УДК 338.28

V. K. Antoshkin,
A. O. Popova,
T. A. Brokl

DIRECTIONS OF FORMATION AND IMPLEMENTATION OF THE DIGITAL ECONOMY OF UKRAINE

Анотація. *У статті визначено сутність цифровізації економіки країни з урахуванням концепції розвитку в наведеному періоді. Наведено шляхи розвитку транспортно-логістичної системи та відзначено позитивні ефекти від її високого рівня. Запропоновано напрями впровадження цифрових технологій з метою задоволення потреб споживачів у продуктах і послугах.*

Ключові слова*: блокчейн, блог, діджиталізація, логістика, реклама, цифровізація.*

Summary*. The article defines the essence of digitalization of the country's economy taking into account the concept of development. The ways of development of the transport and logistic system of the country are presented and positive effects from its high level are noted. The directions of introduction of digital technologies are proposed in order to meet the needs of consumers in products and services.*

Key words*: blockade, blog, dedigitalization, logistics, advertising, digitalization.*

Formulation of the problem. In today's world of digital technology, digital technology is the most dynamic area of its own development. In particular, today the number of mobile connections is considerably higher than the number of inhabitants in the world, and the number of people who have the opportunity to use a mobile phone exceeds the number of people who can meet the basic needs. In addition, the volumes and directions of information flows between countries, their associations, and continents are constantly increasing, resulting in the volume of such information for 2014–2016 provided more than a third of world GDP. These tendencies are especially bright against the backdrop of a certain slowdown in the growth of international trade in goods and services and the international capital movement.

These circumstances affect the continued complexity of the interaction of social institutions based on modern digital technologies as in national and international scale. As a result, data flows become the basis of formation and development of the digital economy that is able to adequately and effectively ensure the production, processing, storage, transmission, use and protection of information. In particular, according to some researchers today to obtain economic benefits is important not only have a certain resource, and have full information about this resource and the ability to use them in planning of activities and decision-making.

Бібліографія ДСТУ:

Антошкін В. К. Напрями формування та впровадження цифрової економіки в Україні / В. К. Антошкін, А. О. Попова, Т. А. Брокль // Вісник Бердянського університету менеджменту і бізнесу. — 2018. — № 1 (41). — С. 25–29.

References (APA):

Antoshkin, V. K., Popova, A. O., Brokl, T. A. (2018). *Napriamy formuvannia ta vprovadzhennia tsyfrovoi ekonomiky v Ukraini* [Directions of formation and implementation of the digital economy of Ukraine]. *Visnyk Berdianskoho universytetu menedzhmentu i biznesu*, 1 (41), 25–29 (in Ukr.).

Analysis of recent research and publications. Valuable research in the scientific sense of perspective is becoming digital economy research work and practical research and development of famous scientists and inventors as B. A. Cherniavskyi, I. G. Britchenko [1] Yu. V. Vdovychenko [2], O. P. Goloborodko, K. M. Kraus, N. M. Kraus [3], T. P. Motashko [4].

But at the same time, a significant number of problems related to vision of concept of digital development of the economy kinds of products and services that the digital economy produces and provides, is not disclosed enough.

The purpose of the article is the study of the basic principles of digitalization of Ukraine's economy, finding out the key trends of the initial stage of its formation.

Summary of the main material of the research. Digital technologies open up unique opportunities for the development of the Ukrainian economy and improve the quality of life of its citizens. The rapid and profound effects of digitization will only be possible if this transformation forms the basis of the life of Ukrainian society, a commonplace phenomenon for business and government institutions.

Ukrainian politicians, central and local authorities, and public organizations should take responsibility for their support and active promotion of the country's development in this direction.

Cabinet of Ministers of Ukraine 17.01.2018 approved the concept of the development of digital economy and society of Ukraine for 2018–2020 years and approved a plan of actions for its implementation. The concept involves a transition from commodity-type economy based on consumption of natural resources to high technology and efficient production processes through IT technology and communications. The program is designed for the next 3 years. It refers to a large-scale development of digital infrastructure in the country.

In the context of the digital economy, transport is one of the key links of all socio-economic relations, providing mobility, of the people speed of communications, human interaction with technology. This is reflected in the modernization of control systems and traffic management, which requires additional control.

Note that in the context of European integration is the most effective development of the transport sector in Ukraine can be realized through the development of transport and logistics system of the country that provides interaction of all participants of the transport and distribution process of organizational and economic, technical, technological and informational aspects in the movement of freight flows and makes it possible to use the competitive position in international markets of transportation and logistics services.

In general, high level of logistics development in any country has positive effects:

— reducing of the cost of goods and services;

— creating new workplaces;

— increasing turnover of wholesale and retail trade;

— improving maintenance buyers' services;

— increasing the investment attractiveness of areas with advanced transport and storage infrastructure;

— improving the environmental situation with the help of optimizing of transport infrastructure;

— increasing government revenues from the sale of transit capacity.

Ukraine has a high potential for development of the logistics market, both storage and transport segment. It's connected to the advantageous geographical location in the transport corridor between Asia and Europe. But the development of the logistics market in Ukraine is on general economic trends in the country and influenced by the dynamics of industrial production and volumes of export and import deliveries. Logistics infrastructure requires significant investment for the construction and modernization of its elements.

Creating a mechanism for the development and efficient operation of transport and logistics systems based on digital transformation of logistics will create a logistics platform for international cooperation, which will become main factor in the growth of the regional economy, providing competitiveness of transport complex of Ukraine in the global system and become part of the state (regional) transport policy [1].

It is advisable not only to identify the current trends in the development of digital technologies and their impact on the world economy, but also to analyze them as a special, leading resource for the economic development of modern society. As a result of the change in the character of economic relations in the digital economy, the most important directions of its transformation in the sphere of employment, technological sector, spatial and socio-economic development should be noted.

A number of statistical observations show that in developed countries (especially in Western Europe, USA, Japan) share of employment in the service sector or in sectors that one way or another associated with the processing of data reaches 7–10 % and more. However, the most dynamic sectors acts sectors of information, computer, telecommunication technologies and a number of industries that use digital technology products for the purpose of processing. However, some difficulties may arise in identifying the exact number of workers employed in the sector of digital technologies as they penetrated into all areas of the world economy.

Another important aspect of the development of the digital economy is peculiarities of the geographical distribution of digital networks. It is a case of forming a data network connecting the various points and

which thus form the global economy area. In this direction there have been developed scientific concepts that emphasize the availability of data networks as the most important features of the digital economy. This feature of the formation and development of these networks will be depended on whether technological or economic aspects of the digital economy research. Although today, in addition, many other aspects determine the role of networks in digital economy, in particular, what it is a network, how its levels and subsystems formed, the character of their interaction, the ability to identify the differences between them, the volume and speed of data movement on the scale of those networks.

Thus, as the basis can be used the existing economic criterion of the digital economy, which is the rise of cost during the creation of data transfer, processing and storage. In this case, there may be explored the correlation of economic activity in this sphere and activity in agriculture and manufacturing. In the context of the digital economy activities in the information sector is dominant, and the data become the subject of economic relations. Specialized companies, scientific and research organizations provide a wide range of services for the collection and analysis of data according to customer's requirements, with the result that the data acquire certain value.

In the case of using of technological concept particularly new technologies, technological innovations in the sphere of informational and communicational technologies become an important sign of change in the economic system, being at the same time the driver of economic development. Thus, the increasing scale of technological innovations, particularly in the sphere of communications system is able to transform the system of socio-economic relations and facilitate the spread of digital technology.

Particularly these technological development indicators are the main indicators of quantitative assessment of the digital economy. However, special attention in this context there are deserved the questions of complexity of determining of the role of technological factor in the process of changing of the socio-economic relations based on digital technology. Thus, several studies suggest a certain set of quantitative characteristics which when achieving a certain level give grounds to assert the dominance of the digital economy.

But it is worth noting that quantitative indicators that indicate data growth turn up also the information and therefore cannot confirm the presence of a certain break with previous subsystems. Therefore, it is important to understand that the increase of information scales is not only the quantitative measure and the subject of statistical measurement but along with the analysis of technological development there should be paid particular attention to the qualitative data analysis.

An important distinctive feature of modern information and data is the presence of complications in their structuring, the ability of their usage and management. In particular, in market conditions, excessive commercialization could lead to the manifestation of certain imbalances in the activities of economic entities, reduction of public data, increase of transaction costs in information data processing as well as a number of other effects that are manifestations of the development of digital economy. As a result the possibility, to accumulate and create enormous scale data, the rapid development of high-speed facilities, networks, tools of accumulation and storage of data has led to the result that only restrictions become not the ability to save and transfer data, but the ability to process and analyze huge amounts of data.

Thus, digital technologies, particularly the Internet, increase the capacity of interaction and exchange between product developers, suppliers and end users, researchers and scientists and enable continuous work on creation and change of goods and services aimed at large-scale technological changes in order to produce innovations. Therefore, it can be argued that technological innovations enable the transition to at new qualitative level of control of economic processes. The core of the digital economy turns the sector of production of digital products and services related to digital technology.

At the same time a digital infrastructure is developing, it is becoming more affordable and is playing an increasingly important role in technological innovations. It should be noted the growth of communication networks as far as implementation of 4 G technologies and optical fiber data transmission tools. At the same time the cost for mobile services is decreasing and increasing the opportunities of using of mobile devices to access the Internet, which gives reason to predict a growing volume of digital technology in the world.

However, it is worth noting the emergence of new business activity models, the formation of network structures based on collective methods of production and consumption, and somehow transform the classic market relations in the direction of the constant need of new solutions in the creation and management of technology. In this context, more and more countries seek to develop a digital economy, using its advantages to deal with key issues of socio-economic development: unemployment, poverty, environmental destruction and so on. Current national digital strategy takes into consideration various issues of economic development — supporting of sustainable socio-economic development, increasing of employment, developing a viable public sector, gaining new competitive advantages, creating and supporting innovative projects and companies.

It is important to note that the foundation of the digital economy is an innovative technologies that produced especially by electronic industry. In the

modern economy of the companies of the digital sector are a source of innovation resources and a starting points in its growth. If at the beginning of the twentieth century the main engines of the world economy were enterprises of the oil producing, metallurgical and engineering industries, today the largest players in the global market are the company representatives of the digital economy [2].

The introduction of the digital economy in Ukraine at an initial stage should take place simultaneously in the following three directions:

— technological, where all technical and technological decisions must be standardized, that is, to be safe and certified;

— institutional and economic, which provides for the organization of new models of management and business models with the use of smart things, industrial Internet-things, blockade technology, its institutional support, to comply with the legal and regulatory framework of socio-economic relations of society;

— production, which includes specific business applications that meet the requirements of second-line management models based on technical support and first-line infrastructure.

At the present stage of digitalisation, regulation and development, there are several digital products and services. Here are some of them:

1. BlockChain. Translated from the English «blockchain» or «block chain» is a continuous sequential chain of blocks containing information, built according to certain rules. You can define Blockade as a way of storing and reconciling the database, a copy of which is available to each participant.

2. Digital Marketing. This is the use of various ways to promote the product to a broad mass using digital channels. Digital Marketing is a set of promotion tools that involve digital channels. It is not identical to internet marketing, because it includes such channels as television, radio and even outdoor advertising. Internet marketing has evolved into digital marketing, which uses integrated on-line strategies, site and mobile application development, creative and copywriting, contextual advertising and SMM, as well as other interactive products. The most popular forms of digital channels: search engine promotion; Contextual and teaser ads; media and banner; promotion in social media and blogs; creating mobile apps for smartphones, tablets and other media; viral advertising.

3. Digital-insurance. The Digital insurance strategy is not just Internet sales but also the transformation of the entire business into an electronic policy. Digital insurance enables insurance companies to lower costs, increase customer service speeds. Consumers have the opportunity to receive timely updates on changes in the insurance policy of the company. Digitalization ensures standardization and improves the quality of responses and services provided.

A significant advantage of Digital-insurance is presence of social media that improves the quality of service and establishing close relationship between the insurance company and the customer. Another positive feature is the reduction of the likelihood of fraud and increasing of security of insurance operations. After a purchase policies through insurance intermediary there is a risk of not making the last insurance premiums and, consequently, the insurance contract does not enter into force. The speed of data processing and settling claims — another advantage of Digital-insurance.

Adapting to the digital format is positive for both the insurer and the client. After all stages of insurance beginning from the handing in of an application and ending with the settling claims pass much faster. The use of cloud platforms reduces the likelihood of errors and the process becomes open and makes it possible to follow the state of claims [3, 4]. In addition, the introduction of cloud platforms provides for insurance companies greater speed, flexibility and scalability, improves response and enable to optimize the processes.

Findings from the study. At the current stage of globalization of the digital economy there should be paid attention to the fact that its share is increasing worldwide, providing many benefits for developing countries and businesses.

Digital interdependence between countries can lead to a certain lag in economic development between them. After all, to create a new competitive advantage, to go through the progressive economic development can only be based on the progress of digital technologies and their consistent use during the functioning of socio-economic systems. Therefore, the peculiarities of the formation and development of the digital sector, its foundation and components as special technological equipment, methods of processing and data transmission are the determining factor in the development of the whole world economy.

Therefore, depending on the level of development of the digital economy, the key drivers of its development will depend on the complex of socio-economic characteristics. Thus, developed countries must pay more attention to innovations, and developing countries — to institutions. Countries with the least developed digital economies should effectively allocate and use scarce resources where the most acceptable investment decision may be providing of access to the Internet from a mobile phone and several other early steps towards effective and inevitable development of digital technology.

Література

1. Чернявский Б. А. Проблемы развития транспортно-логистической инфраструктуры в системе цифровой экономики: региональный аспект [Электронный ресурс] / Б. А. Чернявский,

И. Г. Бритченко. — Режим доступа : http://ojs.kname.edu.ua/index.php/area/issue/view/29.

2. Вдовиченко Ю. В. Цифрові технології як основа та рушійна сила розвитку сучасної глобальної економіки / Ю. В. Вдовиченко // Економіка та держава. — 2018. — № 1. — С. 80.

3. Краус Н. М. Цифрова економіка: тренди та перспективи [Електронний ресурс] / Н. М. Краус, О. П. Голобородько, К. М. Краус // Ефективна економіка : електр. фахове видання. — 2018. — № 1. — Режим доступу : https://www.nayka.com.ua.

4. Моташко Т. П. Розвиток світового ринку страхування в умовах діджиталізації / Т. П. Моташко // Вісник Київського національного університету ім. Тараса Шевченка. — 2016. — С. 19. — Електронна копия за адресою : http://bulletin-econom.univ.kiev.ua/wp-content/uploads/2016/04/182.pdf.

References

1. Cherniavskyi, B. A., Brytchenko, Y. H. (2017). *Problemu razvytyia transportno-lohystycheskoi ynfrastrukturu v systeme tsyfrovoi ekonomyky: rehyonalnui aspekt* [Problems of transport and logistics infrastructure development in the digital economy: regional aspect]. Retrieved from http://ojs.kname.edu.ua/index.php/area/issue/view/29 (in Russ.).

2. Vdovychenko, Iu. V. (2018). *Tsyfrovi tekhnolohii yak osnova ta rushiina syla rozvytku suchasnoi hlobalnoi ekonomiky* [Digital technologies as the basis and driving force of the development of a modern global economy]. *Ekonomika ta derzhava* [Economics and the state], 1, 80 (in Ukr).

3. Kraus, N. M., Holoborodko, O. P., Kraus, K. M. (2018). *Tsyfrova ekonomika: trendy ta perspektyvy* [Digital Economics: Trends and Prospects]. — Retrieved from https://www.nayka.com.ua (in Ukr).

4. Motashko, T. P. (2016). *Rozvytok svitovoho rynku strakhuvannia v umovakh didzhytalizatsii* [Development of the world insurance market in the conditions of digitalization]. — Retrieved from http://bulletin-econom.univ.kiev.ua/wp-content/uploads/2016/04/182.pdf (in Ukr).