

THE ESSENCE AND STAGES OF DEVELOPMENT OF THE DIGITALIZATION OF THE ECONOMY

Gulnara Mardievna Shadieva
Doctor of Economics

Elyor Urozaliev
Tashkent State University of Economics, Samarkand Branch,
Master of Economics on Networks and Sectors

ANNOTATION

In this article, the role of digitization in the development of the state economy, its theoretical foundations, drawings, the problems in its implementation, the ways of the countries of the world in solving these problems, and solutions and suggestions are given.

Keywords: railway, digitalization, "action strategy," economy, digital economy, innovative economy, Schumpeter's theory, coordination, entrepreneurship, electronic market,

It is no secret that the digital revolution is changing the economy and society at an unprecedented rate, which in turn creates enormous opportunities and challenges. The growth of the world's population, the deterioration of the environment, the increase in investment activity, the improvement of the quality of economic growth, the development of human capital, and the most advanced, high-tech based digital economy are the reasons. In the conditions of globalization of the world economy and technology, it is difficult to imagine the economic development of Uzbekistan without the rapid growth of its digital economy. In the "Strategy of Actions" on the five priority areas of development of the Republic of Uzbekistan in 2017–2021, the development of our country at a more stable and rapid pace in the current conditions of a sharp change in the world market, globalization, and competition has fulfilled the task of sharply increasing its competitiveness. The successful implementation of this strategy depends, first of all, on the national human capital, on the acquisition of in-depth modern knowledge and high skills by all our citizens. It's not for nothing, of course. Because in today's fast-paced world, who wins? The state that relies on a new idea, a new idea, and innovation will win.¹

The declaration of 2020 as the "Year of Development of Science, Enlightenment, and the Digital Economy" is an important step in this direction. "Of course, we know very well that the creation of a digital economy requires the necessary infrastructure, a lot of money, and labor resources. However, no matter how hard is it? If we don't start today, when will we? Tomorrow will be too late. Therefore, an active transition to the digital economy will be one of our top priorities in the next five years. Digital technologies not only increase the quality of products and services but also reduce excess costs. At the same time, they are also an effective tool in eliminating the scourge of corruption, which worries and bothers me the most. We all need to

¹ Ўзбекистон Республикаси Президентининг 2017 йил 7 февралдаги "2017-2021 йилларда Ўзбекистон Республикасини ривожлантиришнинг бешта устувор йўналиши бўйича Ҳаракатлар стратегияси тўғрисида"ги ПФ-4947-сонли фармони

understand this deeply.²As a reality, the digital railroad is inextricably linked to and mutually influences the digital economy. The modern appearance of the railroad is a complex of integrated information technologies, incorporating scientific and technical achievements. Railway transport has always been one of the leaders in the development of digital technologies; that is, some IT solutions have been used here for decades. As an example, we can take the signaling system that transmits information about the traffic light signal to the locomotive cabin. The emergence of the digital economy was based on the scientific views of a number of schools and trends in economic theory, namely, marginalism, Keynesianism, and institutionalism. In the process of forming the digital economy, such sciences and technologies as economic and mathematical modeling, social psychology, information technology, and telecommunication technology were affected. That is, advanced technologies for data acquisition, transmission, processing, and storage helped to emerge.

The word "digitalization" is actually a new term that implies the involvement of IT solutions in the process of innovative management and administration and, as a result, the use of information technologies in all systems, from e-commerce Internet products to e-government .

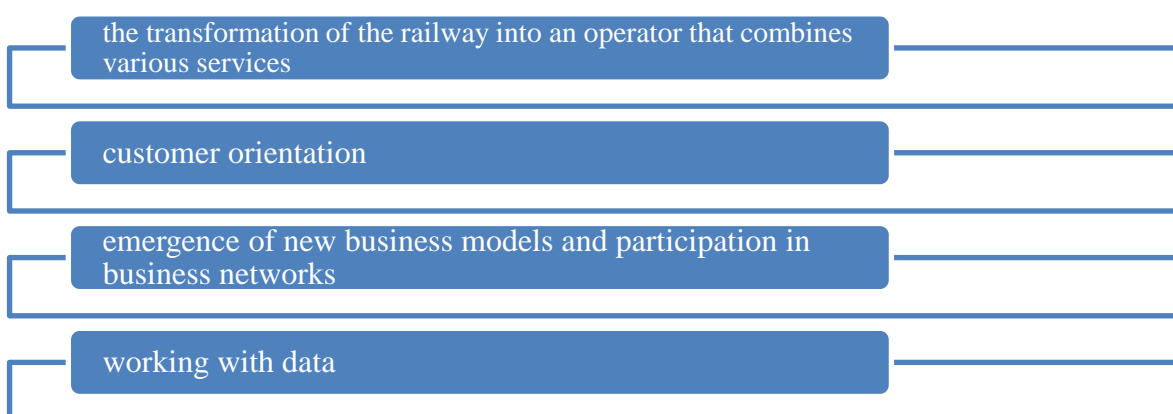
Currently, there are different interpretations of the concept of "digital economy."

For example, electronic (digital) economy—economic activity based on digital technologies — digital economy—digital-information communication technologies based on the use of economic, social, and cultural relations systems—as well as the digital economy. —information—communication technologies

According to the Russian scientist M. L. Kaluzsky, the "digital economy" is the communication environment of economic activity on the Internet, as well as the forms, methods, means, and results of its implementation.³

American futurologist K. Kelly gives a more accurate definition as follows: "Digital technologies and communications mean that communication is not just an economic field; communication is the economy itself."⁴

Four main trends in the digitization of the industry can be identified.



1.1-picture⁵

² Ўзбекистон Республикаси Президенти Шавкат Мирзиёевнинг Олий Мажлисга Мурожаатномаси. Тошкент: Ўзбекистон, НМИУ, 2018. б.20.

³ Калужский М. Л. Маркетинговые сети в электронной коммерции: институциональный подход /М.Л. Калужский. — М.: Берлин: Директ-Медиа. — 2014. — 402 с.

⁴ Kelly K., "New Rules for the New Economy: 10 Radical Strategies for a Connected World" (New York: Viking, 1998), 224 p.

⁵ Author development

All other projects are related to data collection and analysis. This allows us to optimize passenger transportation, build smart locomotives, and save time and money. The digital railroad is one of the consequences of the emergence of the digital economy, which emerged after the fourth information revolution.

The emergence of the digital economy was based on the scientific views of a number of schools and trends in economic theory, namely, marginalism, Keynesianism, and institutionalism. In the process of forming the digital economy, such sciences and technologies as economic and mathematical modeling, social psychology, information technology, and telecommunication technology emerged. That is, it helped spur the emergence of advanced technologies for data acquisition, transmission, processing, and storage.

Academician Saidarror Ghulomov defines "digital economy" as a science that studies human economic activity, which involves the widespread introduction of electronic and information and communication technologies in the processes of production, distribution, and consumption of society's benefits. According to him, the term "digital economy" is used to express two different concepts. First, the digital economy is considered a modern stage of development, characterized by the priority of creative work and information benefits. Secondly, the digital economy is a unique theory, and the object of its study is the information society.⁶

In the digital economy, information in digital form is the main element of production in all socio-economic areas, and the gradual transition to such an economic system will further increase the global competitiveness of our country, create new jobs, and enable rapid economic growth. creates and ensures national independence.

In general, we can see digitization as a logical continuation of the knowledge-based economy. When innovative economy was formed as an economic science in the late 1920s and early 1930s, the economist N. Kondpat'ev stated that the changes taking place in the field of technology have a positive effect on economic development. The economist recognized that the innovative "mass" has accumulated in the country and that the economic conditions for its closure have been created.

Austrian scientist Y. Schumpeter first defined the essence of "innovation" in economic science as follows: "Innovation is a new look, an approach to the existing process, a new production related to modern discovery, development, or human activity. apply to the process."

According to Y. Schumpeter, it is the innovative approach to economic activity that determines the level of development of the economic system of each era. In his theory, entrepreneurship is considered the fourth factor of production. Also, the task of entrepreneurs is to reform and improve production by using inventions to produce new goods or old goods in a new way, opening new sources of raw materials and materials or new markets. The scientist predicted that innovations and entrepreneurs would make revolutionary changes in the economy.

In the 1980s, the American economist S. Kuznets introduced the concept of "period innovations" into economic science. According to his teaching, the basis for ensuring stable economic growth and increasing its level in a certain period of economic development is the implementation of period innovations.

⁶С. Гулямов, Р. Аюпов. Рақамли иқтисодиёт ва унинг асосий ривожланиш йўналишлари. Давлат статистика қўмитасининг "Ўзбекистон статистика ахборотномаси" илмий электрон журнали. 2019 йил, 2-сон.

According to S. Kuznets, the suspension of innovations during a certain period has a positive effect, but he also emphasizes that it can have a negative effect. Therefore, the participation of the state in the development of innovations in socio-economic relations and their implementation in production is considered important. The regular introduction of scientific and technical innovations into the economy, along with being an important factor of sustainable economic growth, causes problems such as unemployment, stress, and the formation of new generation specialists in society. The scientist enriched Y. Schumpeter's ideas on the theory of innovation with new approaches.

We can see a comparative analysis of the characteristics of the digital economy with Schumpeter's theory in the following table 1.2.

Table 1.2 Interpretation of the comparative analysis of the characteristics of the digital economy with Schumpeter's theory⁷

Economic phrases	Schumpeter's theory	Digital economy
Innovation	Introduction of new goods	Implementation of digital products and digital services
Technologies	A new method of development	Digitization of production processes of knowledge-based goods
The fight for consumers	Discovery of new markets	Creation of e-markets and digital distribution channels
Coordination	Conquest of new teaching resources.	Implementing B2B-EC to manage supply chains
Entrepreneurship	Orientation to profit. Reorganization of the firm. Risk-taking strategies	Profit orientation-modernization. Develop new models for digital business management exit Startups

Examples of digital products listed in the table include Yandex search and Facebook digital services, including electronic delivery of information (data, content) across multiple platforms and devices. Also, knowledge-based goods include books, technologies, patents, designs, and databases. E-markets and digital distribution channels include e-shopping systems and social network recommendation communities.

Implementation of the digital economy program in the Republic of Uzbekistan allows for the following: ⁸

- Complete elimination of legal obstacles that hinder the creation of new technologies by creating a new regulatory legal framework;
- Creation and development of digital economy infrastructure, including networks, data processing centers, and technical and software components, in accordance with the requirements of the times;
- Ensuring the comprehensive development and renewal of the education system;
- To create a thorough foundation for the development of various companies, firms, state enterprises, and businesses in the country;

⁷Author development

⁸ Гулямов С.С. va boshqalar. Raqamli iqtisodiyotda blokcheyn texnologiyalari. T.: Iqtisod Molia , 2019. 396 b.

- To the creation of many organizations in the field of digital economics. the digital economy development program should serve to implement the following goals:
- To create an ecosystem for the digital economy in the republic of uzbekistan;
- To create institutions and infrastructure for the country's digital economy system;
- To implement all necessary measures to organize an information society covering all sectors of the republic;
- To increase the competitiveness of our republic on a global scale and in global markets.

A decree of the President of the Republic of Uzbekistan dated February 19, 2018 "on measures to further develop the field of information technologies and communications" and a July 3, 2018 "decision on measures to develop the digital economy in the Republic of Uzbekistan" can also be included in these measures. As a result of these measures, the circulation of electronic documents has been stopped, electronic payments are being developed, and the regulatory legal framework in the field of electronic commerce is being improved.

In general, the role of the digital economy in the world today is increasing. It is not for nothing that 2020 has been declared the year of the development of science, enlightenment, and the digital economy in our country. In our country, certain works are being carried out for the development of this sector. Undoubtedly, the digitization of the economic sector creates opportunities such as reducing costs associated with the production of goods and services, improving product quality, dramatically increasing volume and competitiveness, and saving time. At the moment, digital technologies are widely used in Uzbekistan in the banking system, retail trade, transport, energy, education, healthcare, and other fields.

positive aspects of the digital economy Any order against digital business in the Republic of Uzbekistan can make things useless and create a favorable business environment in the country. The digital economy can perform the following set of tasks:

This allows, for example, the "Laboratory of Digital Diagnostics of Business" to create new products and markets, structure existing markets in accordance with the interests of the most advanced product manufacturers, and optimize the management system based on the use of artificial intelligence.

- Increase the level of protection of critical infrastructure;
- Formation of the legal base of the digital economy;
- Strict prosecution of crime in the digital economy;
- Willingness to transfer rights to digital codes;
- Development of general, universal standards for the digital economy for all sectors of the economy;
- Transition to general rules of interaction for government, business, and society;
- Using the digital economy not as a destroyer that leads to systematic unemployment in the country, a decrease in the purchasing power and standard of living of the population, a decrease in industrial and agricultural production, a decrease in state budget revenues, but as a foundation of the primary sector of the economy;
- Smart cities, smart police, smart railways, etc.; improvement of citizen's quality of life;
- High growth rate and economic efficiency of the digital economy;

To understand the threats to general digitization and the depth and openness of the conversation of specialists and society on this topic.

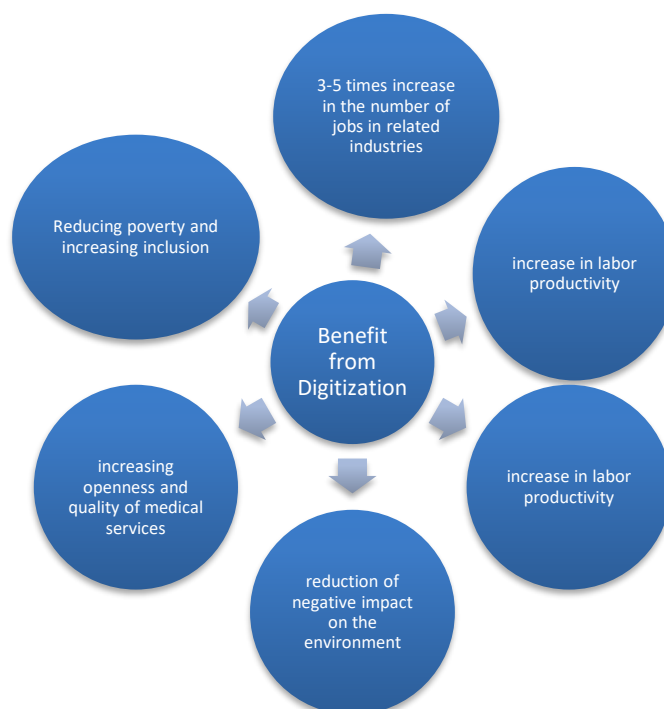


Table 1.3.⁹: The benefits of digitization

In the image above, we can multiply the camera obtained from the digitization. Negative aspects of the digital economy. The digital economy, in terms of the lobbying approach, is not a self-existent part of the economic sectors in the first place. After abandoning the gold-dollar standard, a million tons of virtual gold were created, putting the world economy at risk of a second Great Depression 1,000 trillion dollars in unsecured debt has grown as an export tool of US government lobbying. Thus, on the basis of the lobbying approach, the assessment of the digital economy, taking into account the moral factor, determines the extent of the grave danger that hangs over humanity.

From a spiritual point of view, the task of the digital economy is to end the world monetary system. destroy all money. Today, money is a contingent commodity, like glass beads in Papua New Guinea. In the digital economy, banks have numbers, not money. A virus can wipe out all numbers, impoverish the country, and decimate the population in one day. All of these are potential downsides.

According to scientists and experts, new innovative transport systems are expected to appear in transport as well. For example, magnetic levitation vehicles, vacuum vehicles, Hyperloop systems, etc. can be clear examples of these. generation of innovative ideas using collective knowledge (mass collaboration, sharing economy), production of products and services, and financing of new innovative projects (crowdfunding).¹⁰

⁹ Author development

¹⁰ https://ru.wikipedia.org/wiki/Vikipediadagi_Sahifa

Now, using open data and literature available in the global information system, let's get acquainted with the main indicators of the formation of the digital economy infrastructure and its specific features on the example of several developed countries:

The emergence of new types of services that were not possible before the Internet

From the 1990s to the present, several new markets for products and services have emerged based on the use of the Internet and information technology. For example, messengers, aggregators, internet search engines, internet advertising, e-soching, e-learning, etc. A clear example of the emergence of new types of services is electronic commerce. According to 2019 data, e-commerce accounted for 13.6% of retail sales in England, 13.1% in Germany, 4.2% in Russia, and 9.6% in China. The turnover of internet trade in China in 2019 was reported to be around \$400 billion.¹¹

The possibility of joint consumption of material wealth (the "sharing economy") has changed the attitude towards ownership of material wealth in most members of society. For example, most young people in developed countries are not interested in buying and owning private property for themselves. Because of them, freedom of life, freedom of spiritual behavior and emotions, trips to countries around the world, and ecological tourism activities have become more important.

The increasing importance of social media in forming consumer opinions about a product or service Because it is no secret that working and communicating in social networks has become an integral part of the lives of all young people these days.

Emergence of new types of intellectual property licenses (public licenses) In this case, the rule of majority ownership applies to the product or service created. For example, Creative Commons (CC) type licenses, which allow the public to own intellectual property through the State Statistics Committee, and the General Public License (GPL), which provides a collective license for open software

transformation of business models. The digital economy manifests itself in new business models and creates a chain reaction that is unique to other market participants. The most popular of these are the desire for customized products and services, the desire to receive personalized services, the involvement of e-commerce tools in the company's development strategy, and the use of digital business architectures such as the freemium model, free to play, print on demand, full crowdsourcing, and digitization.

organization of direct sales of manufacturing firms via the Internet, use of electronic showcases, organization of network and inter-network virtual exchanges, possibility of working without stores (drop shopping), and fulfillment of stocks on demand (on-demand).

to improve the knowledge of specialists trained by higher education institutions to the level of modern requirements. Because today, the level of knowledge of specialists who have received higher education is outdated by 50% in just two years after graduating from high school.

¹¹ Лapidус Л.В. Цифровая экономика: управление электронным бизнесом и электронной коммерцией. –М.: ИНФРА-М, 2019. -281 с

Currently, the possibility of working from home offices, which is becoming quite popular in the digital economy, allows many people to work full-time in companies, firms, or organizations without leaving home (gig economy, freelancing, etc.).¹²

In many sectors of production, state-owned enterprises can account for up to 80% of the market. In such conditions, the creation of industrial digital platforms under the leadership of relevant ministries or state corporations is the most reasonable step. Such platforms create the necessary infrastructure base for the rapid development of the digital economy and the wide spread of technologies compatible with it. When creating digital economy platforms, it is necessary to focus on the following areas:

telecommunications, energy, transportation, health care, taxation and taxation, drug logistics, data processing, tourism, foreign economic activity, real estate trade, and production. It is the development of these areas that allows for the creation of an infrastructure and technological base. Then, by transferring them to other areas, Uzbekistan will be able to develop a mature digital economy as quickly as possible.

Such an approach seems to be the most appropriate for our republic today, but it is not without its shortcomings, of course. But an appropriate strategy should take into account both the anticipated road risks and the risks of the digital economy to form the concept of the digital economy on which it should be based. We would also like to emphasize that many programs of the digital economy of developed countries (USA, Japan, Austria, Australia, Great Britain, Korea, etc.) focus on the social directions of "digital medicine" and "smart cities." The direction of development of such projects does not have a serious economic effect, but this situation can be justified by a number of arguments:

First, what kind of large-scale pill-brewing program must be popularly approved and supported in an open, western-style society? Therefore, the development of the digital economy goes under the sign of such social projects;

Secondly, the implementation of digital technologies in large industries sooner or later happens due to economic expediency in itself. And social projects need support from the state (that is, what is expedient is reasonable, and what is reasonable is expedient);

Thirdly, most developed countries will have the necessary technological infrastructure to enable some form of digital economy. As a result of the implementation of large-scale social projects, feedback from a large number of non-specialist users is obtained, which allows for the improvement of technologies from the user's point of view and makes them accessible to wide segments of the population;

Fourthly, the implementation of digital technologies in industry (for example, the Internet of Things in production or the large-scale introduction of 3D printers in production) is expected to solve a rather narrow range of tasks. Implementation of "Digital Medicine" and "Smart City" social projects requires more complexity and diversity, and such projects are appreciated by the general public. A "social stress test" of this kind is necessary for all modern technologies, especially from the point of view of the control system.

¹² Ходиев Б. Ю. Цифровая экономика в Узбекистане. //Мировая экономика, 2017. №12

Thanks to the above-mentioned thoughts and ideas, the importance of these social directions for the social environment is, in our opinion, more understandable to the reader. But it remains unclear what place they should have in the digital economy program of the republic. At an early stage, due to limited resources, it is likely that we will have to make a decision about where to focus efforts; that is, we have two paths: one is to engage in the social adaptation of technologies, and the second is to increase the local technological base.

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