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INNOVATIVE DEVELOPMENT OF ENTERPRISES IN THE POST-INDUSTRIAL MANAGEMENT SYSTEM

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Abstract

The article examines the place of innovative development of enterprises in the post-industrial management system of enterprise development. The possibility of realization of the innovative direction of development in the direction of digitalization of technologies and technological processes in business is investigated. The institutional environment and its ability to implement an innovative direction of society development in Ukraine are studied. The intellectual potential and human capital that will guide business activity in the direction of business digitalization are analyzed. An assessment of the rating of doing business according to Eurotablo is presented. The dynamics of the index of economic globalization of Ukraine is estimated and the indicators of the rating of the global index of innovations in 2019 of Ukraine and some other countries are studied. A qualitative assessment of Ukraine's innovation potential in the dynamics over the years. The place of innovations in modern business is substantiated.

Keywords: Households, innovations, innovative technologies, digitalization, transformation, human capital

Post-industrial development of society is characterized by the transition of elements of activity, life, economic activity of enterprises and organizations, organization and conduct of business, performance of household functions in digital format. The main functions of physical action can be implemented using devices or elements that work by transforming analog data into digital format, provoking a "digital revolution" in the system of society (at the private level), in the system of organization and implementation of business (business level) and in the management system of all elements of the system at the regional and state levels. It is impossible even today to imagine the activities of the state and structures of all hierarchical levels of

government without the use of digital technologies that determine the available resources and take into account the need for them, allocating the share needed for implementation to accumulate capital. That is, digitalization permeated both the activities of individuals, the functioning of society and the economy as a whole. Today, it has become quite acceptable not only to do business through the process of organizing and conducting business in digital format, but also a holistic digital business. Both the financial crisis and the spatial isolation caused by the pandemic have prompted the whole world to quickly adapt to integrating elements of digital technologies into absolutely all spheres of life. That is, all over the world, and in Ukraine in particular, a rapid

digital transformation has taken place, which has reoriented education - into digital education, business becomes competitive only when it reorients its activities to innovative technologies, system methods with maximum use of digital elements and digital models of production technologies. Therefore, digitalization has become not a manifestation of the future, but a necessity of the present, ie the only element in the modern way of life, which gives the opportunity to see the future only with an active transition to "digital technology".

The future of any company is determined by its ability to quickly find and select for its activities the most modern technologies and techniques, and an automated business management system. Therefore, the ability of enterprises, society and the state as a whole to rapid digital transformation encourages the transition from industrial development that involved the use of analog technologies to post-industrial - which involves the widespread use of digital knowledge, digital creativity, digital technology, digital business innovation. Our vision is confirmed by research Innolytics.ag MANAGMENT SYSTEMS SOFTWARE [1], which investigated that «*Digitalization is the generic term for the Digital Transformation of society and the economy. It describes the transition from an industrial age characterized by analogue technologies to an age of knowledge and creativity characterized by digital technologies and digital*»

We believe that the active digitalization of any enterprise should become its development strategy and lifestyle of the company, because the introduction of innovations in the field of digitalization determine the level of long-term digitalization of the company. In the enterprise management system, it is important to form a management system so that its management staff has all the tools to manage innovation. The introduction of innovations and the orientation of the enterprise to the innovative direction of development with constant improvement involves constant changes not only in the production process, but also in the organization of the management system.

The process of constant improvement, renewal, constant modernization through the introduction of innovative tools, instruments, techniques, technologies, methods and models and processes contribute to the formation of new values of the enterprise and reaching a new stage of development.

Continuous improvement involves the analysis of the current process and control over situations that occur directly in the production of goods, works or services. All this is possible only in the case of having operational information about the process. Full dissemination of information, its processing, analysis and decision-making on the basis of the obtained data is a condition for post-industrial development. The primacy of information possession has become especially relevant today. Possessing information, its dissemination makes it possible to stay ahead of the competitor in terms of user interest in the information or the buyer, expanding their markets. The formation of an information database, which is constantly updated when changes are made and has a ranked level of user access to it depending on the level of hierarchy (from user to manager) with the possibility of expert evaluation and automated construction of ready-made decision algorithms ensures the transition to post-industrial develop-

ment. In the system of modern business process, information becomes important not so much as a resource for sale, but in its processing, evaluation, structuring, which contributes to the creation of a new finished quality product based on it. Ukraine already has such a not quite positive practice - to sell not the finished product, but raw materials that minimize the economic effect of the operation. The value added that is formed in the production cycle according to the closed cycle scheme is much higher than the cost of the raw material itself. Therefore, selling the final finished product, the manufacturer increases the economic effect by several orders of magnitude higher than when selling the information itself (analog - the sale of raw materials). In the system of post-industrial production, information should be considered as a raw material that can be sold, but the effect will be minimal. However, the already processed information, grouped, analyzed on the basis of which the algorithm of actions is built and alternative variants of the decision of problems are developed - act as the final knowledge and skills which serve as a finished product. The post-industrial system of development is characterized by another feature, which is due to the fact that the constant application of new knowledge encourages the company to develop, improving its competitive position in the market. After receiving the basic information, the user decides which of the whole array should be chosen for use, and then buys the product that is most informed, which gives the clearest, and the one that is most ready and suitable for use in its conditions. As a result, the dissemination of information about the company, about the finished product it produces creates a platform of potential demand and forms a potential consumer.

Quality service, product, work, presented to the user as a gift, serves as the greatest incentive to become a regular consumer or customer. Thus, involving elements of post-industrial development in the technology of production of the finished product and in the enterprise management system, the maximum economic effect is achieved. However, this can be achieved only on the basis of relevant data, processed, analyzed and formed into a finished product in the form of variants or algorithms of ready-made management decisions. Full possession of relevant information makes it possible to disseminate it at the level of the planned segment of the potential and existing market segment and offer for implementation a processed version of it transformed into knowledge. Thus, enterprises of various industries, including agricultural enterprises, will be able to inform all potential consumers about the quality characteristics of their product and its own brand, the quality of which is confirmed by relevant certificates that ensure recognition not only in domestic but also in international markets. The efficiency of modern business is determined by the primacy of the enterprise in the possession of information, the primacy in its processing and systematization and the primacy in its implementation. Therefore, we believe that economic activity in the post-industrial era is the result of a «game in advance».

The free dissemination of information does not indicate the disclosure of business secrets. Only information that is of interest to the end user, indicating the characteristics of the finished product and technology, is presented for public review. Information about the

technology itself should also be provided, but its specific elements should be presented in an encrypted format and in a language that is understandable to a limited number of professionals. That is, the encryption of special data that constitute a trade secret of the business process becomes the basis of the information culture of the post-industrial era of economic development and states in general.

Multilingualism is an important element in the development of enterprises, the economy and the state as a whole. Knowing the languages of different countries, it is possible to learn the main principles of successful companies, to identify the main tools for success in the development of not only economic prosperity, but also to learn to form technology combining financial results with environmental security and social development. Therefore, documenting business processes in the native language is one of the elements of unique encryption of particularly important information and own developments, and knowledge of other languages reduces the time to develop innovative approaches to solving problems set by the enterprise or the state. Therefore, in the era of post-industrialism, the sphere of information resources and services is ahead of the sphere of material production in need, which leads to a change in the nature of human activity and directions of its development. The type of resources for the effective implementation of the development strategy has changed, where the main production resource was information, which led to the modification of the social structure and change its needs. The main productive resource of post-industrial society is information, not the raw materials or energy that underlie pre-industrial and industrial society. . Production activity began to implement technologies of recycling, recycling or treatment, while in pre-

vious epochs production was based on intensive extraction and mass production. Modern technologies have acquired the characteristics of knowledge-intensive, innovative and resource-saving, to replace labor-intensive and capital-intensive technologies, which prevailed in pre-industrial and post-industrial production, respectively.

Thus, the basis of post-industrial development of society is the information society, which is a phase of development in which information and the creation of knowledge based on it are produced in a unified information space. The speed of formation and dissemination of information and its transformation into knowledge based on the processing, analysis and systematization of available information depends on the level of development of information and communication technologies.

The level of information and communication technologies and the intensity of their spread is evidenced by the intensity of the use of computers and computer networks in enterprises with an estimate of the distribution by the average number of employees. We analyzed these indicators during 2018-2019. The study found that the number of companies that used computers in 2019 increased compared to 2018 data. Thus, if in 2018 44133 enterprises used computers, in 2019 its number increased to 44532 units. This indicates the production need to use information and communication technologies in the process of organizing and conducting business. In addition, it should be noted that more than half of enterprises used a local computer network (LAN) in the process of their activities (53.5 and 51.9%, respectively, in 2018 and 2019), and even more enterprises had an Intranet (59.2 and 58.05% respectively in 2018 and 2019).

Table 1

The use of computers and computer networks in enterprises with a distribution by the average number of employees in 2018-2019

№	Indexes	Period			
		2018	2019	2018	2019
		units		in% to the total number of enterprises	
1.	Number of enterprises that used computers: of them:	44133	44532	X	X
1.1	used a local computer network (LAN)	26307	26287	53,5	51,9
1.2	had an intranet	29129	29388	59,2	58,0
1.3	had an Extranet network	4094	4112	8,3	8,1
2.	Including with an average number of employees from 10 to 49 people:				
2.1	Number of enterprises that used computers. Of them:	33671	33844		
2.2	used a local computer network (LAN)	18154	18031	47,6	45,9
2.3	had an intranet	21607	21681	56,7	55,1
2.4	had an Extranet network	2239	2199	5,9	5,6
3.	Including with an average number of employees from 50 to 249 people				
3.1	Number of enterprises that used computers: of them:	8310	8511	X	X
3.2	used a local computer network (LAN)	6195	6281	70,2	69,1
3.3	had an intranet	5888	6042	66,7	66,5
3.4	had an Extranet network	1176	1207	13,3	13,3
4.	Including with an average number of employees of 250 people or more				
4.1	Number of enterprises that used computers: of them:	2152	2177	X	X
4.2	used a local computer network (LAN)	1958	1975	87,5	86,2
4.3	had an intranet	1634	1665	73,0	72,7
4.4	had an Extranet network	679	706	30,3	30,8

Source: [1]

Percentage of enterprises with an average number of employees of 250 or more use information and communication technologies to a greater extent than enterprises with a smaller number of employees. Thus, if the percentage of enterprises with an average number of employees over 250 people using a local computer network (LAN) is 87.5 and 86.2%, respectively, in 2018 and 2019, then only 70.2-69.1% respectively in 2018 and in 2019 the company, with an average number of employees from 50 to 249 people used this network. This figure is even lower in enterprises with an average number of employees from 10 to 49 people.

All this indicates that companies with a strong intellectual base, developed management and marketing system feel the urgent need to use digital intensification tools and the use of automated systems of information base formation and analysis and processing for active use of automated control systems. Important in the system of post-industrial development is the system of «big data», which was presented by Gartner [2] model «3V» (Volume, Velocity, Variety). Analytical processing of a large array of data should provide economic benefits for business structures, because without the result any processed array of information remains a technological solution. A similar vision is described by Gartner «... Big data» warrants innovative processing

solutions for a variety of new and existing data to provide real business benefits. But processing large volumes or wide varieties of data remains merely a technological solution unless it is tied to business goals and objectives.» [2].

That is, Big Data is an information source of a significant array of data aimed at assisting the management of the enterprise in making effective management decisions. The resource for the formation of the Big Data network are: information on transactions, which is a database of customers from existing electronic systems (transactions carried out by online stores; information based on accounting data); data from reading sensors; data of digital and electronic meters; data of automated trading networks and systems; social network data (customer reviews, blogs, sites) and more. Ukrainian enterprises have also to some extent started to use the «big data» network intensively. However, during 2018-2019, the share of enterprises that conducted «big data» analysis is quite small (Table 2). Less than 6% of Ukrainian enterprises conducted big data analysis. Therefore, business structures of Ukraine need to take measures and implement innovations in the management system of the enterprise, which will allow to obtain maximum effects from the use of the «big data» network.

Table 2

Analysis of «big data» with the distribution by average number of employees in 2018-2019

№	Indexes	Period			
		2018	2019	2018	2019
		units		in% to the total number of enterprises	
1	Number of enterprises that conducted "big data" analysis, according to "big data" sources				
1.1	data obtained from smart devices or sensors	2917	2896	5,9	5,7
1.2	geolocation data obtained from portable devices	1697	1874	3,4	3,7
1.3	data generated from social media	1600	1658	3,3	3,3
	other sources	2974	2852	6,0	5,6
2	Number of enterprises in which the analysis of "big data" was conducted				
2.1	on ones own	5256	5146	10,7	10,2
2.2	external service providers	2023	2051	4,1	4,0

Source: [3]

In the process of obtaining information and analyzing «big data», companies used various sources, in particular: data obtained from smart devices or sensors; geolocation data obtained from portable devices; data generated from social media; other sources.

To a greater extent, enterprises analyzed «big data» based on information obtained from smart devices or sensors (5.9 and 5.7% of enterprises, respectively, in 2018 and 2019) and their other sources (6.0 and 5, 6% respectively in 2018 and 2019). To a lesser extent, enterprises used for analysis information resources obtained from geolocation data obtained from portable devices (3.4 and 3.7% of enterprises, respectively, in 2018 and 2019) and data generated on the basis of social media.

Estimating the number of enterprises where the analysis of «big data» was conducted, we noted that more than 10% of enterprises carried it out on their own both in 2018 (10.7% of enterprises) and in 2019 (10.2% of enterprises). The analysis of «big data» at the expense of external service providers was conducted by 4.1% of enterprises in 2018 and 4% of enterprises in

2019. The development of information and communication technologies enables domestic business structures and management staff of all institutions to minimize risks and build management decision-making algorithms based on real data with the ability to forecast future results. Using information resources and performing analysis of "Big Data" companies gain scientific and technological advantages in the process of implementing development strategies and in making management decisions. Access to information is quite important to solve social problems. It should be understood that using the old approaches that have not previously given a positive result to solve problems, to expect a positive result each time is a futile expectation. Therefore, information about successful results and opportunities should be available not only in the spheres of big business, but also at the level of the whole society. An important element is the exchange of knowledge and presentation of their own experience in solving problems using innovative solutions. This approach will enable the state to solve a significant share of social problems and provide tools for managing social impact. Therefore, the application of the method of

"positive deviance" helps to obtain ready-made solutions to problems under certain conditions and in a similar environment. Finding the most effective innovative solutions to existing problems through the spread and development of information and communication technologies is the engine of sustainable development not only of the individual enterprise, the territorial community, but also the state as a whole.

We believe that today the level of development of the information society is an indicator of economic development. The level of technological innovation has a direct impact on the economic efficiency of production and the business structure as a whole. The sustainable development goals adopted by Ukraine envisage Ukraine's growth in the direction of industrial, innovation and infrastructure development (Goal 9).

Assessing the place of Ukraine in the ranking of the Global Innovation Index, we noted that its value is at the 47th rating level in 2019. while the target for 2020 was 50th place in the ranking. Such a place (50th

place in the ranking) according to the Global Innovation Index Ukraine occupied in 2017, but in 2018 the ranking position was lost by 7 points (43rd place in the ranking). Understanding the importance of innovation in the direction of digitalization of production technologies and control systems encourages the transformation of technologies in the direction of increasing their knowledge intensity.

To implement the planned task, it is necessary to create institutional and financial opportunities for self-realization of the potential of the economically active part of the population and the development of the creative economy. Indicators of achieving positive results are: The number of employees in medium and small enterprises; Share of value added by production costs of medium and small enterprises, in% of the total amount of value added by production costs ; Ukraine's place in the ranking of ease of doing business Doing Business (Table 3). We investigated that none of the indicators was achieved in 2020.

Table 3

Dynamics of indicators of realization of the goal focused on creation of institutional and financial opportunities in Ukraine for self-realization of potential of economically active part of the population and development of creative economy

Indexes	Years					Target set for 2020
	2015	2016	2017	2018	2019	
Number of employees in medium and small businesses, million people	6,5	6,5	6,6	7,0	7,4	8,3
Share of value added by production costs of medium and small enterprises, in% of the total amount of value added by production costs	58,1	62,3	62,6	64,3	-	70,0
Ukraine's place in the ranking of ease of doing business Doing Business	81	80	76	71	64	30

Source: [4]

Taking into account the dynamics of indicators of realization of the goal focused on the creation of institutional and financial opportunities in Ukraine for self-realization of the potential of the economically active part of the population and development of the creative economy, a gradual increase in their size. However, the targets set for 2020 are higher than the achieved goals. And the indicators that characterize the ease of doing business during the study period grew and in 2019 Ukraine took 64th place in the ranking, while in 2015 it occupied 81 ranking position. The changes are positive, but much more needs to be done by public authorities to prepare both businesses and the public to operate in a digital economy.

Among the indicators that characterize the ease of doing business is the Index of ease of connection to the grid, where in 2020 Ukraine took 126th place in the ranking list, while Ukraine's closest neighbor - Poland was in 60th place. Among the surveyed countries according to this indicator, the highest in the ranking was Germany, which took 5th place in the overall world ranking list among 190 countries. Ukraine took a similarly low 145th place in terms of resolving the borrower's insolvency issues. According to this indicator, among the countries analyzed by us, the United States took 2nd place, and Germany - 4th ranking position (Table 4).

Table 4

Rating of ease of doing business in 2020

Indicator	Ukraine	USA	Germany	Poland
Rating of ease of doing business	64	6	22	40
Group rating	64	6	22	40
Starting a business	61	55	125	128
Obtaining building permits	20	24	30	39
Ease of connection to power grids	126	64	5	60
Property registration	61	39	76	92
Getting loans	37	4	48	37
Protection of property rights of minority investors	45	36	61	51
Ease of paying taxes	65	25	45	77
Foreign trade	74	39	46	1
Ensuring the implementation of contracts	63	17	13	55
Resolving issues of insolvency of the borrower	145	2	4	25

Source: Generalized by the author on the axis 1

As the government of Ukraine works in the direction of economic growth of our state, it is necessary to form favorable factors of influence on the factors promoting its growth. Since business is the driving force of the economy, organized on the basis of advanced techniques, technologies and methods of organizing and conducting business - is the key to its effectiveness. Ease of business organization and simplicity of its management contribute to the additional inflow of financial resources in the form of taxes to the state budget and cause an increase in economic activity of the population while reducing unemployment. Global trends in economic development are the transition to digital technologies for organizing and conducting business. Ukraine should focus on the global vector of the direction of

movement, and try to act simultaneously with partners and competitors.

Raising the level of awareness of business participants with the work and tools that form a competitive advantage in the market in the digital economy will contribute to more intensive acquisition of knowledge and skills to function through the active introduction of innovations in all areas of activity.

The level and intensity of globalization processes in the country determine the intensity of its development. Thus, assessing the rate of active globalization of Ukraine during 1991-2018, we noted its gradual growth. Thus, if in 1991 this ratio was 30.94, then in 2018 its value more than doubled and amounted to 74.25 (Fig. 1).

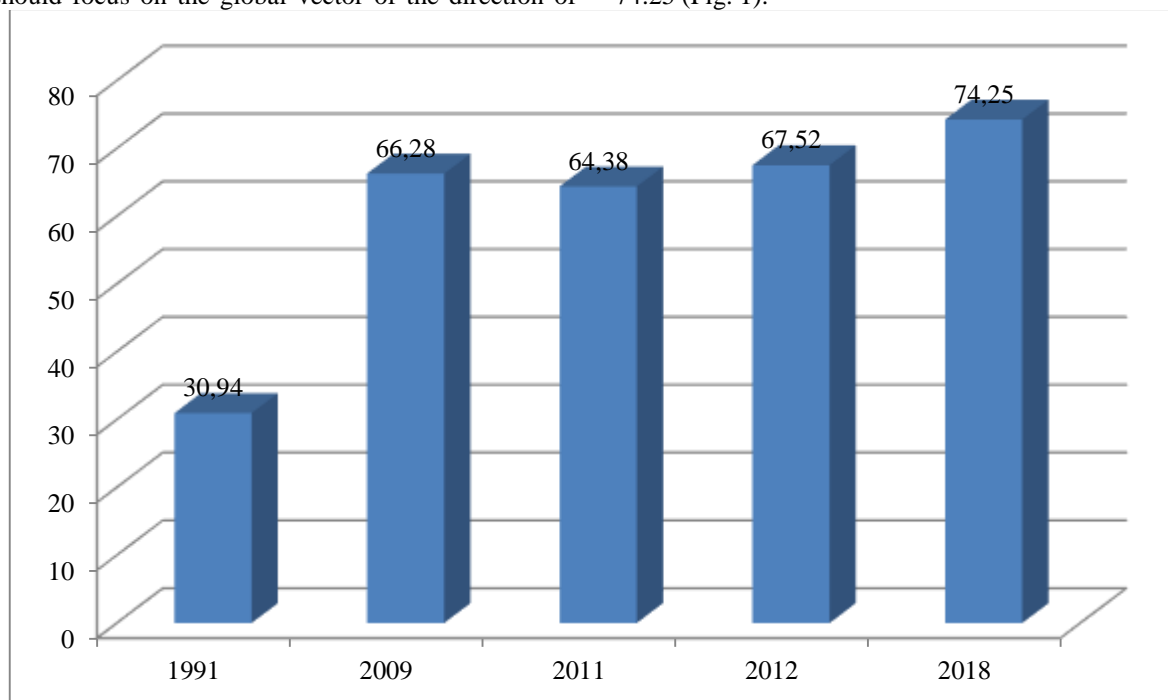


Fig. 1. Dynamics of the index of economic globalization of Ukraine (1991-2018)

Source: [5]

Our research shows the importance of the development of the information society and the policy of the state in the direction of strengthening innovation activity at different levels of the social hierarchy of the state. A country in which the information society is more developed ranks higher in the ranking of the global innovation index.

We conducted a comparative assessment of the rating of the global innovation index in 2019 of Ukraine, along with Poland, Germany and the United States. The leader among the studied countries and in

the world as a whole in terms of the Global Innovation Index in 2019 is the United States, where the value of the subindex of innovation growth was 70.85 points out of 100, which gave the 3rd place in the ranking for its value. In the same year (2019), Ukraine ranked 32nd in the ranking of countries according to the Global Innovation Index, while the Sub-Index of Innovative Growth took only 82nd place among 129 countries that participated in this assessment. The value of the sub-index of innovative growth of Ukraine in 2019 was 40.73 on a scale of 0-100 points.

Table 4

Indicators of the global innovation index rating in 2019

№	Indexes	Ukraine	USA	Poland	Germany
1	Global innovation index, place in the ranking	32	1	26	7
2	Innovative growth subindex: place in the ranking of 129 countries rating (0-100)	82 40,73	3 70,85	37 50,97	12 65,28

Source: Formed by the author on the basis

Source: [6]

Ukraine's low rating positions on the level of the global innovation index are caused by the low level of quality of persons who took part in the implementation

of research and development. During the period of studying the structure of the qualitative composition of the innovation potential of Ukraine (2010-2019), we noted a rapid decrease in these indicators by more than 2.3 times.

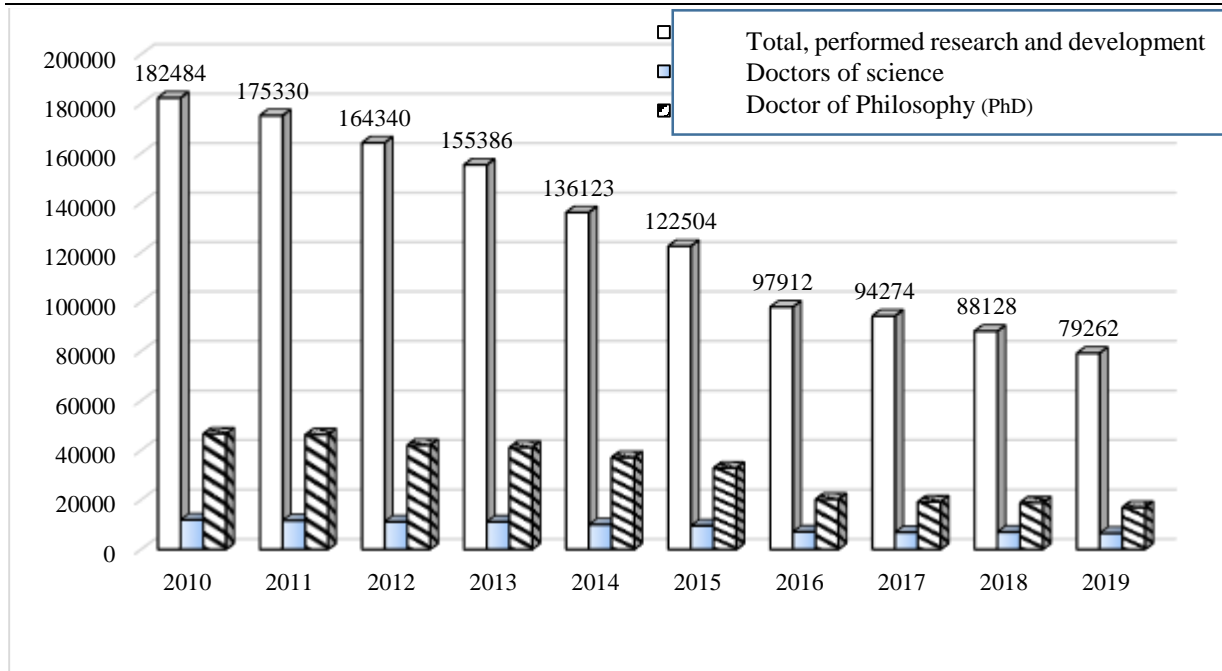


Fig. 2. Dynamics of qualitative assessment of innovation potential of Ukraine, (persons) 2010-2019
 Source: Generated by the author based on data [7]

Thus, if in 2010 research and development was performed by 182484 people, in 2019 only 79262 people, which is 2.3 times less. Similarly negative is the share of quality specialists (doctors of sciences and candidates of sciences) in the total number of specialists who form the innovation potential of Ukraine (Fig. 2).

Getting any result requires investment of resources, energy, knowledge, effort and desire or need to obtain the planned. Therefore, if the goal of state development is the introduction of innovations in the system of economic activity and in the economic and social spheres, the state must implement opportunities for

their development and implementation. Innovation requires financial investment in the development or acquisition of knowledge and the process of adapting them to the relevant field. However, the share of research and development expenditures in the structure of Ukraine's GDP in 2019 decreased significantly compared to its value in 2010. Thus, if in 2010 the share of expenditures incurred for research and development in the structure of GDP was 0.75%, in the structure of GDP in 2019 only 0.43 (Fig. 3).



Fig. 3. Dynamics of the value of expenditures for research and development and the share of expenditures for research and development in GDP, 2010-2019

Source: Formed by the author on the basis of data from the State Statistics Service of Ukraine [8]

The main goal of the development of our state is to ensure socio-economic development on the basis of a highly developed socially oriented economy. Knowledge and innovations are a fundamental tool in the process of implementing the state development strategy. Economic growth can be achieved only by gaining a competitive advantage in the market, and this means today to be in the forefront of countries that implement in all areas of economic activity and at all levels of government digital transformation. The use of "Big Data" allows you to choose the right management decision and the most optimal technology that should be adapted to specific business conditions. This will reduce the cost of the high quality end product and maximize the economic benefits along with gaining a competitive advantage. This is the basis of the post-industrial development model, to produce not the maximum amount of product, but the amount of product that will allow to obtain the maximum effect with minimal resource costs and minimal negative impact on the environment, providing maximum social benefits and satisfaction. That is, the basic indicators of modern technologies were: their resource efficiency; low waste; energy saving and low energy consumption; high energy value and safety; social efficiency; economic feasibility. These are the main directions of modern innovative technologies.

It is possible to analyze the existing technology and evaluate its effectiveness or consider the feasibility of implementing a new technology or innovative development only with relevant data, which should be compared with the probable risks and impacts of various factors on existing technology and potential technology for implementation. That is, each business entity must focus its activities on innovative development, which involves continuous improvement and constant analysis along with the constant acquisition of new knowledge, which will be transformed into better technologies that will be subject to the process of adaptation to specific business conditions. That is, we believe that the post-industrial stage of development involves a constant movement towards improvement through research, analysis, control, transformation of knowledge

into action, which are again subject to careful analysis. This constant cyclical movement of knowledge in the direction of constant improvement is similar to the Deming cycle (PDCA cycle).

Realizing that the basis of innovative development of countries is the level of activity of the introduction of digital technologies in various spheres of life, we can draw a parallel and trace the level of digital distribution. The reasons for such differentiation of states according to the level of formation of the information society are first of all insufficient level of development within the country of electronic readiness and insignificant level of electronic involvement..

In order to motivate society to increase the level of e-readiness, it is necessary to form an appropriate basis that will facilitate the free transition of all hierarchical levels of society to a new lifestyle, way of organizing life and methods of doing business. The fundamental basis of the readiness of each stratum of society to move to a new level of quality of life or economic activity is determined by the presence (or absence) of quality tools and means of such intensification with a sufficient level of access to certain resources. The level of society's perception of innovations in the form of digital technologies is determined by the professionalism of users of innovations and the speed of acquiring skills and abilities to act according to the new scheme. That is, the level of education, professionalism and intellectual development of the country's population will determine not only the ability to develop digital technologies, but also to absorb the already acquired knowledge. In order to determine the potential of Ukraine to implement the innovative direction of state development, we conducted an assessment of the Innovation Efficiency Index (Fig. 4). Potential opportunities for creating a favorable climate for Ukraine's innovation performance over the years of research (2010-2018) are growing. Comparing the innovation output index with the innovation input index determines the rating of innovation efficiency of countries. If in 2010 Ukraine took 54th place, in 2018 - 5th place, which is a positive direction of change.

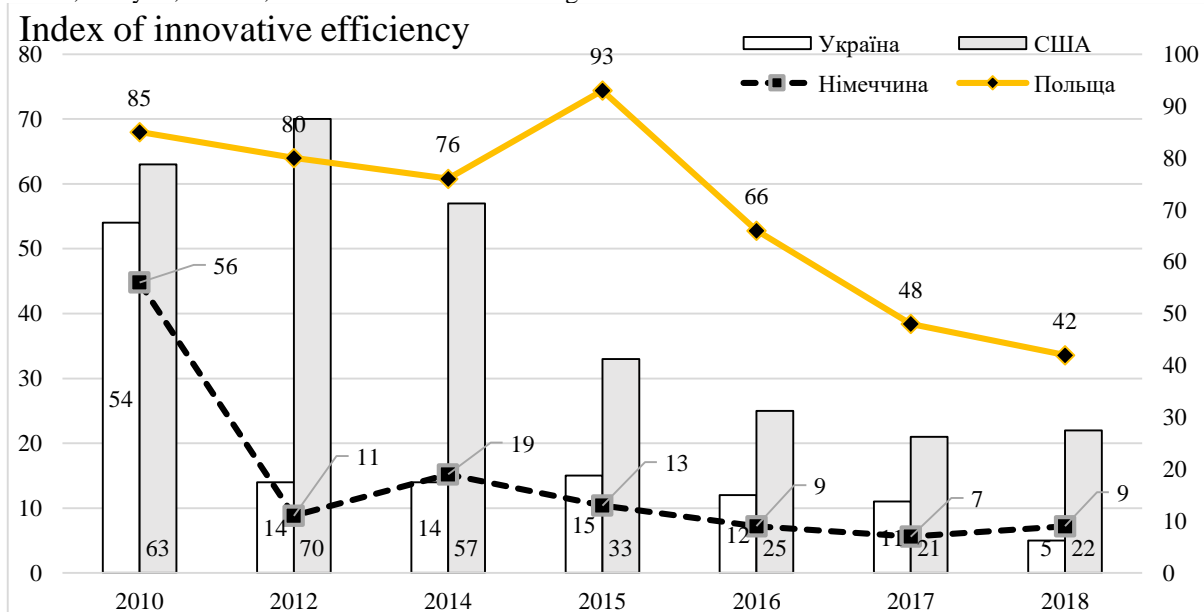


Fig. 4. Dynamics of the innovation efficiency index, 2010-2018

Source: Formed by the author on the basis of data Reports «The Global Innovation Index» 2010-2018 y. [9]

All the above indicates that Ukraine has significant potential for the implementation of the Sustainable Development Goals in the direction of transition to innovative development.

The actions of the state should be aimed at the maximum dissemination of knowledge and the implementation of strategic goals: in the field of education; transformation of the economy into an innovative digital socially oriented economy; development of information culture; dissemination of information literacy of the population and maximum integration of digital technologies into the life of the population; development of socio-psychological support in digital format and more. The development of the digital economy is based on the digital information society.

Innovation is determined by a group of indicators, among which institutions, infrastructure, market indicators are important, the development of which can be provided only by the state. However, their rating value

in 2019 occupies almost the lowest positions, in particular: infrastructure - 97th place in the ranking; institutions - 96th place in the ranking, market indicators - 90th place in the ranking among 129. However, it should be noted that the highest indicators characterize the level of knowledge and research results (28th place in the ranking); creativity (42nd place in the ranking), and business experience in 2019 rose to 47th place in the ranking, while in 2018 it took only 73rd place (Table 5). All this once again testifies to the significant potential and strong human capital and the great importance of research. Conducted by Ukrainian specialists. The institutional sphere, infrastructure and market indicators cannot be sufficiently implemented without the support and protection of the state through the formation of an appropriate existing regulatory framework and funding for the implementation of development projects.

Table 5

Dynamics of the value of the structural components of the Global Innovation Index in assessing the rating parameters of Ukraine at the World level, 2016-2019)

Groups of indicators	Years			
	2016 ³	2017 ³	2018 ²	2019 ¹
Creativity	45,0	49,0	58,0	42
Knowledge and results of scientific research	27,0	32,0	33,0	28
Business experience	46,0	51,0	73,0	47
Market indicators	89,0	81,0	75,0	90
Infrastructure	89,0	90,0	99,0	97
Human capital and research	43,0	41,0	40,0	51
Institutions	107,0	101,0	101,0	96
Global Innovation Index	35,7	37,6	38,5	37,4
Place in the rating of the Global Innovation Index, rating / number of assessed economies	56/128	50/127	43/126	47/129

Source: Generalized by the author based on evaluation data: The Global Innovation Index (2019) URL:

¹https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2019/ua.pdf;

²https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2018-intro5.pdf ;

³<https://www.globalinnovationindex.org/analysis-indicator>

The study of the level of innovative development of the world was conducted by Bloomberg by establishing the Bloomberg Innovation Index and ranking countries by the value of this indicator. In 2020, according to the Bloomberg Innovation Index, Ukraine ranked 56th among 60 countries, losing its position by 10 points compared to 2018. The value of the Innovation Index in 2020 was 48.24. The championship in this ranked series in 2020 was taken by Germany with the value of the Bloomberg Innovation Index - 88.21. According to the assessment of the level of innovative development of countries by Bloomberg, Poland is 31 positions ahead of Ukraine in terms of this indicator, taking 25th place in the ranking.

Ukraine's position in the rating is quite low on the indicator that determines the level of value added production (value added of production relative to GDP). Research data show that according to this indicator, Ukraine is among the outsiders. Based on the data obtained, it should be understood that it is necessary to change the approach to the organization of business processes, and the enterprise management system should be formed so that the elements of uncertainty are minimal and transformed into risks, so they can be taken into account when planning economic results. The production process must be planned in such a way

that the maximum value added is formed. This can be achieved by forming a closed production cycle. According to Bloomberg, the value of the level of production with value added (value added of production relative to GDP) Ukraine also occupies the lowest position in 2020 (57th place in the ranking among 60 countries). All this is accompanied by a rather low level of research and development intensity during 2018-2020 (R&D expenditures in relation to GDP were so low that according to this indicator, Ukraine ranked 47th in 2018 and 57th in 2020). This situation caused a low level of technology productivity (57th place in the ranking according to Bloomberg among 60 countries in 2020) (Table 6). However, the human capital of Ukraine forms all the prerequisites for the active introduction of high technologies, and provides prospects for the introduction of innovative technologies in the direction of integrating digitalization processes into all spheres of economic activity and the formation of the information society.. Ukrainian enterprises are characterized by rather high indicators and the level of penetration of high technologies. The high share of innovative companies in the total number of enterprises gave Ukraine the opportunity to take 35th place in the ranking among 60 countries.

Table 6

Dynamics of innovation development assessment according to Bloomberg rating

Indexes	Germany		Poland		Ukraine		
	2019	2020	2019	2020	2018	2019	2020
Place in the ranking	4	1	21	25	46	53	56
Innovation index Bloomberg	87,3	88,21	69,1	69,98		48,05	48,24
Intensity of research and development (R&D expenditures in relation to GDP)	7	8	36	35	47	54	57
Value added production (value added of production in relation to GDP)	3	4	20	17	48	58	57
Penetration of high technologies (share of innovative companies in the total number of enterprises)	3	3	18	22	32	37	35
Productivity	24	18	40	39	50	60	57
Efficiency of higher education (share of freelance graduates in the total number of graduates of educational institutions)	14	26	16	19	21	28	48
Concentration of researchers (number of scientists per 1 million inhabitants)	11	11	38	38	46	46	49
Patent activity	7	3	37	29	35	35	36

Source: Generalized by the author based on [11, 12]

Therefore, the data of our research suggest that to implement the strategy of state development towards the formation of an innovative society and digital economy is possible only with the active implementation of digitalization in all spheres of economic activity and in the social sphere. Electronic involvement of society is a tool for its direction in the direction of digitalization, which provides new opportunities and competitive advantages. institutional framework is ready to implement them in full. In this segment of economic growth, the priority in action should be taken by the state, which should implement scientific support, promote automated innovative management methods, and initiate innovative development of enterprises through easy access to investment support for innovative enterprises.

The high level of competition has become an obstacle to the development of the least economically balanced agricultural formations to achieve significant rates of economic growth is not possible without the introduction of scientific support and innovative management methods that ensure balanced economic, socio-cultural and environmental development..

Digitization and innovative direction of development of agricultural enterprises is the main basis for increasing their level of competitiveness and market leadership both through the implementation of differentiation strategies and price competition. The introduction of innovations focused on energy-saving and resource-saving high-efficiency technologies make it possible to achieve market leadership through price competitiveness through cost optimization. However, by introducing innovative technologies that make it possible to produce a unique product and distinguish the company on the market among other companies provide a leading position through the implementation of a strategy of differentiation. Constant innovative activity of enterprises is the main guarantee of development. In the conditions of active digitalization and unrestrained development of digital technologies, economic activity takes the form of constant cyclical innovative development, forming the so-called innovative culture of the com-

pany. We believe that modern software is a tool for innovative development. The factor of development of modern enterprises is the level of their innovative adaptability to digital innovations.

In order to develop a culture of innovative development both at the state level and at the level of enterprises, it is necessary to promote the formation of creative thinking in all its participants and readiness for constant changes focused on the development and implementation of innovative projects.. It is important for the company to encourage employees to find new methods and ways to achieve the goals, aimed at improving the conditions for the ultimate goal and result, aimed at ensuring not only the maximum economic effect, but also environmental and social efficiency. Changing the approach to the task always helps to change the expected result, and, in the first stages - a certain discomfort until you gain experience working on a new. However, new knowledge and experience contribute to the development of the enterprise and provide an opportunity to gain competitive advantage through increased productivity, reduced energy consumption and increased resource efficiency.

An important element of post-industrial development of society is not only the introduction of capital innovation projects. It is important to gradually introduce small innovative developments and innovative ideas, which are focused on the gradual change of concept and technology in the direction of its improvement for the implementation of the Deming Cycle - continuous improvement. This approach will make it possible to overcome existing obstacles and optimize the development strategy to the requirements of today. Therefore, the generation of innovative ideas in the transition to post-industrial development must take place constantly, in parallel with changes in market requirements, the external environment, demand, legal norms and requirements. The development of digital infrastructure and digitalization technologies provides new opportunities and encourages constant updating of technologies for the production of products, goods,

works and services. The primacy of participation in innovative technologies helps to increase the level of competitive advantages of business in the market. In addition, it is important not to focus on any one type of innovation. Different types of innovations should be implemented in business synchronously. Thus, along with the improvement of processes through the use of the principle of continuous improvement, it is important to develop new ideas. The effect of innovation is enhanced by the constant development of innovative products and product characteristics. Development of new types of services and quality characteristics of their provision in combination with development of innovative business models and directions of business promote transition to innovative type of development of business as a whole. The introduction of destructive or radical innovations contributes to a complete change in the approach to doing business in the market.

The company must have an innovative team of employees who have different areas of knowledge and thinking in the direction of innovative development and development and implementation of digital technologies in business. Such teams must develop new projects and implement them, adapting them to the company's business process. The rapid development of digitalization encourages digital transformation in the organization of business and its implementation. Changing the standard technology of production of goods, works or services and digital requires the development of new approaches to doing business.

Thus, the post-industrial development of society can be realized through the active introduction of innovations at each stage of economic activity of enterprises. The value of man and the definition of human capital as a major factor in the post-industrial development of society put at the forefront the integration of corporate social responsibility into business. The goals of sustainable development of Ukraine until 2030 contributed to the separation of environmental security as a necessary element of the development strategy of companies and business in general. Therefore, the reorientation of business to the implementation of its strategy through tools that contribute to a positive result in environmental, economic and social direction with the widespread use of all elements of digitalization is the basis of post-industrial development of society.

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HOTEL INDUSTRY IN KAZAKHSTAN: ANALYTICAL REVIEW

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ГОСТИНИЧНАЯ ИНДУСТРИЯ КАЗАХСТАНА: АНАЛИТИЧЕСКИЙ ОБЗОР

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Abstract

The article presents an analytical review of the current state of the hotel business industry in the Republic of Kazakhstan, taking into account the specifics of the formation of the management strategy. Market analysis allows you to summarize and interpret data collected to determine patterns, relationships, or trends. According to the analysis, the hotel business was gaining momentum in Kazakhstan and hotel companies had to fight in a fierce competition. However, the analysis data serves as a starting point for analyzing the consequences of the pandemic in the hotel business.

Аннотация

В статье представлен аналитический обзор текущего состояния индустрии отельного бизнеса в Республике Казахстан, учитывая специфику формирования стратегии управления. Анализ рынка позволяет обобщить и интерпретировать данные, собранные для определения закономерностей, взаимосвязей или тенденций. Согласно проведенному анализу, отельный бизнес набирал темпы развития в Казахстане и гостиничным предприятиям приходилось бороться в острой конкурентной борьбе. Однако, данные анализа служат отправной точкой для анализа последствий пандемии в отельном бизнесе.

Keywords: hospitality industry, Republic of Kazakhstan

Ключевые слова: Индустрия гостеприимства, Республика Казахстан

Отельный бизнес сложная социально-экономическая система, влияющая на развитие и полноценное функционирование общества, который в настоящее время является развивающимся сектором национальной экономики. Из-за пандемии Covid-19 мировая экономика, и в особенности, индустрия гостеприимства столкнулась с беспрецедентной задачей, что привело к временному закрытию многих предприятий гостиничного бизнеса. Ограничения передвижения, введенные в государствах по всему миру привели к резкому сокращению числа отелей, количества работников в индустрии и доходов. Последствия пандемии только предстоит изучить предметно, но для этого необходимо провести анализ состояния рынка на момент наступления всемирного локдауна. В связи с этим

определение тенденций развития отельного бизнеса в период до пандемии являются задачами данного исследования.

К особенностям функционирования гостиничных предприятий следует отнести как характерные для рынка гостиничных продуктов в целом, так и специфические, а именно:

- определение на государственном уровне гостиничных продуктов как услуг размещения, которые являются одним из системообразующих элементов индустрии туризма;

- определение въездного туризма как одного из приоритетных направлений государственной политики в сфере туризма и гостиничного хозяйства;

- учет факторов социально-экономической нестабильности, уровня доходности и занятости