap between importance and readiness across this year's trends, with 80% of organizations saying worker well-being is important or very important for their success over the next 12–18 months, but only 12% saying they are very ready to address this issue. 61% of respondents said that their organizations are not measuring the impact of well-being on organizational performance at all, and those respondents whose organizations did measure well-being's impact on performance were most likely to report that that impact lay largely in improving the workforce experience. The 34% companies have programs around workers' physical, financial, and even emotional health (Schwartz, 2022).

In the 21st survey report exploring absence and wellbeing practices in UK workplaces, in partnership with Simplyhealth, the strengthening of well-being strategies can be observed in pandemic 2020-2022 years (figure 1). However, report their allocated budget for wellbeing benefits has increased as a consequence of the pandemic (only 26% say it), with the majority saying it has remained the same – 59% of respondents. Most organizations make some effort to promote 'good work', collective/social relationships, values/principles and physical health; Financial wellbeing remains a more neglected area (Health, 2021).

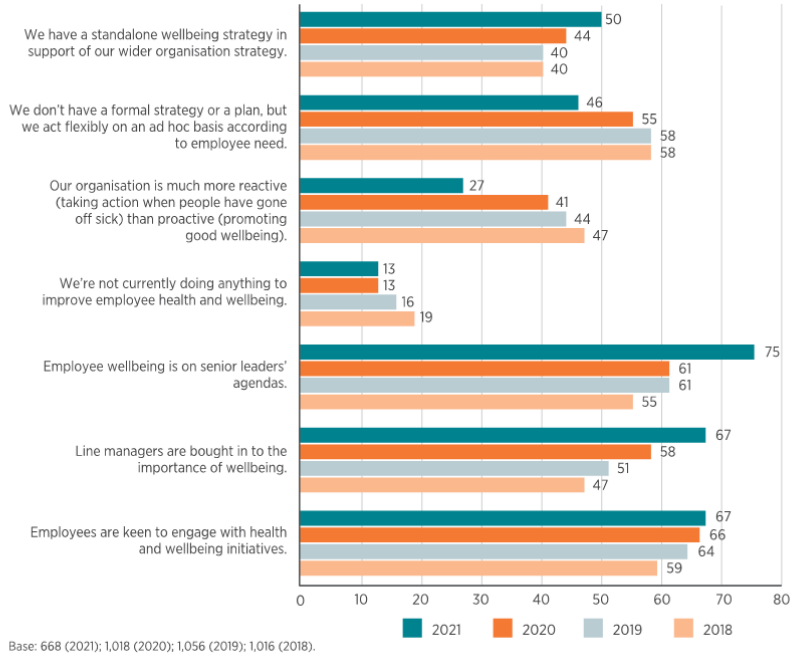

Fig. 1. The position of health and weiibeing in organisations (%)

In the 2021 Deloitte Global Human Capital Trends survey, executives identified "the ability of their people to adapt, reskill, and assume new roles" as the top-ranked item to navigate future disruptions, with 72% selecting it as the most important or second most important factor. Workers themselves recognize the imperative to change as well, with 60% of the 10,000 workers in this year's Voice of the European Workforce study identifying "capacity to adapt" as the most relevant skill they will need to thrive in the labor market (Schwartz, 2022).

Research on how HRM-strategies and practices are changing in relation to the challenges of the intensification of international population migration processes, especially those caused by the Russian-Ukrainian war, is still ongoing, gathering current data for analysis. Individual refugees from Ukraine recorded across Europe since 24 February 2022, as of 29 June 2022 have reached 5,493,437 people (Ukraine, 2022). Hirst's review (Hirst et al., 2021) concludes that HR professionals not only recruit refugees directly (which belongs to the concept of traditional resource HRM), but may also champion changes in industrial relations laws to streamline visa and employment processes and initiate internship programs to gain professional experience by refugees. HR professionals play a role in the social responsibility initiatives adopted by many organizations to foster social inclusion and diversity, and address systemic social problems (Ulrich & Dulebohn, 2015). Applying the theory of cumulative disadvantage to examine more than 10,000 respondents from nine post-socialist countries, Ivlevs and Veliziotis (2018) found that displaced people who had fled conflict, especially women,

are more likely to be long-term unemployed, experience job loss or work informally (Hirst, 2021). The authors of a study on Ukrainian migrants and refugees in Poland (Adamczyk, 2022) come to a similar conclusion: Ukrainian refugee women have a less desirable worker profile than Ukrainian labour migrants. In this context, the employer can act as an information intermediary, so to speak, setting a path for the legalisation of the migrant's stay. It is possible because that legal act, in fact, has equalised access to the labour market for war refugees (Adamczyk, 2022).

Possible programs of Common Good HRM in the plan of integration of refugees in the receiving country can be:

- direct employment of refugees as a manifestation of diversity and inclusion policy;
- programs to confirm and formalize existing qualifications of refugees, which will facilitate employment in decent work. For example, the "USE-IT" program developed by the NHS in Sandwell and West Birmingham aimed to overcome skills shortages in the health professions. I by hiring disabled or unemployed refugees with medical qualifications. By offering work experience and assisting participants to gain registration with a relevant professional health institution, the program has identified a previously untapped workforce pool (Eastwood, 2006; Stewart, 2007);
- language course programs (use of linguistic competences of employees to teach the language of the host country);
- coaching programs to help refugees develop a "life resume" that clearly articulates their experiences and opportunities (Schultheiss, Watts, Sterland, & O'Neill, 2011), apply "life space mapping" to encourage refugees to value their biographical and professional experiences (formal, informal and non-formal) while building one's career (Słowik, 2014);
- psychological adaptation programs to overcome depression, psychological confusion and stress;
- volunteer housing assistance programs for refugees as social responsibility programs that promote greater integration and cohesion (Hebbani, Khawaja, & Famularo, 2016);
- professional training programs for refugees. Thus, German corporations (such as Daimler, Telkom, Allianz, and Siemens) have responded to the European refugee crisis by working with governments to develop employment programs that address the specific needs of refugees and benefit the organization (Weber & Larsson-Olaison, 2017);
- organization of cooperation of HRM units and specialists with governmental and non-governmental organizations to improve access to health care, education and public services to support the needs of refugees and their families;
- organization of educational programs on combating labor exploitation, human trafficking, discrimination at work based on familiarization with international and national labor legislation, humanist corporate cultures and HR policies;
- promoting the social integration of refugees by organizing and holding social events for refugees and their children (tourist and industrial excursions, master classes, cultural events). [10]

Green HRM involves undertaking environment-friendly HR initiatives resulting in greater efficiencies, lower costs and better employee engagement and retention which in turn, help organizations to reduce employee carbon footprints by the likes of electronic filing, car-sharing, job-sharing, teleconferencing and virtual interviews, recycling, telecommuting, online training, energy-efficient office spaces etc. (Mandip, 2012).

The EU has agreed to cut its gas consumption by 15% in an attempt to stave off a winter crisis triggered by a sharp reduction or total shutdown of Russian gas supplies to the bloc from August, 2022 until the end of March 2023. Such unexpected challenges of a national scale encourage the actualization of the "outside-inside" approach of the Common Good HRM concept. This can be implemented by:

- digitization of HR procedures: virtual interviews, teleconferences, processing, online training of employees, remote work;
- initiation of programs for energy-saving redesign of office premises;
- organizational support of employees' environmental initiatives and their proactive environmental behavior;
- formation of ecological thinking not only among employees, but also among the general population at their locations by conducting educational environmental training, master classes on the use of energy-efficient technologies in households;
- inclusion of environmental competence in corporate models of competences and relevant HR practices: recruiting, evaluation, training and development of corporate culture and eco-awareness.

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SOCIAL AND CULTURAL ISSUES OF SUSTAINABLE DEVELOPMENT

APPROACHES TO MOTIVATING PROCESS-ORIENTED AND RESULTS-ORIENTED EMPLOYEES

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Introduction. In this context, the concept of dividing employees into two principal types comes from the human factor - temperament. Since the division of labor, occupational classifiers have been prototyped, which include many professions, necessary knowledge, and skills as well as all types of responsibilities. The recruitment department should have in mind, from the beginning of the job opening, a certain profile of the future employee, so that he or she is as motivated and involved as possible in the tasks assigned to him or her.

Approaches to motivating process-oriented and results-oriented employees

A motivational program focuses on the optimal use of the available workforce to meet company goals and, at the same time, on knowing and developing the personality of the employee [1].

Employee productivity and innovation are the fuel driving businesses forward. Involved and motivated employees generate ideas and plans, but they will stop if employees feel constrained. Managers face a constant struggle of keeping employees motivated and engaged while also staying within the parameters of a company's policy [2].

Similarly, to employees, companies are divided into process-oriented or partially process-oriented (production, assembly line) and partially or completely result-oriented (sales, consulting, IT, etc.). Understanding in which company the incentive system is being developed, it is necessary to determine the number of process-oriented positions. The most popular is the BPMN system or similar. After that, it is necessary to understand the number of employees involved in process and performance work. These actions will help the recruitment department to understand the prevailing type of employees in the company.

The process-oriented individual is the perfectionist who is keen on verifying that they have completed each step of the process according to the instructions. When confronted with material handling equipment, they seek out the policies and procedures of how to handle that equipment rather than making up their own rules. They understand that compliance can drive growth, taking care to follow the precautions advised for each step of the process.

Result-oriented people are the ones who have a clearer view of the forest rather than consideration for and every plant in it. These are the people who have a distinct

drive towards their career, and they know where they want to be in say 5 years from now or 10 years. Result-oriented individuals may not know specifically what they will be doing tomorrow, but they have a definite sense of direction which realigns them to their short-term and long-term goals [3]. The main differences are summarised in figure 1.

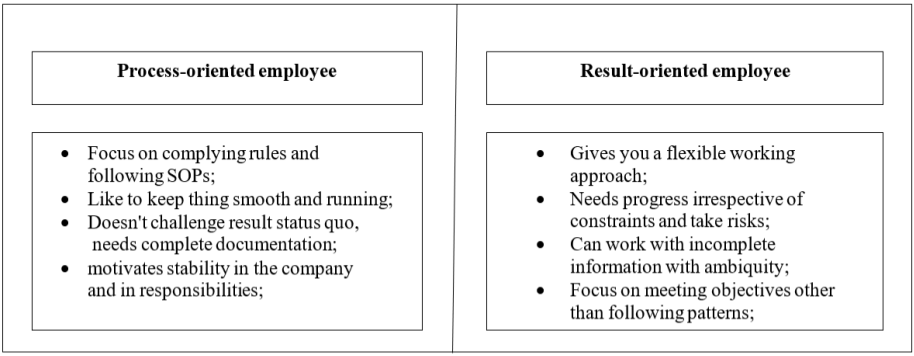

Fig. 1. Main differences between process and result orientation employee

As for approaches to motivation of these types of personnel based on Figure 1, the authors can conclude that the process-oriented employee is more suitable to motivation with minimal risk for him, and the employee focused on the result should be rewarded for the risk and for over-performance.

The authors identify the top material incentive for process-oriented employees:

1.Stable salary (monthly rate, salary can consist of stable part and a variable part, but a variable part can be 0-30%);

2.Gradual increase in the monthly income (at least 5% per year);

3.Bonus for the absence of failures in the process;

4.Extra bonus for improvement of current process;

At the same time, for the result-oriented employee the most effective types of material motivation will be:

1.The monthly salary should consist of a stable part and a variable part (the optimal ratio depends on the position of the person - at least 30% stable part);

2.The variable part includes bonuses (bonuses should have extra levels for extra achievements);

3.These positions should not have a maximum value for the salary.

The advice for implementing this separation of employees may include the following:

1.Companies should group the same type of employees in one department so that the chosen system of material motivation would give the greatest result.

2.The Recruitment department must scrupulously select jobseekers to fill the positions, which is extremely important, because a violation of the principles of these approaches is accompanied by rapid staff burnout, which may result in an increase in the personnel turnover rate.

3.Companies should implement regular monitoring of personnel motivation toidentify possible changes in the types of employees, as well as to promptly react to the

already obsolete elements of the motivation system.

Conclusion Employees play a key role in the implementation of the overall business development strategy. The efficiency of business processes, and therefore the overall success of the enterprise, is affected by the performance of properly motivated employees [1]. A deep understanding of the psychological aspects of motivating individuals helps to obtain the best results at optimal expense. Using the approach described in this paper, employees will be more motivated due to individualization of material motivation. Also, this approach will give the increased involvement in work and will reduce a rate of personnel turnover.

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DEMOGRAPHIC AUDIT OF TERRITORIES IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

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Audit is one of the popular tools of socio-economic management, the scope of which has gone beyond the traditional corporate level and can cover multi-level objects - from the resources of a particular individual to the resources of territories. In the economic literature and practice of social management, audit in a wide sense is the systemic process of estimating the objective data about the economic performance and feasibility, which establishes the equivalence of their performance criteria and gives the correct results. In this study, we will focus on such a type of audit as an audit of territories. Its ultimate goal is to determine the rationale for priority areas for the development/recovery of a particular territory (a group of countries, country, region, city, settlement) depending on its current state, available resources and potential.

In the scientific literature, the concept of "audit of the post-conflict territory" is presented, which the researcher V. Mykhalska interprets as (Mykhalska, 2019):

1) a methodology that involves a technical assessment of the needs and development of the transition period strategy;

2) a process of consultation, negotiation, and analysis that provides a platform for agreeing on the common priorities of national and international actors as they prepare their projects and programs.

We believe that the demographic audit should be used at the level of any territory, regardless of its status, although it is undoubtedly of primary importance in post-conflict

territories. We identify the demographic audit of the territory as a systematic, independent process of assessing the current state of the demographic situation and the parameters of the relevant processes in a certain territory; determination of quantitative and qualitative indicators of the population and its structure; assessment of the effectiveness of the demographic policy and its compliance with the tasks of development/ recovery of the territory.

In our opinion, the demographic audit of the territory can perform various roles:

strategic management tool;

crisis management tool;

the basis for the formation of personnel policy of the appropriate level.

This type of audit correlates directly with the Sustainable Development Goals (SDGs) to a certain extent, namely - Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Making cities safe and sustainable means ensuring access to safe and affordable housing, investment in public transport, creating green public spaces, and improving urban planning and management in a participatory and inclusive manner. In our opinion, the achievement of SDG11 is not possible without a clear understanding of the size and structure of the population, their prospective dynamics, the needs of certain social groups of the population, etc. The use of demographic audit in the practice of state and regional management will contribute not only to the achievement of SDG11, but also to such a set of goals, since they are directly related to the quantitative and qualitative characteristics of the human resources of the territory (Sustainable, 2022):

·SDG 1. End poverty in all its forms everywhere.

·SDG 3. Ensure healthy lives and promote well-being for all at all ages

·SDG 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

·SDG 5. Achieve gender equality and empower all women and girls.

·SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Recently, there have been negative trends in the demographic sphere in the world which, according to experts, will continue to worsen (The Sustainable, 2022):

1.Disaster-related deaths Rose sixfold in 2020 (largely as a result of the Pandemic).

2.About 1 in 10 people worldwide are suffering from hunger.

3.Number of refugees outside their country of origin increased by 44% between 2015 and 2021.

4.A record 100 million people had been forcibly displaced worldwide (May 2022).

5.An estimated 41% of people forcibly displaced worldwide were children (2021).

In Ukraine, the demographic situation in recent years is generally unfavorable, although certain positive values of demographic indicators were observed in some regions. In addition, Ukraine is among the 30 oldest countries in the world in terms of the proportion of people aged 60 and over. According to the national demographic forecast until 2025 (which was compiled until February 24, 2022), the share of people over the age of 60 will be 25.0% of the total population, over 65 years old - 18.4%, in 2030 - over 26% and over 20%, respectively (Demohrafichni, 2018). Consequently, Ukraine assumed international obligations regarding the implementation of the 17 Sustainable Development Goals for the period up to 2030, adopted at the UN Summit in September 2015.We should note that it is obvious that as a result of the war in Ukraine,

not only the number of the population, but also its age structure will change significantly. At the same time, the main tasks of the state and regional socio-economic management will be connected, first of all, with the recovery of the territories most affected during the war, and the recovery of the national economy.

The growing relevance of conducting a demographic audit of territories requires in-depth scientific and methodological development of the methodology of its implementation, which will become the content of further scientific research. In the study (Mykhalska, 2019), the markers of the demographic audit of post-conflict territories, which is considered together with the economic one, are defined as:

conducting a population census with determination of the rate of internal (within various settlements of the occupied territory) and external (from the government-controlled territory of Ukraine and other states) migration;

identification and determination of places of residence of internally displaced persons;

population employment.

We believe that they can be significantly expanded and specified, and one of the approaches can be conducting an audit using indicators of sustainable development (social, economic) and indicators of state statistical reporting (national, regional) on demographic issues.

During the demographic audit, it is important to give preference to the confirmatory audit and the audit of "risk zones". The confirmatory audit is aimed, first of all, at forming a real picture of the number and structure of the existing population of the territory. When conducting it, we consider it necessary to clearly identify the population currently living in the territory, according to the following groups:

labor force (as a resource for growth/restoration of the region's economy);

potential labor force (those who in the near future / under certain conditions can replenish the workforce of the region);

economically inactive population of working age (a part of the population that should not be taken into account as a resource for growth/restoration or those to whom specific management actions should be directed);

socially vulnerable categories of the population that need additional support or the creation of special conditions for participation as part of the labor market participants.

Demographic audit of "risk zones" is the most difficult type of audit, the main purpose of which should be to establish those demographic factors, signs of the demographic situation, processes that will significantly hinder the effective management of the territory, its development or recovery.

Demographic audit of the territory, depending on the situation, can be carried out both internally and externally. In the first case, it is initiated and organized by local authorities (with the participation of all necessary groups of experts and consultants). This type of audit should become an integral element of the system of socio-economic management of the territory. In the second case, the subject of the demographic audit is external to the institution's territory, who need access to current data on the demographic situation in the region (state institutions, international organizations, investors, etc.).

Thus, the demographic audit is one of the modern management tools, its practical implementation on an ongoing basis into the socio-economic management system will allow to reasonably develop programs for the development/restoration of territories based on objective data regarding the demographic situation and the existing population,

human resources.

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MODERN PERSONNEL TRAINING TECHNOLOGIES AS A DRIVER FOR SUSTAINABLE DEVELOPMENT

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The sustainable development of the countries' economics and business entities at the corporate level is based on the achievement of 17 goals, among which a special place is occupied by the education and training of personnel. Thus, Goal 4 "Quality education" directly concerns these issues. It is designed to provide not only inclusive fair and quality education, but also stimulates lifelong learning opportunities for all (Sustainable, 2022). In addition, we believe that the following sustainable development goals are closely related to the issues of personnel training and development:

Goal 1 "No poverty" (the availability of education and its demand in the labor market a priori enable an individual to get a job and, as a rule, a reward that ensures life above the poverty line);

Goal 8 "Decent work and economic growth" (in modern conditions, the personnel and their knowledge arethe main drivers of economic growth, and workers who have received a modern and high-quality education are more likely to find work with decent conditions);

Goal 9 "Industrialization, Innovation and Infrastructure" (production of innovations is the result of the activities of employees with high-quality specialized education and actively involved in the system of lifelong learning).

Also, in our opinion, Goal 3 "Good health and well-being" correlates with the individual's level of education, since individuals with a higher level of education perceive their health as a value and are ready to invest in its maintenance (restoration). Thus, it is obvious that the use of modern learning technologies at all levels of the economy will contribute to the comprehensive achievement of sustainable development indicators.

Educational technologies at the corporate level have been undergoing significant

changes in recent years - from the digitalization of learning processes to a shift in emphasis from Hard Skills to SoftSkills.

For example, Starbucks initiated anti-bias training for employees in the US and Canada to combat racial and ethnic bias (Po-novomu, 2022). At the same time, modern educational initiatives and training programs help HR professionals retain employees, increase team morale, and reduce recruitment and onboarding costs (Po-novomu, 2022).

Modern trends in the development of personnel management systems in Ukrainian companies determine the following areas of training for employees in 2022 (Makukha, 2021):

First, a key bet is placed on Power Skills (previously they were called Meta Skills) - the ability to manage, work in a team, communicate, tell stories and think strategically. Additionally, skills such as empathy, humility, and compassion are said to be the most enduring and powerful skills in business.

Secondly, huge growth is expected for the services of coaches. Although such a concept as "coaching" appeared more than 20 years ago, now a new wave of popularity of this field is being observed.

Thirdly, the focus of training is changing from business to people. Business-centrism says that the emphasis should be on business management, and people-centrism - on the management of people, because they are the ones who drive the business forward. Therefore, instead of being tied to material rewards, you need to inspire them, encourage them and build effective relationships with them.

Among the sectors of the economy, personnel training technologies in the IT sphere are developing most rapidly. Today, it is the environment for the active introduction of innovative products, which requires employees to have specific competencies and their constant updating.

Ukraine has a strong scientific base and an extensive network of publicly funded technical universities. Of the 1,700 educational institutions in Ukraine, 150 offer IT bachelor's degree programs. The most powerful education centers form clusters of companies in their regions (Kyiv, Kharkiv, Dnipro-Zaporizzia, Odesa, Vinnitsa, Lviv-Ivano-Frankivsk, Ternopil). The significant demand for Ukrainian talents is due to the high educational level of Ukrainians. Ukraine ranks 47th out of 189 (between the UAE and Italy) according to the UN Education Index. In general, the education index of Ukraine corresponds to the level of foreign countries. A typical Ukrainian IT worker has higher (often technical) education, at least an intermediate command of English, and 2 or more years of experience (Ukraine, 2022).

The IT business is an interested stakeholder in the education system of Ukraine. So far, the demand for new IT specialists has been significantly exceeding the capacity of Ukrainian higher education institutions (HEI). A response to this has been the emergence of numerous institutions of non-formal IT education, offering intensive training courses for new Junior-level specialists. Non-formal education prepares 10-12 thousand new IT specialists yearly. According to the IT Ukraine Association, their number will grow to 20-25 thousand in the coming years (Ukraine, 2022).

Due to the shortage of qualified employees, some companies have created their own talent training programs, which allow people from other industries, to obtain IT education and employment opportunities. Among the Ukrainian companies that have chosen this path are EPAM, SoftServe, Luxoft, ELEKS, and Beetroot.

IT companies also create educational programs in cooperation with educational

institutions - 8 out of 10 companies fund educational projects (Ukraine, 2022):

51% - Internship programs for schoolchildren/students;

41% - IT courses for the general public;

41% - Educational projects for schoolchildren/students;

19% - Scholarship projects for schoolchildren/students;

18% - Competition programs for schoolchildren/students.

IT companies create a life-long learning culture, which is one of the drivers of achieving sustainable development (Fig.1).

Fig. 1. Areas of support by IT companies a life-long learning culture (Ukraine, 2022)

A feature of the IT sphere that affects the nature of personnel training technologies is that employment of switchers is becoming the norm for the Ukrainian IT market. 82% of companies are already hiring or plan to hire switchers – people who came into the IT industry from other professions.

The main challenges in the field of non-formal education (Ukraine, 2022):

1.Competition for teachers with IT companies that can offer better compensation.

2.Insufficient communication with IT companies on education standards and requirements for new professionals.

3.Significant difference in the quality of training providers.

Thus, in the system of corporate personnel management, IT companies should introduce personnel development programs and educational technologies that would respond to these challenges, correspond to the values of employees and the company's strategic objectives.

The conducted research shows that in the conditions of the spread of remote work, IT companies actively conduct regular trainings in Digital and Remote skills to help employees learn to work remotely more effectively. In addition, gamification elements are used during the implementation of training programs, and chatbots are popular technical solutions.

As experts note, that in modern conditions, a new wave of corporate training is gaining strength. The time of interactive platforms, micro-learning, modernized learning management systems (LMS) based on artificial intelligence and virtual reality is coming. Carriers of knowledge in the new configuration are not only teachers, but also the employees. Interactive learning platforms, distance learning, micro-learning platforms, material delivery tools (author's video, business games, simulation of situations, VR), content library (LYND A, UDACITY, EDX, SKILLSOFT), learning management platforms (LMS, CORNERSTONE, WORKDAY, LITMOS), learning history repository (GRASSBLADE, SALTBOX) can be used (Pysarevsjka, 2021).

Thus, in our opinion, the development and implementation of modern technologies for personnel training the of an IT company should be a priority task of corporate

personnel management. Corporate personnel training technologies have a dual mission:

at the tactical level – training employees to solve unique professional tasks through the development of completeness that will be in demand in the future;

at the strategic level – support of sustainable development indicators for all subjects of economic relations.

At the same time, when company is designing personnel training technologies, as well as a complete personnel management system, it is important to take into account not only the determinants of the external environment (digitalization of the labor market, educational trends, the strategy for the development of the national economy and the industry, etc.), but also such characteristics of the company's employees as their values, motivation, loyalty and engagement.

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PRINCIPLES OF SUPPORTING THE SOCIAL RESPONSIBILITY OF BUSINESS

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Modern business development in Ukraine takes place in difficult conditions of martial law and the economic crisis. Therefore, manifestations of social entrepreneurship and volunteer movement are often observed, aimed at the speedy victory of Ukraine in the war. Unfortunately, there is no 100% transition of business entities to a socially responsible type of activity in the country. As part of a large number of reasons holding back businesses from implementing the principles of sustainable development, two main ones should be mentioned:

lack of sufficient financial resources and low profitability of production and economic activities. This significantly limits the amount of funds that businesses can use to address the social and environmental problems of the region, country and the world;

lack of understanding of the necessity and expediency and internal need of the management and top management of the enterprise for socially responsible behavior in business.

Both reasons are related to the fact that business representatives consider social responsibility as an additional direction of financing funds. At the same time, funds are

always not enough to implement even operational tasks of an industrial and economic nature. That is, business representatives are not aware of the positive shifts and benefits that business entities receive from taking on social responsibility responsibilities. Socially responsible business receives a number of image advantages and preferences. This allows in the future to significantly increase the material component of the enterprise. To do this, the business philosophy must be radically changed. The determining factor should not be the availability of free funds that can be directed to the implementation of socially useful actions of business entities. On the contrary, the socially responsible behavior of entrepreneurs will gradually form their attractive brand as an employer and producer in the national and international markets. Under these conditions, the demand for their products or services will increase, and hence the trend of profit growth will appear [1]. Profit growth will further expand the range of charitable causes and manifestations of socially responsible behavior in business. It is this transformed idea of business functioning that has become the foundation of the concept of corporate social responsibility. Today, this concept is the leading strategy for most successful companies in the world and should cover the maximum number of Ukrainian business entities.

In order to accelerate the transition of Ukrainian business to socially responsible behavior, it is important that the top management of enterprises clearly understand the principles of socially responsible business activity. The main principles to be considered are:

1)transparency, accountability and comprehensive disclosure of information about the impact of the production and economic activities of the enterprise on the environment and society. The principle is implemented in posting on the website of the enterprise, presentation and publication in open sources of a non-financial report on the activities of the enterprise in order to maximize the coverage of all aspects of the negative impact of its activities on human life and the measures taken by the enterprise to minimize them;

2)responsibility to society for the risks from each managerial decision taken. The principle is implemented in a deep analysis of all possible consequences that may appear now or in the future when making a certain decision;

3)innovative development of all spheres of functioning. The principle is manifested in the renewal of production technology and continuous professional and personal development of the staff. This should improve the environmental friendliness of the business and gradually build a positive employer brand in the market;

4)orientation towards humanity, morality and a sense of public duty to future generations of mankind. The principle says that universal human values must underlie all the strategic goals of the company.

In order for these principles to be implemented in practice, support must be formed in society for the development of a culture of social responsibility of business, and any manifestations of socially responsible behavior of entrepreneurs should be valued.

It should also take into account the influence of a complex of internal and external factors that determine the vector of the enterprise's behavior. The choice by a business entity of the social orientation of activity depends on a large number of factors of a stimulating or restraining nature. The main stimulating factors include:

economic success of management and profitability of the enterprise. This allows you to accumulate free funds and direct them to solve specific problems of a social and environmental nature;

empathy and open position of the company's management to understand the need to participate in solving urgent social problems of the territory of its location;

technological leadership based on the introduction of innovative technologies into production. This makes it possible to significantly reduce the polluting impacts on the environment and reduce the consumption of natural resources, ensuring their cyclicity and recurrence.

Factors hindering the spread of the principles of social responsibility among business entities are:

civic passivity, ignorance and disinterest of the management and top management of the enterprise in directing resources to any social and environmental problems. These funds, in their opinion, are net sunk costs (losses);

the difficult financial condition of the enterprise and the lack of real opportunities for the implementation of measures within the framework of socially responsible behavior.

The activation of socially responsible behavior of enterprises will be achieved due to the fact that conditions will be created at the regional and state levels to maximize the effect of stimulating factors and reduce the effect of deterrent factors. On this basis, it is possible to achieve a revival of the processes of social responsibility in the Ukrainian business environment.

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PROBLEMS OF THE UKRAINIAN LABOR MARKET AT THE PRESENT STAGE

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The war radically changed the situation on the Ukrainian labor market. Since the end of February 2022, there has been a significant slowdown in all processes. We could observe positive growth dynamics in the labor market in Ukraine since May 2022. The revival of economic activity in the manufacturing sectors of business and the service sector can be associated with the beginning of the adaptation of companies to conditions of war. Some companies have moved their production facilities to rear regions. Other companies have completely transferred their business to online. Some companies adapted their business operations to wartime conditions with flexible work shifts and safety instructions for their personnel. Companies that before war implemented the principle of personnel interchangeability, were able to quickly start work and ensure the uninterrupted operation of their business.

Of course, the general trend continues to be negative. Some companies have ceased operations or moved their business to other countries. Most companies continue to cut staff, cut wages, which today are on average 30-50% below the pre-war level. The

number of open vacancies is much lower than the number of applicants, even in the IT specialist market. About 8.8 million people left Ukraine, and most of these people are not going to return. This means a big problem for businesses in the near future. Companies will face the question: where to get enough staff with the necessary skills and supplies? As a result, there will be problems for the state with the payment of taxes and deductions. And as a result - a decrease in the number of potential customers for small and medium-sized businesses. The positive aspect in this situation is that professionals and specialists who return to Ukraine will bring new experience, knowledge, new foreign practices and connections. This should help the restoration and development of business, the number of candidates who speak foreign languages will increase. Companies should be ready to accept and implement this experience.

Employers are faced with the fact that employees are in an unstable psychological state. This requires managers and HR departments to interact individually and search for solutions in manual mode, solving personal, everyday issues of their subordinates. All this complicates the work and increases the load on HR departments, but building an automated solution system is currently not possible.

The issues of staff motivation and retention are becoming "sick" and relevant for companies. This is due to the fact that the issue of personal safety for the employee comes first and his decisions can be emotional and not always balanced. This may lead to the desire of workers to quickly dismiss or change their place of residence. Therefore, companies must daily "keep abreast", "hear" their employees, be ready for any personnel decision.

Managers and HR should be able to maintain their own level of empathy, master new psychological support programs, be able to make prompt decisions in non-standard situations. Companies continue to actively develop and implement programs for rapid training of employees with new knowledge, programs to ensure interchangeability at work. This is important to ensure the smooth operation of the company, mental health programs and the active development and implementation of social responsibility policies in companies.

Due to staffing shortages in the near future, businesses need to continue to build equal work environment programs for employees of all ages, generations, backgrounds and locations. It is advisable for enterprises to develop and support talent pool programs and cooperation with universities. It is especially important to work with students, as this is a chance to prevent an even greater outflow of our youth abroad.

Short-term planning, prompt decision-making and risk assessment come to the fore among the competencies of the management team. We do not have step-by-step instructions for doing business, for working with personnel, for retaining and motivating personnel in war conditions. Professionals in business cooperate, exchange experience, look for answers to these questions. They note that one of the main criteria for the correctness of movement on this path is faith and optimism in an early victory and the beginning of a new economic growth in Ukraine.

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THE CURRENT STATE OF THE LABOR MARKET IN UKRAINE: PROBLEMS AND DIRECTIONS FOR THEIR SOLUTION

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The Ukrainian economy is in a deep crisis. This state of affairs is due to many reasons. First, these are unsuccessful long-term power decisions and corruption. Secondly, this is the annexation and occupation for eight years of part of the country's territory and the forced internal displacement of the population because of this. Thirdly, this is the annual reduction in the number of the country's inhabitants due to the negative natural movement of the population and the high level of labor migration of Ukrainians. Fourth, these are the consequences of the pandemic due to the growing incidence of COVID-19. Fifth, this is a full-scale military attack by the Russian Federation. It is impossible to overcome the manifestations of this very complex crisis situation that has developed today in the socio-economic sphere by any one managerial decision. Even if this decision is the most ingenious. We need a comprehensive approach that will allow step by step to change the situation for the better in all spheres of the country's life without exception. This approach should allow you to quickly get the first visible results. At the same time, the probability of returning Ukrainians from abroad in the post-war period will depend on the time that will need to be spent on restoring the Ukrainian economy and creating favorable conditions for the life and work of the population. This is important, since at the moment a large number of Ukrainian women and children have temporarily left for the territories of other countries of the world in search of safety due to the start of Russian military aggression. If this is not achieved, there is a fairly high probability that forced Ukrainian migrants will not only not return, but their flows will even increase (Zakharova, 2019).

All of these problems, which have recently become aggravated in the country's economy, have had a negative impact on the state of development of the labor market in Ukraine. There is now a noticeable slowdown in all transactions. This happened as a result of the shutdown of a certain number of large industrial enterprises, the death and

displacement of the population across the country and abroad, the relocation of enterprises where production technology allows it. Even if there is a need for specialists, enterprises do not use the services of recruitment agencies due to lack of financial opportunities. Enterprises search for candidates among the local population and temporarily displaced persons. This way out of a difficult situation has several negative consequences. First, there is a depreciation and release of highly professional HR specialists due to the inability to pay for their services by enterprises. Secondly, it is quite difficult to give a 100% guarantee of the quality of the personnel recruited by the enterprise. That is why this will have a negative impact on the further financial and economic results of enterprises. The way out of the situation should be the maximum involvement of the personnel reserve and the formation of polyvalent competencies among the staff. This will allow for the period of the crisis to keep the team and carry out the planned production volumes. Provided that the situation on the labor market improves or the profitability of the enterprise's activities increases, management will be able to return to the previous patterns of search and recruitment of personnel.

Due to the departure of Ukrainian specialists abroad or moving to safer regions of the country, for most of them there was an acute problem with employment and the lack of jobs in their profession at the place of residence. The longer the war continues, the more this problem will escalate and gain destructive proportions. Therefore, already today at the state level, real opportunities should be created for training specialists for professions in demand. In the near future, it will be possible to include professions within such areas of activity as agriculture, construction, education and the IT sector as part of such professions. We also expect a high demand for the profession of psychologists, since the psychological state of the majority of the population of Ukraine needs medical correction due to a long stay in danger and a real military threat. The presence of a person with basic knowledge and experience will reduce the time for training in-demand specialists. That is why even today, when the country is still at war, it is necessary to develop programs for retraining the population in those professions that will be useful in the post-war period. This will significantly reduce unemployment and improve the level and quality of life of the population.

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REGIONAL FEATURES OF SUSTAINABLE DEVELOPMENT

PECULIARITIES OF THE DEVELOPMENT OF CONVERGENT AND DIVERGENT REGIONAL SPACE PROCESSES.

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As the latest studies show, regional policy has recently significantly changed its content, the priority is the integration of all processes and participants involved in regional processes, and therefore the unification of the potentials of each territorial unit becomes the main emphasis in the new regional development system.

Theoretical ideas about the essence, forms and nature of regional development are constantly expanding and improving. The concept of regional development, which is divided into two opposing theories in terms of content, is considered the universally recognized basis of the regional economy: representatives of the first theory - advocate the possibility of convergent regional development, representatives of the second theory - insist on the divergence of the levels of regional development. If the representatives of the first theory emphasize the need for unification and convergence of economies, then divergents see possible effective economic development of regions due to the concentration of all factors of production in potentially developed territories. A more detailed examination of each theory made it possible to interpret them (Fig. 1.).

Convergent relations involve an active exchange of production factors, which takes place bilaterally.It is mutual exchange that contributes to the increase of the potential of regions, for example, weak regions are donors of labor resources, developed regions are donors of technologies.In addition to interregional cooperation, there are also connections with the external environment, which increases the competitiveness of the regions.As a result, a mutual balance of socio-economic development of regions and active integration between all territories is formed.

Fig. 1. Interpretation of the content of convergence and divergence processes at the regional level Source: compiled by the author

Divergent connections involve the concentration of existing factors of production within more powerful regions with the subsequent borrowing of positive experience by regions lagging behind in terms of the level of socio-economic development, at the same time, connections are made, as a rule, with the external environment of the economic space and the formation of the corresponding poles growth, in which all the processes of innovative development of the country take place. That is, the divergence manifests itself in the transfer of resources from weak regions to developed ones, which further deepens the disparities in the socio-economic development of the territories.

Thus, the main difference between convergent and divergent processes lies in the

scale of territorial coverage, the directions of movement of factors of production, the strengthening of the role of individual territorial units and the opposite vision regarding the vectors of the country's overall development - as directed development of several powerful regions or as balanced development of all regions.

Given the presence of convergent and divergent processes in the economic space, various currents of regional development have been formed, which see the existence of both of these approaches and have their own advantages and disadvantages.Y. Hajiyev details the directions of regional development and, on this basis, singles out five theories of regional development that are related to convergence to one degree or another, in particular [5]:

1. Neoclassical theories based on the production function.
2. Cumulative growth theories as a synthesis of neo-Keynesian, institutionalist and economic-geographical models.
3. New theories of regional growth based on increasing returns to scale and imperfect competition.
4. New forms of territorial organization of production based on industrial and regional clusters, knowledge economy, national and regional innovation system.
5. Other theories that explain certain issues of regional growth.

Based on the results of Yu. Hajiyev's research, we were able to establish that the fundamental currents that have formed in scientific thought include two main directions of economic theory: the convergent one, which includes neoclassical theories, and the divergent one - based on neo-Keynesian, institutionalist and other currents.

The analysis of theories of regional development allows us to conclude that the vast majority of researchers advocate the convergence and integration of regional economic systems.If we talk about the reduction of the level of differentiation of regions and the convergence of their level of development, then such processes are highlighted by representatives of the neoclassical theory of regional growth, who emphasize the temporary nature of such differentiation, which is resolved by combining production and spatial factors and strengthening the interconnection of their markets.

Therefore, the study of the essence and content of convergent relations within the framework of the general theory of regional development allowed us to draw the following conclusions: the approaches of each of the above theories have a practical implementation in different countries of the world; hypotheses and assumptions embedded in theories are sufficiently long-term and are implemented in practice over a long period of time; theories of convergent and divergent development are not mutually exclusive, since many assumptions are related, contain identical features and characteristics; the theory of convergence applies to all levels of economic development (countries, regions, industries).

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РАЗВИТИЕ КРЕАТИВНОГО СЕКТОРА ЭКОНОМИКИ В УКРАИНЕ

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На протяжении последних десятилетий учеными было теоретически и эмпирически обосновано приоритетность нематериальных ресурсов в формировании конкурентных преимуществ субъектов хозяйствования за счет использования интеллектуальной собственности, высококвалифицированного персонала, деловой репутации, эффективного менеджмента, долгосрочных связей с потребителями и т.п.

В заявлении ООН указано, что креативные и культурные индустрии могут сыграть важную роль в развитии цифровой трансформации и помогут обновить мировую экономику обремененную мировым экономическим кризисом та негативными последствиями пандемии [1].

Именно интеллектуальная собственность, которая проявляется благодаря специальным знаниями и эффективным коммуникациям, становится важным фактором создания добавочной стоимости, конкурентоспособности, влияет на экономическое развитие территорий, регионов и стран.

Первым, кто в своих трудах затронул проблему развития креативности, креативной экономики, креативных индустрий и креативного класса были Дж. Хокинс и Р. Флорида. Джон Хокинс первым ввел в экономический оборот термин «креативная экономика» в журнале Business Week в 2000 году. Он разработал концепцию креативной экономики, для того что бы описать экономические системы, в которых ценность продукта зависит от его оригинальности и креативности, а не от традиционных ресурсов.

Дж. Хокинс первым ввел типизацию креативных отраслей и выделил пятнадцать креативных индустрий, таких как рекламная деятельность, программирование, издательское дело, разработка и производство компьютерных игр и многие другие. По мнению автора, именно в этих индустриях создается интеллектуальна собственность в виде патентов, авторских прав, торговых марок и оригинальных разработок [6].

Ричард Флорида в своем труде определил, что креативность носит многогранный и комплексный характер и «является источником новых технологий, новых отраслей, новых материальных благ и других экономических преимуществ» [5, с. 39]. По мнению автора, становление креативной экономики оказало огромное влияние на формирование нового креативного класса, отличительная черта которого состоит в том, что его представители занимаются работой, основная цель которой - «создавать значимые новые формы» [5, с. 58]. Автор утверждает, что «креативный класс обладает достаточной властью, талантом и численностью, для того чтобы сыграть большую роль в преобразовании мира» [5, с. 24].

Сегодня креативные индустрии способны стимулировать инновационные процессы, расширять спектр креативных услуг, поддерживать развитие малого и среднего бизнеса, способствовать развитию интеллектуального труда, человеческого капитала, творчества и креативности. Поэтому креативную

экономику следует рассматривать как новый формат неоиндустриальной экономики, основным активом которой является результат интеллектуальной деятельности.

Таким образом, креативная экономика - это совокупность социально-экономических отношений, которые возникают в процессе производства, распределения, обмена и потребления благ, созданных на основе креативных идей, способных обеспечить эффективное решение широкого спектра общественных проблем социально-экономического, экологического и культурного характера.

Доля креативной экономики в ВВП развитых стран составляет около 10%, а в странах, которые развиваются около 1%, причем креативные индустрии производят объем продукции на который припадает около 3% мирового ВВП [1].

Лидерами по экспорту креативной продукции являются такие страны как: Великобритания, Германия, Италия, США, Китай и многие другие. Эти страны доминируют на мировом рынке креативных товаров и услуг, уделяют значительное внимание развитию креативного сектора экономики путем применения разнообразных институциональных мер и финансовых механизмов.

Именно в Великобритании впервые был исследован потенциал креативного сектора экономики и разработана правительственная программа его развития. Благодаря этой программе было создано агентство поддержки креативного сектора, которое дало возможность участникам арендовать помещения на льготных условиях, участвовать в грантах, использовать льготное кредитование и многое другое.

Департамент цифровизации, культуры, медиа и спорта Великобритании (Department for Digital, Culture, Media & Sports) дал следующее определение креативных индустрий: «креативные индустрии – это индустрии, которые основываются на индивидуальном творчестве, навыках и талантах и имеют потенциал к формированию благосостояния и создания рабочих мест через генерирование и использования интеллектуальной собственности» [4]. К самым распространенным креативным индустриям следует отнести следующие: IT технологии, реклама, архитектура, искусство и культура, ремесла, дизайн, мода, игры, музыка, издательское дело, телевидение и киноиндустрия и многие другие [3].

Таким образом, в основе креативной экономики лежит генерирование творческих идей и их трансформация в высокопродуктивные продукты. Основными результатами креативной деятельности является IT-приложения, VR/AR продукция, компьютерные игры, медиа продукция, творчество и много других инновационных и креативных продуктов и сервисов.

Самыми известными компаниями на мировом рынке, которые ориентированы на разработку и производство креативных продуктов являются Apple, MicrosoftCorporation, MetaPlatforms Inc, Amazoncom, LegoGroup, TheWaltDisney Company, NVIDIA Corporation, NetflixInc, Tesla Inc, GoogleLLCи много других.

Созданный в условиях креативной экономики продукт, который производится единожды дает возможность создателям продавать его неограниченное количество раз. Например, фирма, разработавши IT-приложение, дает возможность пользователям установить его неограниченное количество раз; размещая видеоматериалы на любом видеохостинге его могут посмотреть миллионы людей; книгу пишет автор один раз и она издается во всех уголках мира; творческий

коллектив создает медиапродукт, который можно посмотреть во всех кинотеатрах мира.

Таким образом, креативный продукт создается всего один раз, затраты компания осуществляет также один раз, а сам продукт может использоваться до тех пор пока на него есть спрос, что нельзя сказать про продукт, созданный в условиях традиционной экономики.Добыча полезных ископаемых, например, как результат деятельности традиционной экономики хоть и приносит прибыль, но требует постоянно увеличивающихся затрат, связанных с операционной, инвестиционной и финансовой деятельностью субъекта хозяйствования. Величина издержек на изготовление традиционного продукта из-за их постоянной цикличности значительно первышает издержки, необходимые для разработки и использования креативного продукта. В этом и состоит основное отличие между креативным продуктом и продуктом, созданным в условиях традиционной экономики.

Следует отметить, что терминологический аппарат Закона Украины «Про культуру» был дополнен новым термином «креативные индустрии», который дает возможность четко определять те виды деятельности, которые создаются посредством реализации творческих продуктов и услуг. Согласно этому закону, «креативные индустрии – это перечень видов экономической деятельности, целью которой является создание добавочной стоимости и рабочих мест через культурное (творческое) и/или креативное выражение» [2]. В Украине вклад культурных индустрий к ВВП составляет около 4% [2].

Следует отметить и то, что с начала развязанной РФ войны в Украине украинские IT компании разработали и запустили в действие несколько десятков новых IT приложений. Например, приложение «Повітряна тривога», который был разработан компанией Ajax Systems совместно с Министерством цифровой трансформации Украины дает возможность гражданам получать актуальную информацию про наличие воздушной тревоги.

Результатом креативной деятельности в Украине во время войны является действующий социальный проект «Прихисток», который был разработан по поручению Президента Украины та Правительства с целью приобщения граждан поделиться своим жильем с людьми, которые пострадали от боевых действий.

Таким образом, основными характерными чертами креативной экономики являются следующие: значительное увеличение ценности идей, знаний, интеллектуального труда, интеллектуальной собственности в сфере инноваций и технологий; доминирование сферы услуг над сферой производства; расширение коммуникационных связей между носителями и потребителями идей в мировом масштабе; увеличение инвестиций в образование и многое другое.

Развитие креативной экономики должно быть стратегической целью Украины и сыграть важную роль у послевоенном возобновлении экономики через стимулирования инноваций, развития предпринимательства, цифровизации, креативного класса, развития образования, науки, культуры, инфраструктуры и многое другое.

По нашему мнению, основными направлениями развития креативной экономики в Украине являются следующие.

Во-первых, послевоенное восстановление Украины дает исключительные возможности для проведения радикальной модернизации экономики и проведения структурных реформ, которые должны опираться на развитие креативного сектора

экономики.

Во-вторых, на общегосударственном уровне для стимулирования развития креативной экономики необходимо осуществить изменения в законодательстве относительно поддержки креативного предпринимательства, финансирования и страхования креативной деятельности; создания инфраструктуры и необходимых институтов с целью формирования специального рыночного механизма, способного трансформировать креативный продукт в экономическую ценность.

В-третьих, необходимо обеспечить защиту прав интеллектуальной собственности разработчиков креативных продуктов путем усовершенствования законодательства в этой сфере.

В-четвертых, разработка новых креативных продуктов может осуществлятся как результат сотрудничества органов местной власти и территориальных общин для решения локальных проблем экономического, социального, экологического, культурного характера и повышения имиджа территорий.

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