Digital economy and digital society

edited by Tetyana Nestorenko
and Magdalena Wiezbik-Stronska

Series of monographs Faculty
of Architecture, Civil Engineering
and Applied Arts

Katowice School of Technology

Monograph 22

Wydawnictwo Wyższej Szkoły Technicznej w Katowicach, 2019

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PREFACE

The monograph is devoted to modern approaches to the informatization of society, the introduction of the latest technologies in information, one of the attempts to scientifically substantiate the feasibility of using digital technologies.

The monographic research presents the scientific achievements of the team of authors, which reveal various directions of society's informatization, forms, methods, technologies taking into account the development of economic relations.

The first part of the monograph examines issues related to the formation of a digital society, namely social and humanitarian aspects, in which the phenomena of virtual communication and manipulative technologies are considered in the context of the formation of an information society; informational and cognitive competence as a component of professional competence; a differentiated and individualized approach to learning the child to use means of obtaining information; ways of conducting information warfare; the use of kreolized texts in vocational training, etc.

In the second part: "Psychological and pedagogical issues of the development of digital society", issues concerning the acquisition of digital competences by citizens and the definition of the sphere of society's digitization are discussed: information and communication technologies in the educational process; formation of information and communication competence of future specialists; formation of educational space in the conditions of information society; trends updating the content and methods of vocational and pedagogical training in terms of quality management of educational services; innovative technologies of teaching a foreign language in the process of postgraduate educational training of specialists; alternative technologies for teaching children with special educational needs; features of the advisory process, mediated by technical means; competently-oriented tasks in the course "Programming".

An important place in the monograph is the third part, which presents the modern problems of the development of the digital economy.

The issue of digital competitiveness and human capital for economic growth has led to a study in the field of study: the problems of the development of tax systems in the digital economy; practical and methodological bases for the economic security of tropical enterprises in the conditions of globalization; transformation of the system of management of relations with consumers in the conditions of digital economy; cooperation with Finteh start-ups and digitalization as a promising direction for the development of the banking sector; digitalization in the branches of economy; modeling the development of mechanisms for financial decentralization based on production-institutional functions; modern methods of managing receivables and ways of reducing the risk, etc.

The third part also addresses the issue of socio-economic drivers of the digital economy, modern staffing strategies in the digital era, and the formation of the concept of digital

management as the main factor in the implementation of intellectual capital; digital technologies and their impacts on the development of the country's economy; ethical use of information in marketing communications, management of natural growth processes based on models of economic dynamics; development of "breakthrough" technologies of industrial management as a global trend of digital society.

The authors' team hopes that the monograph will be useful for scholars and students, all those who are interested in modern information technologies in various spheres of public life.

Tetyana Nestorenko
Magdalena Wieżbik-Strońska

3.4. Digital technologies and their impacts on the development of the economy of the country

The subject of economic theory, according to Western economists, is the study and use of limited economic resources to satisfaction of human needs. According to the theory of neoclassical synthesis, the founder of which is A. Marshall, the subject of the study is the national wealth, the ways and incentives of human behavior under conditions of limited resources. The ideas of J. M. Keynes, later called Keynesianism, became the basis of the theory of macroeconomic regulation of the national economy and the study of dependencies between economic proportions. He used institutionalism as his study of the economic system, as well as applied economic and noneconomic factors, the definition of collective action and collective choice. Consequently, the emergence of a digital economy relied on the already existing scientific views of a number of schools and trends in economic theory, above all, marginality, Keynesianism, institutionalism.

During the formation of the digital economy, the digital economy constantly felt and was influenced by the environment of such sciences and technologies as economics and mathematical modeling, social psychology, information and communication technologies (ICT), and also promoted the emergence of new advanced technologies for the purpose of obtaining, transmitting, processing and storing data. So, the objective process of economic development contributed to the expansion of the limits of knowledge due to the influence of other sciences and the expansion of research objects, while the economy involved in the process of their knowledge, interests and influence of new trends in economic theory, including the digital economy[412].

The current stage of economic development is characterized by a number of specific features, which are primarily due to the rapid progress and pace of development of social production, the introduction of information telecommunication technologies. In addition, the process of globalization of the global economy, the launch of the import substitution mechanism impose requirements for the process of updating and developing the digital economy.

The notion of "digital economy" is a relatively new trend in economic theory.

The digital economy is a system of institutional categories (concepts) in the economy, based on advanced scientific advances and advanced technologies, primarily in digital information and communication technologies, whose operation is aimed at increasing the efficiency of social production, supporting sustainable economic growth in order to increase prosperity. and the quality of life of the citizens of the country. The result of the digital economy is a specific product (or service) in obtaining citizens of this service in the socio-economic activity: scientific and educational, health care and medical care organizations, ensuring effective business conduct and its control, legal services, in the field of advertising , i.e. the creation of an e-government (or statedocument circulation). Thus, the International Organization for Economic Co-operation and Development (OECD) and scientist Thomas Mezanburg distinguish three main components of the digital economy[413]:

- supporting infrastructure (hardware and software, telecommunications, networks, etc.);
- e-business or e-business business (conducting business and any other business processes through computer networks);
- e-commerce (distribution of goods over the Internet).

Consequently, the digital economy is an innovative dynamic economy based on active introduction of innovations and information and communication technologies in all types of

[412] Gasanov G., Gasanov T. (2017) Digital economy as a new direction of economic theory. Regional problems of economic transformation. Regular problems of the transformation of economics. 2017. No. 6. pp. 4-10.

[413] The Concept of a “Digital Economy” [Electronic resource]. – Access mode: http://odec.org.uk/the-concept-of-a-digital-economy/ – Title from the screen.

economic activity and sphere of life of the society, which allows to increase the efficiency and competitiveness of individual companies, economy and standard of living of the population. The digital economy is the foundation of the Fourth Industrial Revolution and the Third Wave of Globalization.

A characteristic feature of the digital economy is its connection with the demand-side economy (on-demand economy), which involves not selling goods and services, but accessing them at the exact moment when it is needed. Receiving orders is online, and their execution is offline. Advantages of the economy on demand are: high speed of obtaining the necessary service or product; Reducing their value to the end user by reducing the number of intermediaries; simplifying the release of suppliers of goods and services to users.

The need for the use of digital technologies to enhance competitiveness, entrepreneurship and innovation was highlighted in the" Action Plan "Entrepreneurship 2020[414]. The European Commission encourages the use of opportunities for the digital revolution, encouraging innovative business transformation and supporting digital businesses in Europe[415]. More effective use of digital technologies has been recognized by the EU as the main driver for strengthening competitiveness and economic development as well as job creation and, as a consequence, is one of the first issues on the agenda in a number of initiatives, in particular: The flagship initiatives of the EU 2020 – Industrial politics for the globalization era, Digital Agenda for Europe, The Innovation Union[416]; "Entrepreneurship 2020" Action Plan – The Entrepreneurship 2020 Action Plan (2013); Small Business Act of Europe – The Small Business Act for Europe (2008)[417]; Commission Communication "Adapting e-Business Policy in a Changing Environment: Go Digital Initiatives Lessons and Future Challenges – Adapting e-business policies in a changing environment: the lessons of the Go Digital Initiative and the challenges ahead" (2003)[418].

The Entrepreneurship 2020 Action Plan provides a framework for policy and vision for key priority sectors by 2020. The program has five categories, each of which describes the key factors affecting digital entrepreneurship. Note that developed countries pay considerable attention to the development of the digital economy. The European Commission allocates five measurements of the digital entrepreneurship program:

a) digital knowledge and ICT market;
b) digital business environment; c) access to finance for business;
c) digital skills and e-leadership;
d) creation of a supportive entrepreneurial culture (Fig. 1).

The European Commission is also working on other issues related to the competitiveness of the digital economy in Europe:

1) stimulation of switching to electronic invoice circulation and payment information between enterprises, which will accelerate the money circulation between them, reduce printing and postal costs, provide reduction of storage costs of documentation;

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[414] The Entrepreneurship 2020 Action Plan [Electronic resource]. – Access mode: http://ec.europa.eu/enterprise/policies/sme/entrepreneurship-2020/index_en.htm – Title from the screen.

[415] Measuring the Digital Economy OECD Report [Electronic resource]. – Access mode: http://www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/measuring-the-digital-economy/summary/english_1443d3d7-en#page1 – Title from the screen.

[416] New Digital Economy [Electronic resource]. – Access mode: https://www.ida.gov.sg/~/media/Files/Infocomm%20Landscape/Technology/TechnologyRoadmap/NewDigitalEconomy.pdf – Title from the screen.

[417] OECD Digital Economy Papers [Electronic resource]. – Access mode: http://www.oecd-ilibrary.org/science-and-technology/oecd-digital-economypapers_20716826 – Title from the screen.

[418] Digital economy [Electronic resource]. – Access mode: http://ec.europa.eu/growth/sectors/digital-economy/index_en.htm – Title from the screen.

2) standardization of information and communication technologies (ICTs) in order to unify their specifications and properties and maximize opportunities for cooperation between business entities;

3) the development of "electronic skills" for the effective use of digital technologies in industry and other sectors of the economy.

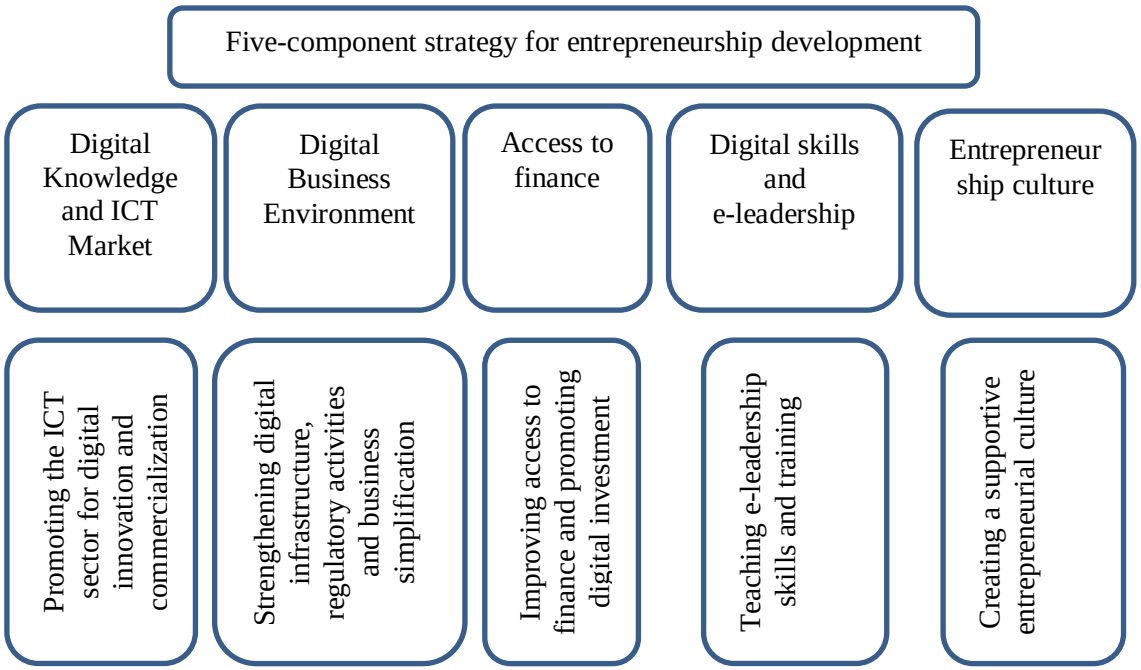

Fig. 1. Composition of the Program "Entrepreneurship 2020" Action Plan

An important component of the formation of the information society and the digital economy in Ukraine is the use of opportunities for modern ICTs for the creation of information and new knowledge, goods and services, and effective exchange of them. Information and telecommunication technologies in the conditions of intensive development of market relations – one of the most important elements of effective management. The level of ICT development in the country can be estimated by the general indicators of the use of computer technology and telecommunications.

According to a sample survey of the State Statistics Service of Ukraine[419], 91.1% of enterprises in all regions of the country use computers in their activities. The highest level of computerization has enterprises in the field of money mediation, loans, insurance – 99.6% of the total number of enterprises. The high value of this indicator was in the field of film production and activities in the field of broadcasting and television – 96.5%; the lowest level of computerization – in the sphere of hotel and restaurant business – 82.1%. Of the total number of computerized enterprises, 62.7% used an internal computer network, and an extended internal computer network – almost every sixth enterprise. Each fourth company had a functional home page in the intranet and used wireless access.

The problem of ensuring the effectiveness of digital technologies and enhancing their positive impact on economic growth and socio-economic development of the countries is urgent. In this regard, the majority of scientists and practitioners consider the priority task on the global scale to increase the availability of the Internet, including and the price tag. Today in the world for every user of high-speed broadband connection there are five people who do not have such a connection. On a global scale, almost 4 billion people do not have access to the Internet at all.

[419] State Statistics Service of Ukraine [Electronic resource] – Access mode: www.ukrstat.gov.ua.

About 2 billion people do not use mobile phones, and almost half a billion people live in areas not equipped with mobile communications[420]. As for Ukraine, according to the American website Speedtest.net, which uses the Internet bandwidth analysis, Ukraine has a well-developed fast broadband Internet, but its mobile Internet is slow. In all neighboring countries, mobile Internet is better than in Ukraine.

Three of the world's fastest Internet leaders include Singapore, South Korea and Hong Kong. Ukraine ranks 39th out of 133 countries at the speed of broadband Internet (Fixed Broadband). Along with us in the ranking – Ireland (37), Poland (38), Russia (40), Estonia (41). In the rating of mobile Internet Ukraine is only 109 in the 122nd place. Ukraine was ahead of the following neighboring countries: Moldova on 43, Poland – 49, Belarus – 69 and Russia – 72. In this regard, the priority task is to provide for everyone, both in Ukraine and the world of access to the Internet. Note that this is one of the targets of the Sustainable Development Goals (SDGs), known as "The Transformation of our World: An Agenda for Sustainable Development for the Period up to 2030" (English Transforming our world: The 2030 Agenda for Sustainable Development, approved by the United Nations Summit on Sustainable Development on September 25, 2015, the Sustainable Development Goals (SDGs) include 17 global goals and 169 relevant objectives. In particular, SDGs includes Goal 9 "Creating a solid infrastructure, promoting comprehensive and sustainable industrialization and innovation," which can be achieved by combining market competition with public-private partnerships and effectively regulating the functioning of the Internet and telecommunications.

In order to assess the level of technological development in the countries of the European Union and the degree of the introduction of innovative technologies in society and, in particular, in the economy, the DESI Index (The Digital Economy and Society Index) is used. The index is calculated from 0 to 1. Human capital, digital technology integration, digital public services, quality of communication and Internet use are estimated. In 2017, the EU countries received the highest marks for the following components of the DESI index: communication (0.63), human capital (0.55) and digital social services (0.55). However, the need to improve integration of digital technologies into business activities (0.37), Internet usage (0.48). According to the DESI index, in 2017, Denmark, Finland, Sweden, the Netherlands, Luxembourg, Belgium, Great Britain, Ireland, Estonia, Austria (Figure 2) are the leaders in the development of digital technologies among the countries of the European Union.

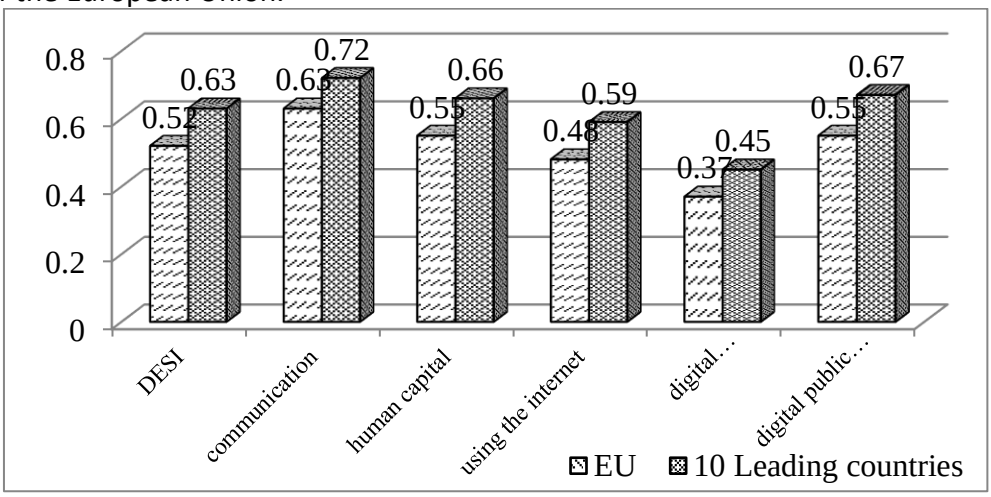

Fig. 2. The DESI indexforthe EU andthe 10 countries-leaders in the development of the digital economy[421]

[420] Report on World Development "Digital Dividends". World Bank Group-2016 // http://documents.worldbank.org/.
[421]Digital Economy and Society Index 2017 [Electronic resource] - Access mode: https: // ec.europa.eu/digital-single-market/en/

Note that for the top 10 EU leaders in the development of the digital economy, the overall index of DESI and its components are considerably higher than the average for the European Union. In addition, the top 10-leaders of the countries included mostly small EU countries.To this cluster did not enter such countries as Germany, France, Italy, Spain, etc. This once again demonstrates the peculiarity of the new wave of globalization and the Fourth Industrial Revolution: small and medium-sized enterprises and small countries can be successful and competitive if they actively implement digital technologies and develop the digital economy.

Due to the development of the digital economy, small and medium-sized businesses (SMEs) have become unattainable in the past to become global. This is what determines the peculiarity of the third wave of globalization, its inclusiveness. In particular, the founder of Alibaba, Jack Ma, formulated at the World Economic Forum in Davos (2017): the concept is "30-30-30": for the next 30 years, the world will be replaced by those today 30, and companies employing 30 employees[422].

It should be noted that all the first positions in the components of the DESI ranking are occupied by countries with the top 10 EU leaders. In particular, Denmark has the highest ranking among EU countries in terms of the use of the Internet and the integration of digital technologies; Finland - by the component of "Human Capital"; The Netherlands – "Communication"; Estonia – "Digital Public Services" (Table 1).

It is clear that Ukraine is not a member of the EU and the DESI index is not officially defined for it. For Ukraine, the Digital Evolution Index 2017 is also not determined. One of the reasons is the lack of relevant information, reporting.

In a digital economy, human capital and information technology play a crucial role in ensuring sustainable economic and business development. In this regard, the training of highly skilled professionals, taking into account the needs of the market and modern trends in the development of digital technologies, the effective implementation of which is accompanied by accelerating economic growth, increasing the number of jobs, improving the quality of services, becomes of particular importance.

Enterprises that use digital technology are becoming growth hubs that provide the Internet of Things economy – the concept of a computer network of physical objects ("things") equipped with embedded technologies for interacting with each other or with the external environment.

Table 1. 10 EU countries with the most advanced digital economies

Country	DESI rating		Communication		Human capital		Use of the Internet		Integration of digital technologies		Digital public services	
Denmark	1	0,71	4	0,76	5	0,69	1	0,72	1	0,62	4	0,74
Finland	2	0,68	12	0,64	1	0,76	5	0,62	3	0,56	2	0,82
Sweden	3	0,67	5	0,76	4	0,69	2	0,71	4	0,54	8	0,65
Netherlands	4	0,67	1	0,82	6	0,65	4	0,62	6	0,48	3	0,77
Luxembourg	5	0,61	2	0,79	2	0,73	3	0,64	22	0,3	19	0,49
Belgium	6	0,61	3	0,78	11	0,57	11	0,52	5	0,52	13	0,57
UK	7	0,61	6	0,74	3	0,71	7	0,59	15	0,37	18	0,5
Ireland	8	0,59	11	0,65	12	0,56	16	0,48	2	0,56	7	0,67
Estonia	9	0,58	7	0,62	10	0,58	6	0,6	20	0,32	1	0,84
Austria	10	0,57	15	0,63	7	0,62	20	0,44	14	0,39	5	0,73
Average indexes per group		0,63		0,72		0,66		0,59		0,45		0,67
The European Union		0,52		0,63		0,55		0,48		0,37		0,55

[422] Pivovarov Y. Why Ukraine digital economy [Electronic resource]. – Access mode: http://nv.ua/ukr.

While in the beginning of the 20th century major oil and steel, metallurgical, mining and mining enterprises were the main drivers of the global economy, the largest companies are now the representatives of the digital economy (Table 2)[423].

Table 2. The rating of the largest companies in the world in 2017

Name	Scope of activity	Market capitalization, billion US dollars
Apple	Production of electronics and information technologies	618
Alphabet (Google)	Internet services, applications, video hosting	532
Microsoft	Software development	483
Berkshire Hathaway	Insurance, finance, transportation, utilities, food and non-food products	402
Amazon	Selling and supplying various goods through the Internet	356
Exxon Mobil	Extraction and processing of oil	347
Facebook	Internet	332
Johnson & Johnson	Pharmaceutical industry	313
JPMorgan Chase	Banking	309
General Electric	Production of electrical engineering, energy, medical equipment, home appliances, transport engineering	280

The experience of the United States and China shows that the development of the digital economy in these countries contributes to increased competition, increased productivity and qualifications of labor, reduced prices, facilitated access to information and created a number of other benefits for consumers and companies. The use of digital technologies improves the business and investment climate by increasing the availability and efficiency of public services (registration of legal entities, accreditation, obtaining permits, declaring and paying taxes, customs support), development of ecosystem business services (logistics services, mobile banking), increasing transparency of conditions of conduct business (electronic platforms for tendering and purchasing, feedback portals).

The transition to a digital economy forces companies to adapt to other methods of work that will allow them to profit. Namely, the transition to a corporate network will allow companies to find solutions within the company and this will be more important than the corporate hierarchy.

Information – the new "black gold" of the 21st century, with the development of the Internet of things its volume continues to grow – but also the value is rising[424]. Companies need new tools for working with information, and professionals – new skills. Consequently, the transition to a digital economy is causing a problem – lack of skilled personnel capable of understanding the new technologies and information streams that will be produced by powerful computers – machines.

The digital economy is based on the production of electronic goods and services by high-tech business structures and the implementation of these products through e-commerce. Digital economy – activity in which the key factors of production are the data presented in digital form, and their processing and use in large volumes, allows to increase efficiency, quality and productivity in different types of production, technologies, equipment, during storage, sale, delivery and consumption of goods and services[425].

[423] Top 10 most expensive companies in the world in 2017 [Top 10 samykh dorogikh kompaniy mira v 2017 godu]. Top 10 most expensive companies in the world in 2017. URL: http://moneymakerfactory.ru/spravochnik/samyiedorogie-kompanii-mira (accessed 08/01/2018).

[424] G. Rudenko Digital Technologies: New Business Opportunities // Effective Anti-crisis Management No. 1 (82) 2014. – 6 p.

[425] Elkom – General questions of electronic commerce [Electronic resource] Access mode: http://elcomrevue.ru/tsifrovaya-ekonomika/.

The subject of the digital economy is economic relations and laws. Relations are formed in the process of production, exchange, distribution and consumption of scientific and technical information through digital information technology, and the development of these processes is subject to economic laws.The urgency of the study is due to technological changes that bring new characteristics both to the global economic system and to the economy of individual markets and enterprises. Digital technology has led to a revolution in business. The new digital economy is based on fundamentally different rules than the traditional economy. Business entities are forced to work in an ever-changing environment. Survival and development in such conditions implies constant adaptation of business to a dynamically changing environment at the strategic and tactical level.The digital economy has a great impact on production, trade, transport and financial services, education, healthcare, media, etc. Technology expands the capabilities of people and organizations in different directions, provide the opportunity to create and disseminate ideas, design and implementation of innovations in commercial activities.The development of information digital economy is inextricably linked with the development of the information market. Information market can be characterized as a system of economic, legal and organizational relations on the sale and purchase of intellectual property products on a commercial basis.

With the growth of informatization and the digitization of society, the information industry is beginning to dominate the economy, production is becoming more innovative and knowledge-intensive. Every year the number of employees in the field of information and communication technologies is increasing. The main factor that stimulates the informatization of society in recent decades is increasing the availability of hardware and software, the development of networktechnologies. Significant influence on the dynamic development of the information market providedan intensive growth of business in the development of software products[426].

The development of the digital economy has led to the emergence of a new type of competition – hypercompetition. Systemic elements of hypercompetition are multilevel and multidimensional, new knowledge (competence), manageability, dynamism, adaptability, mobility, innovation, efficiency, etc., which determine the globalization advantages of world leading countries and technologically advanced transnational companies. The information market uses special methods of competition of IT structures that perform a narrow-minded function in the development of innovative technologies for the production, storage, processing and transmission of information to optimize the business processes of organizations.

At the microeconomic level, information and communication technologies (ICTs) allow enterprises to optimize business processes. At the macroeconomic level, the impact of ICT explains the need to select new directions for the development of economies in countries and regions that take into account trends in the global economy, including use.

The digital economy allows you to overcome a number of constraints inherent in the traditional economy. Digital products can be copied and used unlimited range of people, and they do not lose their consumer properties, and in the sharing and exchange of these properties are often improved. In this case, material products can't be used at one time by several people and are prone to wear in the process of exploitation. Online stores allow you to avoid restrictions on the areas typical of the usual trading platforms, and therefore the breadth of the range.

With the growing influence of information on the management of the company, an additional study of the methods of its use is needed. At present, it is becoming more and more difficult to solve the organizational and managerial problems of companies, the setting of business

[426] Perelyak A. I. Digital economy: new opportunities of business. Scientific community of students of the XXI century. Technical sciences. Sat. Art. by mat. LII intern.stud scientific practice. conf. No. 4 (51). URL: https://sibac.info/archive/technic/4(51).pdf.

processes. The digital economy has made a number of significant changes in the activities of companies. The emergence of information production factor, which became a significant resource. Increased production costs, because information as a commodity and a factor has a price. Reducing transaction costs through the use of ICTs.Growth of the significance of the human factor in the implementation of ICT-based production.Reducing the significance of the uncertainty factor through the active use of information resources.

In the traditional economy, the producer has played a major role in the relationship between producer and buyer, since he was responsible for generating the idea of a product. The buyer chose from the list of goods already made and offered by the manufacturer. In a digital economy, a modern buyer has the opportunity to become involved in the process of creating a new consumer value, to generate ideas for new products and services.

The move toward more close interaction with the consumer can be characterized as a logical step of manufacturing enterprises for changes in the business environment. Manufacturing companies increasingly began to cooperate with the consumer (creating a product design, production of a product on an individual order, the development of a functional new product, etc.). The concept of "open innovation", developed by G. Chesborough, is also associated with changes caused by the digital economy. Open innovation can be observed in the process of actively engaging consumers in the process of innovation, when companies use not only internal ideas (ideas of employees), but external (ideas of consumers). In the age of digital economy, knowledge is strategically important. They play a key role in the sustainable economic development of enterprises of various industries. In this regard, it is advisable to formulate new approaches to the development of business development strategies based on modern tools and methods for integrating corporate knowledge into the company's management system. Knowledge management as one of the most important areas of activity in the management system should be concentrated on the formation of intellectual property, the development of organizational, consumer and human capital enterprises. Intensive use of intellectual assets provides opportunities for the formation of internal and external competencies that together form the system of key competencies of the company[427].

The development of the digital economy has a significant impact on the internal and external business environment. There are radical changes in the field of information and communication technologies, which are reflected in different areas of companies. The Internet enables even new and tiny companies to sell their products around the world. Companies can appear and grow fast, with relatively small capital investments. Information technology helps to reduce costs, and significantly increase the efficiency and productivity of labor in almost all sectors of the economy.

he situation of the company in the market in the digital economy is becoming increasingly complex, rising risks and the level of uncertainty in making strategic decisions. This situation is due to the unstable situation due to dynamic changes at the technological level, the growth of competition, and the state's influence on the economy.

Technological changes inherent in the digital economy create new market rules for doing business, both for producers and buyers. In a digital economic environment, companies need to continuously look for new competitive strategies and increase the effectiveness of competition.

In order to survive and evolve under the new conditions, companies should increase their competence in the field of digital information technology.

Of the total number of computerized enterprises, 62.7% used an internal computer network, and an extended internal computer network - almost every sixth enterprise. Each fourth company had a functional home page in the intranet and used wireless access. In 2017, the share of enterprises with access to the global Internet network was 95.1% of the total number of

[427] Chezboro G. Open Innovations. Creation of profitable technologies. M.: Generation, 2007. 336 p.

enterprises that used computers. Internet enabled banking and financial services (87.7% of enterprises); forms (81.6%); information (80.5%); return filled forms (66.6%); to carry out administrative procedures (declaration, registration, request for obtaining a permit (40.5%)). More than a third of enterprises (39.8%) with Internet access had a home page or website. Two thirds of enterprises that have catalogs of products or pricelists on the website were part of the processing industry and trade. Each fourth company, using websites, posted vacancy announcements or provided online filing vacant positions; provided suggestions on the manufacture of products in accordance with the requirements of the client or the ability for customers to independently develop product design; made payments online. Each sixth enterprise provided personalized content within the website for regular customers; placed an order or booked online ("Add to cart" function). Computerized enterprises actively engaged in automated data exchange (sent or received data for / from government agencies and transport documentation, provided payment orders to financial institutions, received (sent) electronic invoices, sent (received) product information, sent orders to suppliers, received orders from customers). Internet access was 93.9% of small businesses, 98.0% medium-sized and 99.4% large. All enterprises (small, medium and large) are widely served by the Internet to receive banking and financial services and information in general, as well as for the receipt and return of completed forms[15].

Thus, today's digital economy is an effective basis for the development of public administration, economy, business, social sphere and society as a whole. The formation of the digital economy is also a matter of national security and independence of Ukraine, competition of domestic companies, the country's position on the world stage for the long-term perspective. In order to successfully develop the digital economy in Ukraine, effective public policies are needed to overcome the digital divide and stimulate the development of the digital economy. The key strategy for Ukraine's "digitalisation" should be to work with the internal market, and the key initiatives are the formation of motivations and needs in digital technologies for consumers (business, state, citizens). It is necessary to approve at the state level the project "Digital Gadgets of Ukraine 2020", which stipulates the active role of the state in implementation of the implementation of the strategy for the development of the digital economy, the digitalisation of all spheres of activity, the active implementation of the Industry 4.0, the formation of the necessary professional skills. A country cannot succeed in developing a digital economy in the absence of the necessary regulatory framework, a digital-based economic development strategy. But equally important is the formation of professional skills, basic ICT literacy, preparation for a professional career, and the promotion of lifelong learning.

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