

THE THEORETICAL FUNDAMENTALS OF THE TRANSFORMATION OF THE DEVELOPMENT OF THE DIGITAL ECONOMY

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Abstract. *This study reveals the essence and importance of the digital economy as a major factor in socioeconomic development. The benefits of digitalization for society and the economy in general have been proven, as users of digital services and products have the ability to gain high-speed Internet access and improve their information and knowledge base, making life more comfortable and convenient. It is proved that Ukraine ranks first regarding freelancers among European countries, and therefore improving the legal and regulatory framework for this type of activity will improve the socioeconomic standard of living.*

The aim of this work is to reveal the theoretical and practical foundations of the importance of the digital economy as a factor in the socioeconomic development of the state.

The paper notes that the modern global labor market is a complex, multi-component and dynamic system that is permanently affected by information technology, which, in turn, entails changes in the content of the labor process, its organization, employment structure, social and labor relations, and also requires the formation of fundamentally new competencies of the employee. Digital technologies have created a very specific process of labor and have changed all of its elements: the subject, means, technology, organization and results of labor.

The impact of new technologies on human resources is unpredictable. This process is complex because it is not so much about innovative technologies as about how people are going to use them.

This paper contains an economic analysis of the main trends, problems and prospects of the digital economy in Ukraine in terms of key sectors, namely: telecommunications, IT technology and information services. It is established that these industries are developing quite rapidly and show relatively strong economic results. This contributes to increasing the investment attractiveness of enterprises, in particular for external investors. Prerequisites for the development of the digital technology sector in Ukraine are the growing market of information services, the availability of human capital, and minimal government intervention in the functioning of the industry.

These scientific research results are focused on developing a set of modern economic instruments and identifying promising areas of digital transformation of economic systems, including conceptual approaches to the transformation of the digital economy, which, unlike existing approaches, take into account the components of stimulation, motivation, and indicators of digital economy development.

Keywords: *digital economy, digitalization, development, digital labor market*

Introduction

The development of relationships in the social environment depends on the level of economic development. This applies at any level: global, national, regional, territorial, etc. Digitization of the economy is a certain form of economic technology with its own characteristics, trends and patterns. Many countries around the world use this technology to increase the efficiency of economic development, increase competitiveness, and more.

The information revolution, characterized by the massive spread of information technology among the population and businesses and their constant improvement and adaptation, has a significant impact on the development of national and regional economies.

Features of the development of modern economic systems, including the digital economy, formed the basis of research by many international scholars, including: J. Galbraith, D. Tapscott, N. Negroponte, and T. Messenburg. Ukrainian scientist M. Voynarenko dealt with the issues of capitalization of information and intellectual potential. The works of L. Kit, A. Shemet, I. Malik and others were devoted to the development of the network and information economy. Studies of transformational processes of the economy in the conditions of decentralization were outlined in the works of K. Bystryakov, S. Voit, B. Egorov, A. Klyuchnik, V. Lagodienko, L. Malik, V. Nemchenko, O. Pavlov, T. Stroyko, Y. Khvesyk, and others.

The results of previous research have created a strong theoretical and methodological basis for the processes of economic transformation, but there remains insufficient use of digital technology in socioeconomic development. It is important to identify promising areas of digital technology in the development of economic systems.

The main body of the paper

The essence and significance of the main components of the digital economy. The sequence of evolution in the technological world forms new production tools and a certain basis for various economic agents. New economic systems are being created as a result of industrial revolutions. The following two main approaches to understanding the role and place of digitalization in global industrial production are identified. The first treats the current stage of introduction of information and technological achievements as evolutionary – the next as revolutionary. According to the latter, the digital economy is studied as the basis of the fourth industrial revolution, because there is a clear change in basic technology and there are signs of changing technical and economic conceptuality.

Today, the formation of the industrial revolution is associated with the development of communicative Internet technologies, which have radically changed the technology of business processes and are called digitalization. Thus, the first step of the fourth industrial revolution and the third wave of globalization was the digital economy.

The hallmark of the digital economy is its connection to the demand economy, which is not based on selling goods and services, but gaining access to them when needed.

Digital diffusion occurs when digital technologies accelerate the transfer of knowledge, business innovation and productivity within the company through the supply chain of industries to achieve sustainable economic development.

The digital economy has significantly changed traditional business processes. Due to the most complex levels of digitalization, the economy sees the global transformation of industrial relations of participants, the result of which is the integration of production and services into a single digital system, in which (Mesenbourg, 2021):

- all elements of the economic system exist simultaneously in the form of physical objects, products and processes, as well as their digital copies;
- all physical objects, products and processes become part of an integrated IT system due to the availability of digital copy and the element of connectivity;
- due to the presence of digital copies and becoming part of a single system, all elements of the economic system continuously interact with each other in a mode close to real time, simulate real processes and predicted states, and provide constant optimization of the entire system.

The main segments of the digital economy are (Mesenbourg, 2021):

- the information and communication technologies sector and infrastructure related to e-business;
- digital production and e-business, including industry, and business organization processes using computer networks;
- e-commerce, i.e., retail and the Internet sales of goods.

The information and communication technology sector is one of the main components of the modern world, representing a new technological paradigm which belongs to the type of general-purpose technologies that are widely used and adapted to different sectors of the economy. The world's largest IT companies are presented in Table 1.

Table 1. The largest IT companies and their market capitalization
Source: compiled by the author on the basis of Mesenbourg (2021)

Company	Sphere of activity	Market capitalization, billion \$
Microsoft	Software	905
Apple Inc.	Electronics, information technology	896
Amazon Inc.	Retail company, sales and purchases over the Internet	875
Alphabet Inc. (Google)	Internet services, video hosting, applications	817
Facebook	Internet, social network	476
Samsung Electronics	Technologies	234

Artificial intelligence is becoming the core and foundation of a crucial technology for humanity (Nekrasov, 2019). Artificial intelligence has been characterized as a breakthrough class of technology over the past 10 years, which has occurred as a result of advances in computing power, volume, diversity and speed of data growth (Allam, 2016). The volume of investments in the field of artificial intelligence in the world is growing rapidly. In 2018, this amounted to \$27 billion (of which 55% was US investment). The share of digital services in Ukraine and the EU is presented in Table 2 (Nekrasov, 2021).

Table 2. Share of digital services in Ukraine and the EU, %
Source: compiled by the author on the basis of Nekrasov (2021).

Digital service	Ukraine	EU
E-commerce in retail	4	7
Organizations that use CRM systems	10	33
People who buy online	23	55
People who receive services online	29	48

According to the results of one study, artificial intelligence will increase, and in 2030 global GDP will rise by 14%, or \$15.7 trillion due to the active use of artificial intelligence (Klingler-Vidra, 2019).

Researchers believe that artificial intelligence will be part of the digital transformation strategy and a priority for almost one third of companies. As for the industries that predict the maximum effect from investments in artificial intelligence technologies, they include: IT, technology and telecommunications (59%), commercial and professional services (43%), as well as consumer services and the financial services sector (32%) (Klingler-Vidra, 2019).

Broadband Internet access is a turning point that can transform and create jobs, drive productivity, and be the foundation of economic competitiveness in the long run.

The turbulent development of the world has helped broadband become a critical infrastructure that determines the competitiveness of countries in the global digital economy.

Broadband not only makes it possible to provide new services and create new industries, but also transforms existing industries and traditional regulatory principles with great speed (Alekseev & Bogatyrev, 2020). As a result of broadband:

- newspapers have become online content providers;
- voice over Internet protocol revolutionized the telephone market;
- in the music industry there is work on creating new income schemes;
- the copyright industry is facing new challenges in the protection of intellectual property online.

Thus, the ability to receive broadband Internet will directly affect employment. The ability of the Internet to reduce transaction costs provides opportunities for people who have difficulty finding work or access to productive resources, as well as improving the integration of people with disabilities and people living in remote areas.

According to research by the World Bank Group (2020) on employment, the 30% penetration of fixed broadband access on average in the Eurasian Economic Union may lead to the creation of 2–4 million new jobs by 2025, 1 million of which can be created in the field of information computer technology. It is possible to achieve an increase in productivity by up to 1.73% by 2025.

The essence of this fifth generation (5G) connection technology means accelerating data transfer by almost 40 times or more. The rapid development of such technologies will lead to a revolution in industry, agriculture and transport. There is a possibility of uninterrupted and high-speed data transmission, where devices can exchange data directly and provide access to the remote control of agricultural machinery, industrial works or unmanned vehicles.

The industrial sector of information and communication technologies is of great importance in the global economy. In industrial production, productivity has not increased over the last ten years, and demand has been largely fragmented, leading to a need for innovation.

In general, the share of material production in the world is declining, and thus the tertiary sector of the economy is beginning to occupy a leading position in the world.

Given that a third of the total economic value of the Internet of Things is concentrated in industrial production, the center of gravity of the new revolution falls on industrial enterprises (Aharon et al., 2015).

The next driving force of the digital economy is the spread of digital platforms. Recently, many digital platforms have emerged around the world that use data-driven business models to reshape existing industries. Digital platforms act as mechanisms that prevent different parties from interacting online.

Some non-global digital platforms have taken major market positions in certain segments. For example, around 90% of the Internet search engine market is owned by Google. Facebook accounts for two thirds of the global social networking market, and its platform is among the most popular social networks in more than 90% of countries. More than 40% of the world's online retail sales are through Amazon's network, and its subsidiary Amazon Web Service accounts for about the same share of the global cloud infrastructure market (UNCTAD, 2019). One of the vectors of e-business which is actively developing is e-commerce. E-commerce is the field of computer networks and business processes that are associated with such transactions. E-commerce includes: e-information exchange, e-capital movement, e-commerce, e-money, e-marketing, e-banking and e-insurance services (World Bank Group, 2020).

Currently, Amazon, Google and Facebook are considered powerful companies in global e-commerce. Each of these giants has played a role in shaping the e-commerce industry. While before they each worked in their own niche, now there is an increasingly fierce struggle between them that poses a threat to other brands and retailers in the market.

Summing up, we note that the main current trends in e-commerce include (PaySpace Magazine, 2020) trade without barriers, the growth of subscription purchases, one-button purchase, and direct sales from manufacturers.

Current state and level of digitalization of Ukraine's economy. Current trends in the development of digitalization of various spheres of society on a global scale are obvious and inevitable. These trends are the basis for the latest stage of technological arms races, the consequences of which will be geopolitical and geoeconomic leadership. At the same time, there is the chance that, both for developed and developing countries, improvement of the domestic and socioeconomic situation is realized. Today, the digital agenda and the formation

of a hypercompetitive digital economy are the top priorities for many countries around the world.

Indicators of a country's readiness for digitalization include the four most important factors that describe the level of digitalization of the state: (1) the general level of digitalization of the economy; (2) the extent to which households are covered by the digital sphere; (3) the level of digital gaps; and (4) the state of intensity of state participation in digitalization.

It should be noted that the concept of digitalization of the economy in Ukraine is significantly different from what is currently understood worldwide. Currently, in Ukraine, talking about the concept of digitalization is specific, and attaches importance to concentrating exclusively on the formation of new types of services based on the collection and analysis of data from various physical objects. This does not address radical changes in the production system or in approaches to the design, production, marketing and operation of the physical objects which were laid down in the concept of Industry 4.0.

According to the report of the World Economic Forum (WEF) for 2019, which relates to the level of technological development and innovation in Ukraine, it should be noted that among the 100 countries in the world Ukraine occupied 60th place. In two indicators, the structure of production and driving forces of production, Ukraine took 70th and 59th place, respectively (Aharon et al., 2015). Thus, Ukraine is one of the countries lagging behind in this regard.

Losses in the leading industries have undermined the development of related enterprises in machine tools, toolmaking, metallurgy, materials science, industrial chemistry and others. Thus, as a result, for the 1992–2019 period the share of manufacturing in the structure of Ukraine's GDP decreased significantly from 44.6% to 11.5%, and became almost half the level of middle-income countries (19.6%). It was almost equal to the share of agriculture (10.1%), the export earnings of which today determine the dynamics of the hryvnia exchange rate, as well as inflation and the overall solvency of the state.

According to reports from the State Statistics Bodies, the deindustrialization of Ukraine's economy is accelerating. The rapid decline in production affects all areas of industrial production without exception (UNCTAD, 2019).

Overall industry represents 23%–24% of GDP, 12% of which refers to the processing industry. In 2019, this industry was rapidly declining compared to others. It should be noted that the component of the private sector in the processing industry is very high, at 95.3%. Thus, it can be argued that the negative state of industry is not related to the form of ownership. The starting point for the decline of industry was 2014, after it failed to recover from the fall of 2014–2015. In 2018, industrial production was at 82% of the level of 2013, so a decline in industrial production was evident. Considering the state of industry in 2019, we note that it exhibited positive dynamics for only three months, from March to May, and since the summer the decline has intensified (United Nations Conference on Trade and Development, 2019).

We recognize that the decline in industrial production is observed not only in our country. However, taking into account the results of 2019, the industrial production of the euro area decreased by 4.1% in December, while during the same period in Ukraine, industrial production decreased by 7.5% (PaySpace Magazine, 2020).

The level of digitalization that is occurring in the economy of Ukraine differs significantly depending on the specific industry. The sphere that concerns the financial services, communication services, and logistics of Ukrainian companies uses the achievements of information technologies as widely as international competitors.

Despite such trends, there are still a number of industries where the intensity of the use of digital technologies is extremely low. Thus, this state is the basis for a significant lag in productivity that characterizes these industries.

Some scholars believe that, in Ukraine, the level of enterprise spending on the development and implementation of new technologies and products and the state of investment in the innovation

component is absolutely dissatisfactory. Compared to global leaders, this is catastrophic in terms of the prospects for the development of the country (Kormakova et al., 2019).

The results of 2018 on innovation in industry provided by the State Statistics Bodies show that only 16.4% of enterprises used such technologies (Nekrasov, 2019). As for developed countries, there the share of innovative enterprises was 4–5 times higher, accounting 5%–60% of the total number of enterprises (UNCTAD, 2019).

In Ukraine, only 3.9% of enterprises spent on research and development (internal and external), and the component of innovative products, which is important in the total volume of sold products, has long been at the level of 6%–7%. Regarding the science-intensiveness of GDP in Ukraine, there was a reduction in the 1990–2019 period by almost three times, and the current value is less than 1%.

The IT sphere in Ukraine and high-tech export. The weakest point in the digitalization of Ukraine's economy is the complete absence of large Ukrainian IT companies. All powerful Ukrainian companies in this industry operate in the domestic market.

Considering the investment component in the IT industry, its share of industry in Ukraine is increasing, not taking into account the limited investment resources in the country (during 2013–2016, IT companies invested around \$264 million in fixed assets and intangible assets) (Yahoo, 2020). However, overall, this share is less than 0.5% of total capital investment in the economy. The dynamics of growth of the IT market in Ukraine are shown in Figure 1.

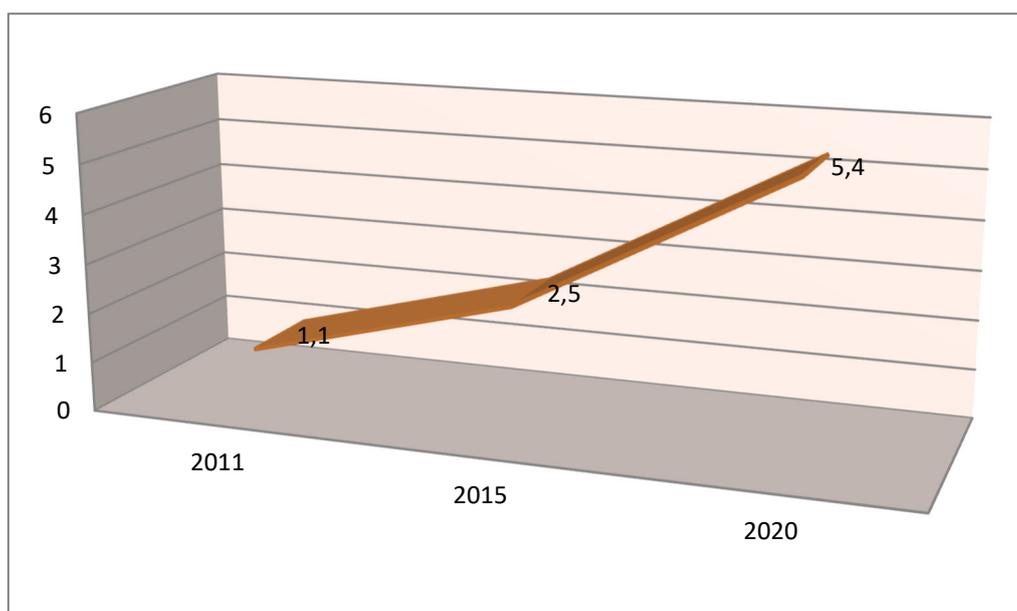


Figure 1. Dynamics of growth of the IT market of Ukraine

Source: compiled by the author on the basis of Demianchuk et al. (2021)

Almost 10 years ago the level of proposals for the provision of IT services was negative, due to the complexity of developing effective information systems. However, it is worth noting that there is a need for businesses in IT, and this is growing every year. It should be noted that companies lack the competencies to provide the required level of IT services for business, and they are also constrained by the limitations of low IT budgets.

According to forecasts, by 2025 the IT industry is likely to grow to \$8.4 billion, and the number of jobs will increase by 2.5 times to more than 240,000. According to experts, the IT services industry in Ukraine tends to grow under any circumstances, but systemic problems (including weak investor protection, unclear tax rules and the lack of effective copyright laws) are slowing

down and hampering work – not only for outsourcers, but also for other companies (Klingler-Vidra, 2019).

With regard to the export of IT sectors, we note the level of digitalization of the economy and the importance of high-tech exports. Exports of IT services (% of exports of services, according to the balance of payments) in Ukraine are growing every year. Such services, namely in the field of information technology, bypassed pipeline transport to become the second largest branch of all exported services (Aharon et al., 2015).

According to the estimates of the IT Ukraine Association, it is noted that more than 80% of IT services in Ukraine are formed for foreign markets, which make this industry export-oriented (Ministry of Education and Science of Ukraine, 2019).

According to the estimates of the IT Ukraine Association, the IT industry in 2016 was in third place in the overall list of Ukrainian exports (Filipishyna, 2021). Based on this forecast, by 2025 the industry has every chance to grow to \$8.4 billion and provide more than 40,000 jobs. Data from the World Bank show that Ukraine ranks 33rd in terms of exports of IT services (World Bank Group, 2020). Leading positions are occupied by the USA and China. Their volume of the global market of IT services in 2017 exceeded \$3.5 trillion. India's IT market can be estimated at \$145 billion, which is almost 40 times more than that of Ukraine. It should also be noted that the Indian information technology market has active support at the state level, which cannot be said of Ukraine. To date, the number of IT professionals in India has exceeded 4 million, which is 40 times more than in Ukraine (Klingler-Vidra, 2019).

The current state of affairs is partly explained by the fact that the digitalization movement in the Ukrainian economy took place much later than in European countries, and such a gap is still observed.

As for private companies, they mostly buy equipment and developments abroad. In 2016, procurement amounted to only \$190 million – in 2020, it has grown to \$300 million. The extremely low consumption of information technology, equipment, services and software has a significant direct impact on the state of Ukraine's economy.

Orders from abroad justify a certain dependence in the domestic market, which is unable to provide the IT industry with dynamic development and high wages. Working for a foreign customer does not allow IT companies to earn money constantly and on a large scale on their own products.

Features and characteristics of the digital labor market. In the digital economy, there are changes both in the nature of work and in the system of labor relations. Thanks to digital technologies, an appropriate work process is formed, which brings significant changes in its elements, such as: subject, means, technologies, organization and results of work. Under modern conditions, the information economy turns information into an object of labor.

The specificity of the digital labor market is global. The effect of the digital labor market is the interaction of the employer with the employee, which takes place on the digital platform through the remote work mode. Thus, a job seeker can be employed remotely without having territorial or national borders.

To consider such work a specific segment of the labor market helps segmentation of the global market that occurs on the basis of the mandatory use of modern IT devices or other gadgets and their technologies at all stages of work, namely: job search, job or order, its implementation, sending the result of work and receiving payment for work. A comparative description of the traditional and digital labor market is given in Table 3.

Table 3. Comparative characteristics of the traditional and digital labor market.*Source: compiled by the author on the basis of Filipishina et al. (2020)*

Traditional labor market	Parameters	Digital labor market
Used with or without ICT, depending on the specifics. Coordination is carried out by the immediate supervisor, and they are transferred to the work performed.	Technology of work performance, its coordination and transfer to the buyer	Execution, coordination and transfer of the finished product is carried out with the help of ICT to the employer. The product sold in the digital labor market is a labor service created with the help of ICT.
The monthly salary, corresponding to the chosen form and system of remuneration, provides additional material incentives in the form of bonuses, profit sharing, dividends.	Pay	One-time or divided into certain parts for the volume of work performed using electronic payment systems and electronic money. The main level for determining the remuneration is the level of complexity of the work and the uniqueness of the labor service provided.
Real workers looking for work in enterprises and organizations that produce goods or provide services.	Interaction of the employer with the employee	The mandatory use of ICT at all stages of employment: job search, receiving an order, its implementation, transfer of work results and remuneration.
Existence of permanent staff, lack of regulations.	Labor market mobility	Flexibility of the digital labor market is associated with a virtually unlimited level of digital mobility, which greatly reduces the cost of maintaining it by the employer. The main feature of the mobility of this segment of the labor market is its virtual nature, the movement of labor occurs without its physical movement. A sufficient condition for labor mobility is the demand for a certain type of service, the ability of a virtual employee to produce services of the required quality, as well as their willingness to find and fulfill new orders.
Low level of dynamism: - the labor market is not moving forward to a new, more efficient employment structure, and if it is moving, it is extremely slow; - stagnant labor market, in which there is virtually no movement of workers through available jobs, or the transfer of jobs from inefficient production to efficient.	The level of dynamism of the labor market	High level of dynamism: - high labor turnover, labor market demonstrates the ability to quickly update the structure of jobs; - the labor market is able to move directly, without deviations and slippage, to a new structure of employment, which is dictated by a shift in demand, changed by technological and institutional conditions.
All age groups.	Age structure of employment	The demographic and digital market belongs to the young generation of workers who are able to produce innovations, quickly navigate information flows and learn.

The following digital devices act as tools: laptops, computers, various gadgets, tablets, cellular devices, cameras and more. The input information required for employment is digitally recorded. Information is the object of a specialist who, thanks to their skills, experience and ability to select and highlight innovations, makes changes to it. Therefore, the digital labor market is a unique segment of the global labor market, which remotely generates supply and demand for digital labor services and has the interaction of its actors, which is carried out exclusively through information technology.

Digital employment is an extremely important and appropriate activity of the active population, which has economic orientations, with the help of digital technologies, where the result acts as an information product and direct interaction is a reference point for meeting public and

personal needs and economic benefits for workers and interested employers. Labor supply and demand takes place on special online platforms which form the terms of employment, payment issues and performance appraisal.

The main specificity of the digital market is the interaction of digital labor market actors, which takes place through the online platform. This is a place of conflict of interest for employees and employers and a place of agreement to pay for services provided. The labor service is formed with the help of computer systems in the formation of goods sold in the digital labor market.

Note that a characteristic feature of the digital labor market is a high level of flexibility, which indicates a high level of labor mobility. The main characteristic of the mobility of this segment of the labor market is its virtual nature. Thus, the movement of labor is carried out without its direct, physical movement, from any country to another. Note that experts highlight the creation of a new, modern type of mobility, i.e., digital, which occurs without the physical movement of labor, which greatly reduces the cost of maintenance for the employer (UNCTAD, 2019).

With regard to globalization and informatization, it should be noted that technology raises the level of competition and strengthens the competitive advantage of people with relevant, quality education, the highest level of professionalism, talent, honesty and the ability to solve non-standard problems. The most popular in the digital labor market is intellectual work, which is characterized by the specifics of the services offered.

Researchers note that the digital labor market is shaping innovative employment. The main carriers of innovative human capital are people who are constantly improving their knowledge, professional skills, self-education, and use the experience gained for the productivity of innovations using different areas of choice via computer systems.

Economically active youth are the main agents of the digital space that master and use it. According to a report by the US Bureau of Labor Statistics on the demographic structure of employment in the digital segment, the largest share of employment is in the age group from 16 to 35 years, as they account for 50% of the total number employed in this segment (PaySpace Magazine, 2020).

Among the main stakeholders in labor services in the so-called virtual labor market are innovative companies covering the global market and companies that are young and fast-growing.

One of the hallmarks of the digital labor market is that it has a high level of dynamism. There are the following four models of labor market dynamics, which depend on the composition of factors such as the intensity of reproduction of labor (high, low) and the intensity of reproduction of jobs (high, low) (Allam, 2016):

- a model with a high turnover of labor (observed during the labor market, demonstrates the ability to quickly update the structure of jobs);
- the arrow model (assumes that the labor market is able to move directly, without deviations, to a new employment structure, which is formed under the influence of changes in demand, which have changed under the influence of technological and institutional conditions);
- a model in which the labor market, even under the influence of certain transformations, does not move towards a newer, more efficient structure of employment, and if this happens, it is extremely slow;
- a model of a stagnant labor market, under the conditions of which there is practically no movement of people due to the availability of jobs or the transfer of jobs from inefficient to efficient productions.

Due to its nature and level of dynamism, the digital labor market corresponds to the first two models.

Attention should also be paid to the emergence and development of the virtual (electronic) labor market, which can significantly expand the potential of labor, become a basis for alternative

spheres of professional and individual self-realization, and involve people with low social protection in the professional development process.

The next segment of the global labor market today is the traditional market, which is a set of interactions between stakeholders in labor services, creating demand and supply that are realized outside the digital sphere.

Considering digital employment, we emphasize that it is reflected in two main forms: e-freelance and e-outsourcing (World Bank Group, 2020).

An electronic freelancer performs work activities that are performed remotely using computer systems. This is used in a wide range of economic activities, namely: programming, content creation and translation, marketing research, sales, consulting, and financial accounting and administration.

Outsourcing, in other words, the use of external resources, is based on the principles of selling goods through contracts based on the transfer of non-core production and commercial operations to an independent external partner who has production cooperation, and to reduce costs. The current specificity of outsourcing agreements in the product market is based on the fact that processing is carried out, which consists in supplying the products of the main production to the customer under their brand. This is the main difference between modern outsourcing contracts and contracts that exist in a regular contract. Within the contact group, the contractor essentially provides the customer with a service that consists in the execution of the order, which is based on the production, delivery to the market and sales of the subject of the contract. Therefore, the elements of service provision are also added to the component costing of production operations.

Note that, according to experts who draw attention to the fact that the outsourcing market is formed and growing unevenly, there are sharp reactions to the variability of external factors. Thus, it is believed that such uneven development depends on the following factors:

- The involvement of specialists for design or one-time work. This is very common in the global structure of outsourcing, which provides such services. While 43% of manufacturing companies use external specialists sometimes, they do not do so constantly.
- The increasing need for outsourcing in times of crisis. The use of outsourcing services leads to a significant reduction in labor costs and other resources, as such actions allow the company to stay afloat.
- The presence of a large number of small outsourcing companies and freelancers. This is characterized by fragmentation of the market of external services and the number of small organizations and individual outsourcing specialists and services that provide them, and can range between wide limits.
- The involvement of specialists from other countries and the impact of emigration. Thanks to digital technologies, the participation of specialists in remote work from countries with lower wages is gaining popularity. IT outsourcing, remote call centers, marketing research, and sales are considered key services of this model.

Analysts of modern economic development predict that in the near future – under the influence of the fact that the main drivers of market development are the development of digital technologies – cloud technology, artificial intelligence, and robotics will be dominant.

Thus, e-outsourcing is the transfer of part of the business processes that take place by third-party organizations that use computer software and the Internet.

Globally, the following processes have had the greatest impact on the development of outsourcing:

- technology (complexity, location and nature of services that can be used for outsourcing). These criteria have become large-scale and are constantly evolving, expanding their benefits for use in business;

- internationalization (increased political and regulatory stability, improved education of labor market representatives, reduced resistance to mobility, implementation of cloud and mobile solutions);

- economic and political factors (the need to maintain a certain budget within the public sector of the economy, strengthening the requirements for risk assessment of financial services, such as the adoption of Directive 2004/39/EC of the European Parliament and of the Council regulating financial instruments markets). These factors also concern the protection of information aimed at combating corruption (World Economic Forum, 2019).

The following types of outsourcing exist, and their use depends on the location of the customer and the contractor and the subordination between them:

- offshoring (the customer and the contractor are in different countries, and the contractor is a division of the customer);

- outsourcing (the customer and the contractor are in the same country, and the contractor is an independent company);

- offshore outsourcing (the customer and the contractor are located in different countries, but the contractor is an independent company).

There are also types of outsourcing depending on the tasks that are delegated to performers:

- production outsourcing is the transfer of production functions to the contractor;

- outsourcing of business processes is the transfer to the executor of processes that are not the main activity of the customer;

- IT outsourcing is the transfer to the maintenance of customer information systems (e.g., development or maintenance of software, website creation, maintenance of related equipment).

Based on the above, we note that one of the undeniable advantages of outsourcing is the transfer of non-core and specialized areas of customer service.

The main advantages when deciding to outsource companies are as follows (Nekrasov, 2019):

- increasing demand by attracting additional labor resources;

- reducing costs by reducing payments, as well as the lack of an additional social benefits package which the employer provides to full-time employees, and potentially the replacement of existing employees;

- flexibility in cost allocation via scheduling, mobility and the reduction of permanent staff and subsequent use of temporary labor, if necessary;

- accessing the best modern professional skills by replacing workers, access to the local labor reserve;

- predictable, standardized (international) processes via the management and quality of contract work, the impact on margins and net profit of suppliers;

- concentrating capital and rebalancing regulatory or business uncertainties via the concentration of professional skills, technologies and internal interaction that allows set tasks to be solved (in particular in the sector of services related to finance).

Significant trends characterize the development of the global market for international outsourcing services:

- high growth rates of sales in the market of science-intensive goods and services. The range of processed products in this group consists of: serial electronic devices that are mainly consumer-based, and their components, and the components and parts of modern devices related to data processing and transmission (computers, memory units, microprocessors, printers, etc.). The range of science-intensive services provided by outsourcing contracts includes applied research, research on new products, engineering services, information technology services, communication services and more;

- improving the qualification level of labor-intensive services. It is worth noting that business models for most labor-intensive services have changed from a low-cost approach, in which the main element is to reduce costs and to attract cheap labor, to a transition to a professional model

that involves highly qualified personnel capable of performing new, more powerful, modern, and efficient business operations.

Thus, the turbulent development of the global labor market is a rather complex, multicomponent and volatile system, which is permanently affected by information technology. This in turn entails changes in the essence of the labor process, its organization, structure of employment, and social labor relations, and also requires the creation of fundamentally new competencies of the employee (Mikhno et al., 2022). Digital technologies have formed a specific process of labor and have made a significant contribution to changes in all its elements, namely: the subject, means, technology, organization and results of labor (Yankovyi et al., 2019).

It is impossible to disagree with the fact that current changes in the field of new technologies and their impact on human resources is predictable (Filipishyna, 2021). This process is quite complex, because the main goal is not so much about deep innovative technologies, but about how society perceives their use.

Conclusions

The modern world has already taken the first step towards a fundamentally new technological, economic and social reality. However, the challenges facing modern industrial society are difficult to overestimate. We are talking about a change in the global socio-technological structure, which results in the complete reformatting of our usual systems and the formation of new social and economic strategies. At the same time, the technological paradigm is changing, management models and social norms are changing, and large-scale demographic changes are taking place.

The essence and significance of the digital economy as the main factor of socioeconomic development are revealed in this work. The benefits of digitalization for society and the economy in general have been proven, as users of digital services and products are the population that has the ability to gain access to high-speed Internet, information, and a broad knowledge base, making life more comfortable and convenient. It is proved that Ukraine ranks first for freelancers among European countries, and therefore improving the legal regulation of this activity will improve the socioeconomic standard of living.

The model of transformation of the digital economy and society is considered. The main factors and indicators of the development of Ukraine's digital economy are identified: the development of digital finance, social networks, digital identification and infrastructure; the protection of intellectual property and e-commerce; and the business and data revolution. The formation of a model of transformation of the digital economy has been studied, which will take into account the incentives and motivations of digitalization participants. This will lead to the development of digital infrastructure and business, the renewal of projects, and the competitiveness of industries and sectors of the national economy. It is proved that the digital economy is an open, complex, nonlinear, poorly structured non-equilibrium.

The necessity of the investment component in promoting the development of the digital economy and society is substantiated, as no transformation is possible without significant investment. Analysis of investment processes in the digital economy shows that significant innovative changes in telecommunications occurred due to the transition of companies to 3G and 4G in 2015 and 2018, respectively, and the volume of investment increased during these periods by 14,799.9 million UAH and 11,489.7 million UAH. It is proved that the creation of engineering clusters, intersectoral alliances, centers, laboratories, incubators, accelerators, venture funds, and innovation teams that integrate IT companies, local authorities, educational institutions and service structures in the field of information is promising for the development of the digital economy in Ukraine. These strategic dominants of the digital transformation of

the economy will allow investors to focus on promising long-term investment projects that will ensure the sustainable development of public welfare.

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