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DIGITAL TRANSFORMATION OF THE WORLD ECONOMY AS THE MAIN DIRECTION OF ITS MODERN DEVELOPMENT

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Abstract

In this research paper, we investigated the digital transformation of the world economy as the main direction of its modern development. According to author's idea, the global economy is undergoing a digital transformation as well, and it's happening at breakneck speed.

Key words: Digital economy, Activity, Social networks, Telecommuting and TCP/IP protocol.

1. Introduction

The digital economy is the economic activity that results from billions of everyday online connections among people, businesses, devices, data, and processes. The backbone of the digital economy is hyperconnectivity which means growing interconnectedness of people, organizations, and machines that results from the Internet, mobile technology and the Internet of Things (IoT). The digital economy is taking shape and undermining conventional notions about how businesses are structured; how firms interact; and how consumers obtain services, information, and goods. Professor Walter Brenner of the University of St. Gallen in Switzerland states: "The aggressive use of data is transforming business models, facilitating new products and services, creating new processes, generating greater utility, and ushering in a new culture of management".

2. Literature Review

Modernization and intensification of agriculture in the republic of Uzbekistan were investigated by Yuldashev *et al.* (2020), empirical research on causal relationship between export and foreign investments in the economy of Uzbekistan based on granger test

Mustafakulov *et al.* (2019) explained the issues of factors effecting net actives of investment funds were studied by Burkhanov *et al.* (2019) proposed the aspects of financial security of industrial enterprises under influence of global crisis were researched by Tursunov (2017) and Tursunov (2020).

3. Analysis and Results

Despite the fact that digital transformation has firmly entered the life of all countries of the world, when considering and defining this concept, scientists characterize it from different points of view (Li *et al.*, 2021). The first point of view boils down to the fact that the goal of the development of digital technologies is business automation. Digital transformation is a process that lasts for decades, with the emergence of new technologies contributing to the emergence of new stages of digitalization. The totality of technical innovations leads to the change of one structure to another (Figure- 1). The second point of view connects digital transformation with a certain period of information technology development. The turning point was the development of the third platform (cloud technology, mobile Internet, "big data"), which served as the basis for the creation of fully digital companies operating in the virtual space.

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Adherents of the third point of view emphasize the economic aspects of the phenomenon, considering digital transformation as a relevant tool for any company engaged in both digital business and real production. Companies with real production activities are using new business models and the necessary

tools for successful development. The use of digitalization in the development of marketing strategies is especially relevant for such companies. In our opinion, there are certain reasons in the first two points of view, but the third point of view is more consistent with the essence of digital transformation.

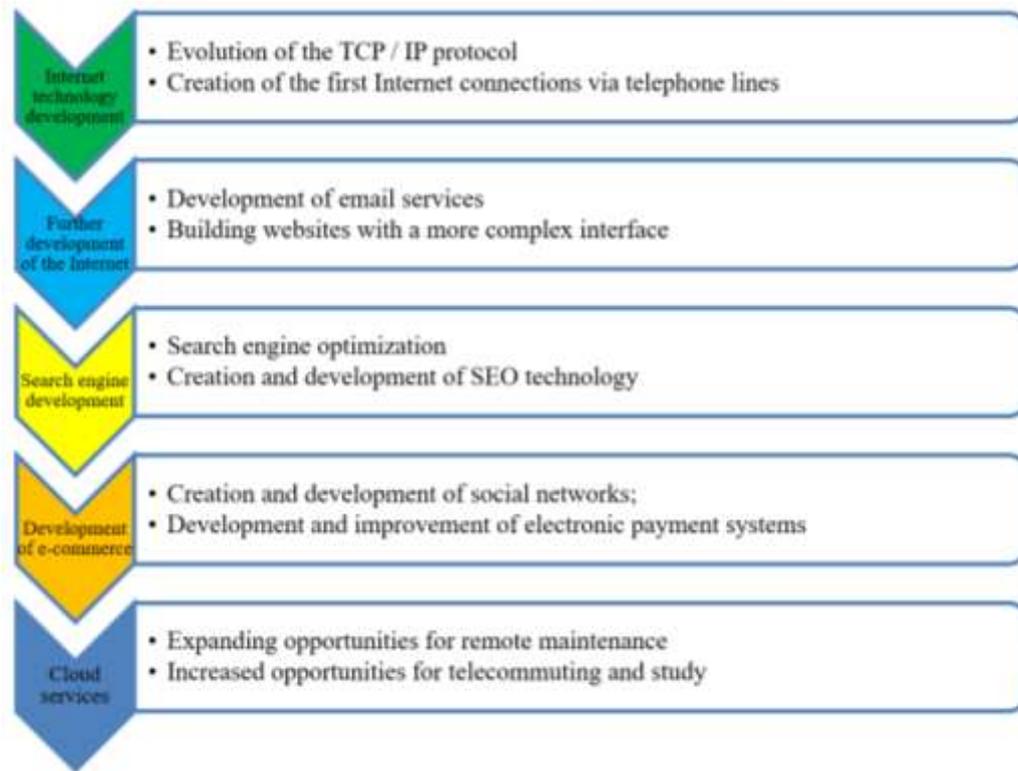


Figure 1 - Stages of development of digital technologies

The difference between digital transformation and business process automation lies in the radical increase in efficiency. It is no coincidence that Sh. Mirziyoyev, within the framework of the Digital Uzbekistan-2030 Program, notes the need for complete digitalization of such areas of the economy as construction, energy, agriculture and water management, transport, geology, health care, education, cadastral and archival affairs. Luigi and Ramon (2021) associated the possibility of digital transformation not only with the availability of certain technologies, but also with the need for an enterprise to provide an appropriate strategy, ways of organizing work groups and work processes. In Table 1, we look at the factors driving the digital transformation. Numerous surveys indicate that the main drivers for digital transformation are: Changing the

behavior and expectations of employees and customers from the level of digital services. The pressure of competition, the desire to occupy new promising markets. Digital transformation is characterized by the introduction of not only information technology, but also other innovations: biotechnology, nanotechnology, quantum technology. Each of the listed technologies, cooperating with information technologies, creates innovations at their intersection. To assess the degree of digital transformation in different countries of the world, the Digital Evolution Index (DEI) is used, which includes the following parameters:

- The level of development of physical and digital infrastructure.
- Demand for digital technologies in the country



- The level of development of the institutional environment
- The level of development of the national innovation system.

Table - 1: Factors driving the transition to digital transformation

Elements of a marketing strategy	Stages of digital transformation		
	Initial	Managed	Optimized
Strategy	Digital strategy is missing from enterprise strategy	Digital strategy is one of the priorities of the enterprise	Digital strategy is the basis of the business strategy of the enterprise
Technology	Scattered data sources, basic tools for data accounting and analysis	Multi-channel data collection, basic modeling tools	The use of cloud technology and "big data"
Human capital	Scattered digital knowledge	Staff have digital competencies	Digital Marketing Specialists Available

Table – 2: Values of the digital economy development index for some countries of the EAEU and the EU

Country	Quality of ICT infrastructure	Internet use intensity	Human capital	Digitalization of the economy	Digital Economy Development Index
Sweden	0,08141	0,9343	0,6604	0,9235	0,8536
Germany	0,5384	0,5408	0,6155	0,7231	0,5785
Hungary	0,2469	0,5845	0,5183	0,7668	0,5015
Belarus	0,3118	0,4980	0,5548	0,6458	0,4642
Russia	0,3245	0,2332	0,4571	0,4558	0,3396
Kazakhstan	0,3710	0,1590	0,4732	0,1455	0,1927
Uzbekistan	0,3811	0,1699	0,4155	0,1463	0,1985
Kyrgyzstan	0,2369	0,1322	0,3265	0,1100	0,1422
Tajikistan	0,2234	0,1241	0,3140	0,1062	0,1344

Source: The Digital Economy and Society Index (DESI) [Electronic resource] // European Commission. – Mode of Access: <https://ec.europa.eu/digital-single-market/en/desi>. – Date of access: 03.06.2021.

In terms of the quality of ICT infrastructure, Uzbekistan is ahead of neighboring countries, such as Kazakhstan, Tajikistan, Kyrgyzstan, since the telecommunications infrastructure is developing very dynamically in Uzbekistan. For the development of digital infrastructure in 2021-20200 it is planned to attract about \$ 2.5 billion. In Uzbekistan, the number of installed ports of broadband Internet access is increasing annually, which provides subscribers with a continuous connection to it for transmitting and receiving information at high speeds. To improve the indicator of human capital and its competencies in the field of information technology, the program "One Million Programmers" was

launched in 2020, which provides an opportunity for free training in programming skills, in which more than 130 thousand students are trained. All the measures considered contribute to an increase in the development index of the digital economy of Uzbekistan to the level of the leading EU countries. The disadvantages of international indices for the development of the digital economy can be attributed to the fact that they do not take into account the peculiarities of each of the countries; there is a kind of adjustment of countries' indicators to the calculated requirements of international indices. The existing methods do not allow, in our opinion, to comprehensively assess the degree of development of the digital economy in the



country (Miao, 2021). These methods assess mainly the technical side, thus identifying the development of the digital economy and the level of ICT infrastructure and preparedness of the population. Belarusian scientist G.G.

Golovenchik developed a methodology for forming a rating of countries by the level of development of the digital economy in the form of a hierarchical three-tier model (Figure - 2).

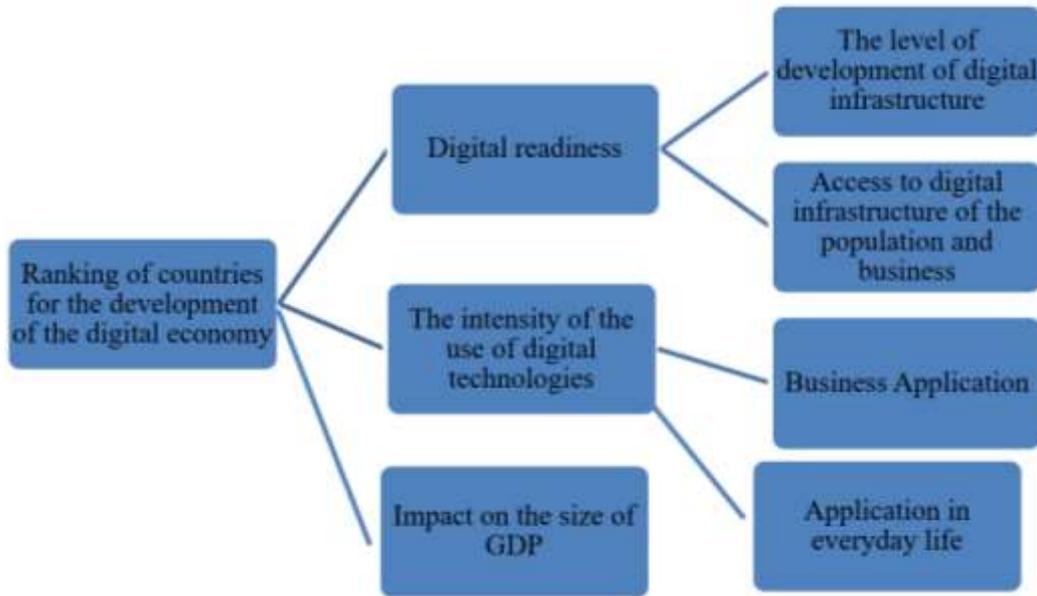


Figure2 - Hierarchical three-tier model of the development of the digital economy in the country

The Information and Communication Technology (ICT) industrial sector, which typically includes telecommunications services, electronics, computing and software, plays an important and growing role in the global economy. It accounted for approximately 7.5 % of global GDP in 2020. However, the sector's share in GDP does not fully reflect the tremendous impact that ICT, due to the nature of the product, has on economic growth and all aspects of human activity, including the availability of various social services, health care and education. The increased use of modern information technologies (high-speed Internet, mobile broadband and computer services) itself contributes to economic growth, and the fact that such technologies facilitate and accelerate the process of interaction between people and increase labor productivity creates additional socio-economic benefits. The digital economy acts as an addition to the real economy, capable of pushing the development of industry, the agricultural complex, construction, services and public administration, and increasing the country's global competitiveness and its national security. The introduction of digital technologies

is carried out with the parallel development of traditional production, when society receives the main dividends from the digital economy.

Digitalization has embraced all business entities in different countries of the world, including small businesses, which is associated with the development of digital infrastructure. In fig. 2.1.3 shows the quantitative ratio of small businesses in different countries of the world with access to broadband Internet with access speeds from 2 to 100 Mbps and more than 100 Mbps. Small business digitalization is a source of small business development in different countries of the world. The given data indicate that the highest degree of provision of small business with high-speed broadband Internet takes place in Denmark, Sweden, and Finland. However, the provision of small enterprises of the Republic of Uzbekistan with broadband Internet with a speed of 2 to 100 Mb/s is quite high.

Cloud technologies are most in demand for small businesses, since small businesses often do not have the funds and the need to



maintain huge software for solving various problems and specialists to support it. Small businesses use cloud technology to improve data consistency, accelerate IT platform upgrades at minimal cost, reduce operational costs, and ensure the security of sensitive customer and internal data. Using cloud technologies, you can automate your business as much as possible, spending a minimum of time on setting up and monitoring the operation of services and applications. In their activities, small businesses use various digital technologies that can reduce the costs of doing business: financial instruments for online payments; tools for targeted advertising in social networks, accounting software, CRM systems, a small business's own website.

From the above data, it can be seen that in Finland, Japan, Sweden, almost all small businesses have their own website. Using your own site makes it possible to promote the products of a small enterprise not only to domestic, but also to foreign markets, provides an opportunity for quick feedback with consumers of products or services, and in some cases an additional sales channel for a small enterprise. Uzbekistan, Belarus and Russia are slightly behind European countries in terms of the availability of a website for small businesses. The development of digitalization within the framework of the Digital Uzbekistan-2030 Program contributes to an increase in this indicator for Uzbekistan in the near future.

4. Conclusions

In the process of growing digitalization of the economy, the implementation of various Internet resources for purchases and sales by small enterprises from around the world is gaining popularity. From the above data, it can be seen that the volume of online purchases for small businesses exceeds the volume of online sales, and the trend is true for almost all countries under consideration. This trend can be explained by the fact that the experience of online shopping has a longer history, and online sales have begun to be mastered by entrepreneurs in connection with the realities

dictated by the coronavirus pandemic. The pandemic has also become a significant challenge for business and industry, the preservation of which became possible only due to the automation and digitalization of production and business processes, the transition to online commerce, electronic payments, the transfer of some employees to remote work using technologies such as VPN (virtual private networks), VoIP (Voice over IP), online conferencing (ZOOM, etc.), cloud technologies, collaboration tools. Digital modernization is changing the organization of production and economic activity in all countries of the world, becoming an integral part of them, which is characterized by a steady trend towards the growth of the share of the digital economy in the structure of GDP. At the same time, the level of digitalization varies significantly in different states. The emergence of a new digital space in innovative entrepreneurship creates and opens access to a significant amount of data for numerous participants in the global economic space. Formed "big data" together with technologies are becoming one of the leading assets of the state, business and civil society. In addition, the development of national programs for the development of the economy of a new generation is underway, including the development and implementation of high technologies, the analysis of "big data" and forecasting, the introduction of new management methods. The task of strategic importance is not only achievements in the context of the socio-economic well-being of states, but also as a condition for maintaining sovereignty against the background of globalization and the implementation of digital entrepreneurship programs by other participants in the world market. The digital economy is rapidly changing the face of modern business. It provides access to a significant amount of data for numerous participants in the global economy. The digitalization strategy of the economy contributes to the expansion of the scale of production and exchange, the growth of the market value of enterprises, more efficient use of the means of production and labor, both in the sphere of material production and in the sphere of production. services, and, most importantly,



increased competition and a change in the prevailing style of economic management. Thus, the digital transformation of the economies of all countries of the world is currently becoming an integral element of modern life, contributing to an increase in the efficiency of business development, including small business, economic sectors, the social sphere and the system of state and municipal administration.

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