THEORY AND PRACTICE OF APPLICATION OF MECHANISMS OF DIGITAL ECONOMY IN BANKS

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Abstract:

The article analyzes the theoretical and practical significance of the relevance of the use of innovative technologies in banking services, and also describes measures to develop a digital economy in this area. Based on the analysis, a number of positive aspects of bank lending were studied, including the positive impact on the countrys GDP and employment growth, as well as recommendations on the development mechanisms of the digital economy in the banking sector based on international experience.

Key words: digital economy, banking system, electronic money circulation, payment systems, banking, customer, remote services, innovations, international practice.

Introduction

In developed countries, increasing attention is being paid to issues such as the study of the digital economy through the use of modern technologies in the provision of banking services. The main trends in this area are the introduction of modern integrated information systems for the effective management of banking services, ensuring transparency and protection of system data, the use of digital economy technologies and improving the methodology of effective information integration of information systems. The widespread development of the digital economy and innovative technologies requires commercial banks to improve the information systems of services.

The development of services in the activities of commercial banks in Uzbekistan, in particular, the introduction of new types of banking services with the widespread use of information and communication technologies, is relevant today. In particular, banks use “artificial intelligence” and digital technologies to improve the services provided to small and large financial technology companies. Because new competitors in the market were threatened by old financial institutions of all sizes. At the same time, new technologies open up wide opportunities in the banking services market.

In recent years, a number of positive steps have been taken in the country to introduce new mechanisms for the provision of services by commercial banks. In particular, the Presidential Decree “On Measures for Further Improvement in the Field of Information Technologies and Communications” (2018), the Decree “On Measures for the Development of the Digital Economy in the Republic of Uzbekistan” (2018), “2020 - Year of the Science and Digital Economy” and the development of the concept “Digital Uzbekistan” until 2030 (Mirziyoyev, 2020) set a number of tasks in this direction for the banking system.

The above conceptual ideas show that the topic of this article is relevant.

Literature review

In order to become one of the banks in developed countries today, it is necessary to take the shortest path to growth, first of all, through deep acquisition of knowledge in the field of advanced information and communication, Internet and digital technologies. To do this, it is necessary to constantly improve the literacy of employees in the application of innovative technologies in all types of banking services. Of the many technologies that directly affect science and education, the most important are technologies in the digital economy. Today, this brevity is called the digital economy.

Nicholas Negroponte (1995), a scientist at the University of Massachusetts, coined the term "digital economy" and expressed it as a metaphor for the transition from atomic movement to bit movement.

Currently, this term is used by politicians, economists, journalists and businessmen around the world. The World Bank (2016) presented to the world community a report on the state of the global digital economy with the report Digital Dividends.

In fact, the main foundation of the “digital economy” is the great Al-Khwarizmi, who introduced the number “0” in mathematics, and it should be considered the founder of modern computers, information and communication technologies and high technologies. Although in the scientific literature today there are more than 10 terms “digital economy”, it has not yet been written down as a holistic term in science.

The main features of the digital economy are a high degree of automation, high-quality implementation of electronic document exchange, mutual electronic integration of accounting, audit and management systems, electronic databases, customer interaction system, various corporate networks. Its advantages include reducing the cost of various payments (for example, trips to the bank and other resource savings), expanding the opportunities for their withdrawal to the world market with the simultaneous availability of a large amount of operational information about goods and services.

To date, the term “digital economy” was coined by a number of foreign economists D. Tapscot and M. Banderman and the following local scientists V. Kobulov, A. Aripov, S. Gulamov, B. Begalov and many others on the scientific and practical issues of the digital economy, scientific work done. However, such important aspects as the implementation of information systems in banks, the principles of modeling based on automated information systems, the effectiveness of using automated information systems in the banking sector, their interconnectedness, and the conditions of the digital economy have not been studied enough.

In the development of the digital economy, the scientific development of innovative technologies and ideas and, on this basis, the improvement of the regulatory framework is cyclical, but the development of reforms is constant. Any economic practice that gave good

results yesterday may not meet today's requirements, which may require improving this practice or creating a new one. This further enhances the relevance of the research topic.

Methodology

The study showed that the positive results of financing enterprises working with innovative and information technologies through loans from commercial banks, including the country's GDP growth, income growth and employment growth. For this purpose, a correlation and regression analysis of the number of employees in business entities operating in the country and the relationship of loans issued to commercial banks to business entities with the share of business entities in the country's GDP was carried out.

According to the sample correlation coefficient, the influence of the number of people employed in this sector on the share of business entities in GDP was high, R = 0.9597, and the effect of bank loans on the share of business entities in GDP was high, R = 0.7686.

We performed a regression analysis using the Excel Data Analysis feature. The density of the dependence is r = 0.992474054 on the scale. Therefore, the correlation coefficient between indicators based on this scale has a very strong degree of correlation. According to the data, a_0 = -157331, a_1 = 8,056, a_2 = 0,00075, the direct regression formula took the following form:

$$KBYU(y) = 8,056KBBS(x1) - 0,00075KBBKR(x2) - 15,7331$$

Therefore, the regression coefficient a1 determines the relationship between the resulting sign (u) and the factor sign (x). This indicates how many units the resulting character increases when the factor increases by one unit.

We used the F-test to verify the adequacy of the regression equation (Y = 8,056-0x1-0,00075x2).

According to the observed data, the calculated indicator Fp (calculated, observed F) was compared with the corresponding critical indicator Fk (F critical, tabular). F score = 4.25, F table = 295.595

Since F is a table> F in the calculation, the econometric model (1) is considered adequate. $T_к$= 2,262, Ta_0=-3,9, Ta_1=15,38, Ta_2=-6,19.

Since Ta1> Tk is calculated, a1 means that the regression coefficient is significant.

From the above regression analysis, we can draw the following conclusions: an increase in the number of employees in existing economic entities by 1 percentage point will lead to an increase in the share of economic entities in GDP by 8,056%.

The study also used research methods such as analysis and synthesis, induction and deduction, statistics and comparison. A brief description of the results of the study is as follows:

- the scientific views of some economists on the application of innovative technologies in a computer system in the digital economy;

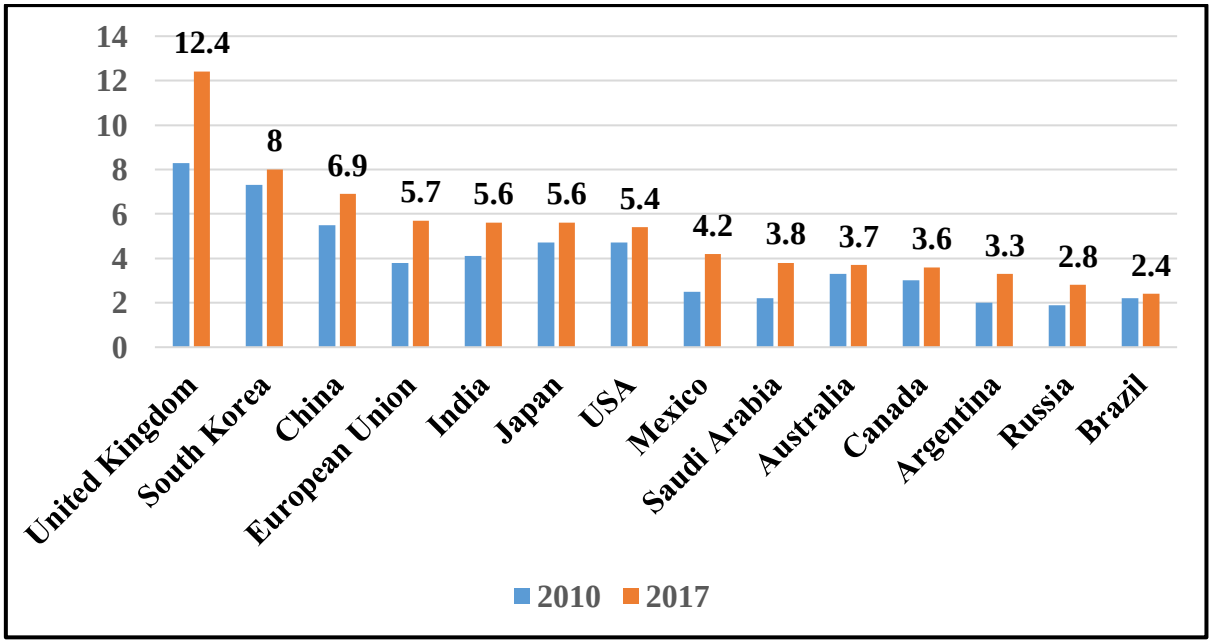
- recommendations are given on creating the conditions for the development of the digital economy in order to accelerate the widespread use of innovative technologies in the accounting system. For example, the development of a regulatory framework for an incentive system for enterprises that develop, recommend and use innovative products, services based on innovative technologies, optimal organization of pricing policies, etc;

- recommendations were made on creating the necessary conditions for increasing the number and volume of remote financial services provided to the population in the digital economy, including the need to introduce an identification card system and a mechanism for its use in financial transactions.

Main part

Digital technologies are changing the appearance and structure of the economy, destroying traditional business models, increasing competition and competitiveness between individual enterprises and banks throughout the country, which leads to the expansion of markets and opportunities. An example of this is the share of traditional flows of goods, services and goods in global GDP, which fell from 53% in 2007 to 39% in 2014 after 20 years of growth, according to a report by Mc Kinsey Global Institute (2015). Between 2005 and 2014, the volume of cross-border data exchange increased by 45 times. Since 2014, about 12% of world trade in goods has been through international electronic commerce.

Therefore, many experts agree that digital change is one of the key factors in global economic growth. According to the Boston Consulting Group (BCG), one of the leading experts in the field of the digital economy, the share of the digital economy in the GDP of developed countries has grown by 1.2% since 2010 and amounted to 5.5%. In developing countries, this indicator has grown from 3.6% to 4.9% of GDP.



Drawing 1. The growth of the share of the digital economy in the GDP of countries, in percents

The UK is the world leader in the share of the digital economy in GDP. The sector, which includes ICT and telecommunications, online commerce and government funds connected to the Internet, ranks second after real estate, surpassing manufacturing and commerce. South Korea and China took the next place. If you look at the indicators of the development of electronic commerce from the point of view of the country, then, according to The Boston Consulting Group (BCG), the UK is leading, followed by Germany (Drawing 1).

Table 1. 2018 I-DESI subindexes

Countries	Digital (I-DESI) Index	Communication level	Human capital	Internet using	Digital integration	Digital Government Services
South Korea	75,2	79,8	75,6	74,5	63,8	83,0
Norway	73,0	75,8	69,1	85,2	65,8	72,5
Iceland	72,7	72,4	80,2	75,9	75,7	53,7
Japan	68,5	72,5	69,7	73,9	53,0	75,0
Australia	67,8	56,8	80,5	57,8	57,3	88,9
Canada	67,0	59,6	67,3	66,2	65,4	81,5
USA	66,7	71,3	56,2	71,0	61,8	79,0
New Zealand	65,8	55,4	79,3	58,2	55,6	81,6
Israel	55,6	54,3	57,4	58,5	45,2	65,4
Russia	47,5	38,9	64,1	48,7	29,8	56,8
China	45,3	47,8	40,5	45,3	40,7	58,6
Chile	44,9	47,8	42,6	32,9	40,5	61,4
Turkey	41,5	43,3	53,1	35,9	27,7	43,2
Brazil	39,7	39,5	39,2	33,8	27,8	62,4
Mexico	43,1	45,5	41,6	30,0	33,7	67,2

In I-DESI 2018 (Digital Economy and Society Index). South Korea, Norway and Iceland are among the top three. Russia lags behind the leading South Korea by 27.7 points, but costs higher than China, Chile, Turkey, Brazil and Mexico. In general, Russia today is recognized as a country with high potential in the process of introducing a digital economy (Table 1).

If we look at the share of the digital economy in the Republic of Uzbekistan based on information and communication technologies and the Internet, the country's GDP in 2019 will be 2%. Raising this indicator to 10% by 2030 is defined as one of the strategic goals for the future. This is based on the quick implementation of the tasks set in the Digital Uzbekistan - 2030 program. We believe that the adoption of the Digital Uzbekistan Law in the near future will serve as the legal basis for a radical shift in the development of the digital economy, fully serving the effective implementation of our priorities for the next 5 years of an active transition to the digital economy.

The digital economy is one of the main indicators of national security and independence of the country, which will increase the standard of living of people by several times. State and social management, as well as the widespread adoption of digital technologies in the social sphere, will increase efficiency by significantly improving people's lives, eradicating

corruption and the black shadow economy. Because the numbers are all sealed, stored in memory, quickly provide information when necessary. In such circumstances, it is impossible not to hide any information, to make secret transactions, not to provide complete information about a particular activity, the computer will show everything. The abundance and structure of the data prevents false and misleading work, because it is impossible to trick the system. As a result, it is impossible to steal funds, spend them inefficiently and aimlessly, exaggerate or hide them. This will increase the flow of legal funds into the economy, taxes will be paid on time and correctly, budget allocations will be transparent, funds allocated to the social sphere will not be stolen, and so on. “Digital technology not only improves the quality of products and services, they reduce unnecessary costs. At the same time, they are an effective means of overcoming the most serious disaster - the scourge of corruption.

Conclusion

Coexistence of banks of the Republic of Uzbekistan with world banks paves the way for intensification of the processes of integration and globalization. On the one hand, the development of integration processes necessitated the use of modern ICT, on the other hand, this led to the transformation of the business. Studying these processes from an economic and political point of view and obtaining scientific conclusions is a requirement of the time.

In our opinion, special attention should be paid to the implementation by commercial banks of the following measures for the development of business entities based on innovation and information technology:

- It is necessary to expand the range of innovative online lending services in the practice of banks.

Credit practices are widely used online in banking practice in developed countries. In order to improve this type of service, it is necessary to increase the speed and quality of the Internet, and to increase the computer literacy of enterprise employees. This is due to the fact that innovative online lending can be characterized by satisfying business needs in lending methods without spending a lot of time and effort.

- In order to exclude cases of artificial credit dependence in the activities of business entities in the lending practice of banks, it is necessary to provide “credit leave” to business entities operating on the basis of innovative and information technologies.

In our opinion, the determination of the conditions for repayment of the main debt and interest on loans provided by commercial banks to enterprises operating on the basis of innovations and information technologies, based on the period of their production, will contribute to the development of their future activities.

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