Digital Economy And Its Influences At The Banking System Of Uzbekistan

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Abstract: The article is devoted to the discussion of recent trends and reformation in digital economy and banking system in Uzbekistan. The object of the research is the PJSCB “RAVNAQ-BANK”, while implementing and developing of digital economy in the financial sector of the Republic of Uzbekistan is the subject of this article. The actuality of the research consists of increasing the number of scholars who are interested in how to develop digital economy in several developing countries and by this to achieve economic effectiveness in both the scope of country and company. The research consists of four parts. Firstly, the role of digital economy in the banking sphere is explored. Secondly, the application of mobile system to the banking services is investigated. Thirdly, reformation processes of digital economy by developing banking system of PJSCB “RAVNAQ-BANK” are examined. Lastly, introduction of digital economy to the sphere of banking and banking services for integration with e-government are discussed.

Key words: digitalization, digital economy, digital transformation, e-government, information technologies, bank, banking system, commercial banks, finance, Uzbekistan, PJSCB “RAVNAQ-BANK”.

1. INTRODUCTION

The digital economy is rapidly developing worldwide as the largest driver of innovation, competition, and growth. Even though many people have been excluded, tremendous opportunities are available for the digital economy to support financial inclusion for sustainable economic development. The rapid development of digital technologies leads to a radical transformation not only in the economy, but also in society itself. Thus, by reducing information costs, digital technologies significantly reduce the cost of economic and social transactions for the state, companies and individuals, promote innovation, in which transaction costs become almost zero, and also dramatically increase efficiency: existing activities and services become cheaper, faster or more convenient. And finally, digital technologies promote integration: people get the opportunity to use services that are previously inaccessible to them. At the same time, an information market is being formed, which is characterized as a pool of social, legal and economic relations in the sphere of sale and exchange of information products between consumers, producers and intermediaries. This approach enhances the dominance of the information industry in the economy of several countries, the sphere of production and services is becoming more knowledge-intensive and innovative. In this context, in Uzbekistan at the highest level, great attention is paid to the development of information and communication technologies, increase their role in the socio-economic development of the country. A striking example of this is the performance of Shavkat Mirziyoyev at the solemn inauguration ceremony of the President of the Republic of Uzbekistan, which specifically notes the following: “Modernization of industries and regions, increasing their competitiveness, development of export potential will always be in the center of our attention. For this, it is necessary to attract more actively foreign investment, advanced technologies, including information and communication, into all areas. It is on this basis that we will be able to achieve an increase in gross domestic product of more than 2 times by 2030” [1]. In this case, the cyclical nature of competition implies a greater probability achieving successful digital platforms significant, but at the same time, temporary market advantages. There is general consistency in the fact that dynamic competition based on continuous processes of innovation, development and change is a key component of a market economy. In this regard, the greatest benefits from the digital economy will be those countries that can quickly and as much as possible adapt to the changes taking place, while the rest are more likely to be lagging behind. In order to compete in the digital economy, it is necessary to have the appropriate number of competencies, flexibility and efficiency are important, it is necessary to competently manage project portfolios and analyze large amounts of data in order to be able to make objective decisions 24 hours a day. Therefore, in such a digital economy, it will be difficult for a person to find a place for himself—only the financial sector will change, but also the industry, services and products that can have a digital form [2].

2 REVIEW OF LITERATURE ON THE SUBJECT

The concept of the digital economy originated in the last decade of the twentieth century, with the introduction of this phrase in 1995 by Nicholas Negroponte of the University of Massachusetts. Over the past period, many approaches to the disclosure of the term “digital economy”. So, M.L. Kaluga defines the digital economy as a communication environment of economic activity on the Internet, as well as forms, methods, tools and results of its implementation [3]. OECD considers this concept as a general term for describing the markets focused on digital technologies and, as a rule, include trade in information goods and services through electronic commerce [4]. Digital technologies are the Internet, mobile phones and all other means of collecting, storing, analyzing information and exchanging it in digital form.

Thomas Mesenburg identified three main elements of the digital economy [5]:
• e-business infrastructure (hardware, software, telecommunications, networks, human capital, etc.);
• electronic business (the way of doing business, namely: any process implemented by an organization using information and communication networks);
• electronic government (the way of doing business, namely: any process implemented by an organization using information and communication networks).
Digital technologies in the modern world create fundamentally new opportunities for building interaction between the state, business and the public, eliminating long chains of intermediaries and speeding up a variety of transactions and operations. Based on this view of the digital economy, many researchers have come to the conclusion that this model of the economy will provide “digital dividends” to society in the form of increased market access and market coverage, increased internal and market efficiency, including higher labor productivity, lower transaction costs employment growth (reduction of unemployment), better satisfaction of human needs, poverty reduction and even weakening (or completely overcoming) the social polarization of society. Digital transformation is accompanied by risks. Very acute are the issues of economic security of the credit institution. The relevance is due to the fact that in the transition to the digital economy, digital banking is one of the main elements of ensuring economic security of the financial sector. That is, increasing the level of economic security of the credit institution is a priority in the transition to the digital economy. As society becomes less dependent on cash transactions and more dependent on public Internet services, capital management and banking compliance will look very different, with more emphasis on decentralized cryptographic systems. The cost of banking IT can be reduced by using open source software and improving its sustainability by using its distributed nature. The first technologically adjusted regulators will create Internet standards for regulation and open the way for everyone else. This will provide cryptographic proof of solvency or your identity. Companies will be able to work with greater transparency and consumers will consume with greater confidentiality[6].

Figure 1. Stages of digital transformation in the banking sector
As a foreign experience, the development of the digital economy into banks is very important nowadays. The transition to a digital economy today is one of the key priorities of Uzbekistan’s development. Uzbekistan relies on the development of digital technologies as the basis of economic activity and public administration. The development of the digital economy of Uzbekistan is engaged in the government at the legislative level. The work of the company - everything goes into the digital environment. To date, there has emerged and is developing such a unique phenomenon as the "digital economy". In this paper, the concept of the digital economy, its characteristics and features are considered, various approaches to the definition of the digital economy, as well as the prospects and trends of its development in Uzbekistan are given. Private joint-stock commercial bank “Ravnaq bank” was founded in June, 2001. On June 23, 2001 the bank has obtained license №70 which gives the right to make a banking operations. Since November, 2002 the bank is a member of the Guarantee Fund supporting deposits of citizens in the bank of the Republic of Uzbekistan, member of RSE “Tashkent”, and member of the Bank association of the Republic of Uzbekistan. One of the priority area of the strategic development plans for the next 5 years is to expansion of infrastructure by opening new branches and mini-banks. Implementation of the program of infrastructure expansion allow the bank ensuring stable growth the scope of its activities. In doing so, bank will focus on funding the subjects of the small business and private enterprise. Short-term strategic objective for the years 2018-2020 is an increase of assets by more than twice, and the overall capital – by more than four times. Milestones for 2018. As per forecast of the Bank, in 2018, the average growth of commercial banks will constitute at least 25 % (as per the results of the 9 months of 2017 in regard to similar period of 2016 the growth was 212%). The reason of a large increase of assets of commercial banks was at the expense of devaluation of the local currency). At that, the most significant increase will be observed in the group of small and private banks, where the growth rate will reach 35% or more per year. The Bank intends in 2018 to create the necessary base for further ensuring of dynamic development and improving the competitive position in the banking services market. Based on its potential, as well as the intentions of its major shareholders and partners, in 2018, the Bank forecasts an increase in assets of at least 41%. Target markets for commercial activities and their development. In 2018, the Bank intends to develop three strategic areas of the banking business: corporate, commercial and retail. At the same time, the main emphasis will be placed on the development of corporate and commercial business as the basis for a quick and mini-casting directions for creating the necessary client base and ensuring stable sources of revenue. In 2018, the retail business will be seen as a complementary area of business, which should be developed according to market. Development guarantee of target markets of commercial activity. The main priorities for ensuring the development of the Bank’s commercial activity, as well as the creation of necessary basis for implementation of business plan, parameters, material and technical basis. Based on the priority areas of development, as well based on the Bank’s potential, the absolute financial indicators are expected to grow by the end of 2017:

- Assets up to the level not less than 480 931.1 mln.UZS;
The Bank has been working on implementing modern banking project customer service in Uzbekistan. The Bank provides a wide range of quality financial services to the population, representatives of small and private businesses and economic entities of all sectors of the economy. Many years of professional experience, competent financial policy, quality management, effective use of modern information technologies, as well as innovative approach to the process of service are the constant growth of the trust customers to the Bank and in turn strengthen the mutual beneficial cooperation. The main principles of building productive relationships between the Bank and customers are openness of information, constructive dialogue, attention to the problems of customers, as well as making quick and effective decisions. The Bank, based on the highest standards of banking services, offers its customers a wide range of modern banking products and services. By increasing quantity and quality of services provided, as well as strengthening and development of partnership relations, client base for the reporting period amounted to 23,511 customers, including: legal entities and individual entrepreneurs operating without status: legal entity – 1,258, individuals – 22,253.

International rating. On November, 2017, the credit rating service “Standard & Poor’s” granted the long-term credit rating to the PPJSCB “Ravnaq Bank” at the level of “CCC+”, and confirmed its short-term credit rating at the level of “C”. Forecast – “Developing”. National Rating. Credit-rating Agency “Ahbor – Reyting” granted to the PPJSCB “Ravnaq Bank” the credit rating “uzB+” with a forecast “Stable” in December, 2017. This rating marks the middle level of bank’s credit capacity, a bank with “uzB+” rating is capable of fulfilling its financial capabilities on timely and comprehensive manner (Figure 2).

The Bank implemented a remote banking project customer service “Ravnaq mobile” via mobile applications on Android and IOS operating systems. Purchased server equipment to improve the quality, speed, reliability of the Bank’s information systems such as “Internet Banking”, “Ravnaq mobile”, “Ravnaq 24/7”, corporate mail, etc. Also, the main database of ABS NCI-bank was migrated to the new server equipment, the main database server and its backup copy was posted to ensure fault tolerance in different parts of the Bank. A new corporate website of the Bank has been launched, which meets the modern requirements of the time and is designed taking into account, the “Electronic government” system being created in the country. As a result of the measures taken to create comfortable conditions for remote servicing of corporate clients, intra-automation of work processes number of connected customers increased to 850. The growth of the customer base of “Ravnaq-bank” DURING 2012-2017 indicates that it has achieved good results and is a reliable partner. Today PJSCB “Ravnaq-bank”, performing diversified activities, offers its customers not only a whole range of banking services, but also a wide range of additional products and solutions that take into account the needs and desires of customers. Constant aspiration of “Ravnaq-bank” to introduce new products and services for customers, taking into account their needs and desires, gives its tangible results. Uzbekistan has developed a Comprehensive program for the development of the National information and communication system of Uzbekistan, designed for 2013-2020, in accordance with which the development of ICT in the country. Speaking at the enlarged meeting of the Cabinet of Ministers devoted to the results of socio-economic development of the country in 2016 and the most important priority areas of the economic program for 2017, President of Uzbekistan sh. M. Mirziyoyev noted in his report: “Our urgent task, relevant today and in the future – to ensure the effective functioning of the entire system of "Electronic government". It should be noted that the current stage of development of the digital economy in the country is characterized by a period of formation and high dynamics of development. ICT development in Uzbekistan is carried out in 4 stages:

Figure 2. The rating of commercial banks

Figure 3. The current situation of PJSCB “RAVNAQ-BANK”
1) 2000-2002, the initial stage of development – the period of phased introduction of ICT and improvement of public administration;
2) 2003-2007, the second stage – the period of adoption of the main legislative and regulatory documents and the widespread introduction of ICT;
3) 2008-2012, the third stage – the period of the beginning of the active introduction of internal information systems and software products in state bodies, the provision of information and reference electronic services;
4) 2012 – present, the fourth stage – the period of further improvement of the structure of public administration.

Today, the banking system of Uzbekistan is actively introducing innovative information technologies. According to the results of the banking system in 2016, at the enlarged meeting of the Board of The Central Bank of the Republic of Uzbekistan it was noted that the share of banking services in the structure of financial services amounted to 88 % and increased by more than 1.2 times compared to 2015. In addition, according to the results of the banking system in the 1st quarter of 2017, specific tasks of expansion, improvement of the range of banking services and accelerated introduction of modern ICT were identified.

Currently, the banks of the Republic use such types of remote banking services as Bank-client, Internet banking, mobile banking and SMS-banking. For example, the national Bank for foreign economic activity of the Republic of Uzbekistan provides its customers with online services such as SMS-informing, e-mail-informing and personal IVR-Cabinet. By sending SMS messages to a cell phone, the owners of NBU accounts receive operational information. E-mail-informing also allows customers to receive the same operational information about the account status via e-mail address and the Internet. Personal IVR-Cabinet (Interactive Voice Response) is a system of voice alerts. This intelligent platform allows to receive information about banking products and services, as well as information on Deposit accounts of the client in an interactive mode through a personal IVR-Cabinet when dialing from mobile or landline phone numbers to the service number of the Bank. The Bank PJSCB "Ravnaq-Bank" for corporate clients provide Internet banking, allowing you to use the full range of services for remote account management via the Internet, as well as offers its customers remote banking services (DBO), which allows you to remotely manage your Bank account via the Internet and telephone. As the practice of providing online services and remote banking services to customers shows, domestic banks offer a fairly limited type of online services. In addition, it should be noted that the adaptation of banking activities and solutions to the requirements of consumers is quite slow. For the active introduction of innovative banking services in the banking system, the Republic of Uzbekistan needs to develop a similar Russian program strategy for the development of the digital economy, which requires not only investment, but also focus on the experience of States ahead in the field of digitalization. Success factors and prospects for the development of traditional banks. Our experience suggests that successful program of digital transformation involve the presence of ambitious goals, sufficient resources for their achievement, as well as the close attention of the top management – often in the form of appointment of Director at Board level who will be responsible for the program, providing supervision and overseeing it along with the other strategic objectives of the Bank. In addition, an important factor is the ability to actively interact with technology companies in the framework of joint development and implementation of innovative solutions, outsourcing of innovations or other forms of cooperation. Finally, banks can focus on providing basic services such as balance sheet management and transactions. This scenario assumes, among other things, work under a foreign brand (White Label), when the long-term competitiveness of the Bank will be determined primarily by success in radically reducing costs.

Financial performance. In 2012-2017 the bank managed to achieve the key goals set before the Bank in the framework of the development Strategy of the past period. PJSCB "Ravnaq-bank" has provided a consistently high income and efficiency, exceeding the objectives of the Strategy of the previous period: in 2017, the Bank's revenues amounted to 46.0 billion UZS, compared to last year, the Bank's revenues increased 2.2 times. Net profit amounted to RUB 3.0 billionsoums and in comparison with last year has grown in 1.7 times.
PJSCB "Ravnaq-bank" have demonstrated high levels of profitability and shareholder return:

- Return on equity at the end of 2017 amounted to 13.2%.
- The growth rate of assets over the years has significantly exceeded the market average, while we managed to maintain the high quality of our portfolio.

Throughout the strategy Implementation period, the loan portfolio quality indicators were better than the market indicators, such as retail business and corporate. Growth of loan portfolio in retail business compared to last year it was 2.4 times. The bank has achieved success in the development of customer relations: we have increased our customer base and satisfaction. The bank has significantly expanded interaction with clients in remote and digital channels. In the segment of financial services for individuals, the bank managed to achieve significant results. The bank has significantly increased their active customer base and increased the number of products per customer in all customer segments. Despite the performance improvement, in an active environment business growth we have not been able to fully realize our potential for automation and cost optimization.

![Mobile bank application](image)

**Figure 6. Mobile bank application**

When planning the activities of the Bank for the period up to 2023, preparation of the balance sheet, income and expenditure plan, the forecast of the main economic parameters was made. Trends affecting the strategy. The banking industry is changing rapidly under the influence of a number of global challenges:

- Customers: changing consumer preferences.
- Technologies: the emergence of new technologies and speed of implementation existing.
- Banking: reduced margins in the banking sector and increased regulatory requirements.

Customers. More and more of the banking sector’s clients are beginning to be representatives of the younger generation. Main feature representatives of the younger generation – transfer to the digital environment of all spheres of life:

- 95% of representatives consider the smart-phone to be an important personal device in my life.
- 2 times more often use self-service than older generation.
- 2 times more likely to use instant messengers and chat rooms.

New preferences and expectations from customers are formed services in the digital space, they: prefer mobile channels and expect a personal, modern and convenient service. At the same time, customers leave behind a "digital trail" of personal data. Technologies. New technologies are increasingly transforming the way banking services are provided. Leadership in new technologies will determine the leadership of the Bank in the market in the future 3-5 years. Blockchain. Blockchain technology is increasingly used in the banking sector, allowing the creation of decentralized online services. Blockchain accelerates decision-making in terms of interaction with a large number of counterparties, and also allows you to improve the security of transactions. Cybersecurity. An effective system of protection against cyber threats is a prerequisite for ensuring the reliability of the Bank in the digital economy. Today, solutions in the field of protection of personal data and counteraction to cyber fraud, without which it is impossible to imagine modern banking operations. Biometric identification. Technologies of recognition of the client on the face, a fingerprint, a palm, a voice, a retina of an eye and other find more and more frequent application in the banking sector. Sociometer allows adjust communication to the psychological profile and apply in personnel management. Internet of things (IoT). The introduction of IoT technologies allows to bring a number of supporting processes in the Bank to a new level. For example, tracking cash flow, optimization of the procurement process, the functioning of ATMs and payment terminals. Banking business. The Reduction in the profitability of the banking sector. The value of profitability (ROE) in the banking system has stabilized at a low level over the past 5 years. The key task for the PJSCB “Ravnaq-bank” is scaling up business, increasing profitability and efficiency while increasing flexibility, speed and customer focus based on the introduction of new technologies and education of a new quality people. They believe that this can be achieved primarily through the formation of better customer experience, not only in the financial sector, but also in other industries, through the integration of modern technologies into all products, services and processes of the bank, as well as through effective management and development of the best employees. They optimize work in physical channels: Let us provide our corporate clients with the opportunity to receive services and open an account at any place with the help of an on-site manager. Create and launch innovative interfaces in digital channels: improve customer experience in RB-mobile, Ravnaq 24/7 and “Internet Banking”, we will launch the voice assistant service and chat bots. They should train our clients in new experiences, warn of possible risks through all possible channels (banking, social networks, instant messengers and others) and will do everything to protect client from unnecessary communications. In the next 5 years, The bank plans to open 3 branches in the city of Tashkent, which will allow us to expand the scale of business and be accessible to our potential customers.

3 CONCLUSION
One of the key trends in the global economy over the past decades is its rapid digitalization. Digital transformations are changing the face and structure of the economy, breaking the business models, leading to the expansion of markets and opportunities, becoming the most important engine of world economic growth. In order to successfully adapt to transformations and reduce the technological gap with leading players, Uzbekistan needs to develop effective responses to the challenges of the digital age. In particular, the development of long-term scientifically based digitalization strategies is required, taking into account the need to ensure leading rates development in this direction, both at the state level and in the context of industries and enterprises of the republic. In this context, the advance rates of development should in no way imply a gradual “catch-up” introduction of the technologies of the previous generation. Such an approach will not only put the country and business in the position of always lagging behind, but also lead to significant risks, since players with fundamentally new business models can come to the market. For forward-looking development is important to identify trends in the field of digital technologies that most affect the shape and structure of the economy as a whole and individual sectors in particular, as well as determine which of them will make it possible to extract the greatest benefits in the next 5–10 years. The pace of building digital infrastructure is critical. In the world of the Internet of Things, everything must connect with each other quickly, safely and securely. In this regard, it is important to continue the implementation of measures to expand the coverage of the population by advanced technologies and their rapid deployment throughout the country. This will lead to an increase in the availability of the Internet, and will also give impetus to the development of entrepreneurship in the digital periphery. Equally important are measures to build the capacity of our own ICT industry, the implementation of which will reduce the critical dependence on imports and increase the export of digital technologies. According to the Decree of the President of the Republic of Uzbekistan dated June 30, 2017 No. UP-5099, today for this the necessary favorable conditions have been created in the country. The development of sectoral programs for the modernization of the country's industry based on “Industry 4.0” principles with the introduction of financial and non-financial mechanisms to stimulate demand from enterprises for technologies of this kind. It is important to motivate industrial enterprises to attract domestic suppliers, engineering companies and research centers to develop and implement these technologies. Through this approach, domestic demand will become the locomotive for the development of local technology companies. One of the key elements of public policy should be training and retraining. In this context, the adaptation of the educational system and infrastructure to the new requirements of the digital age will be required. In particular, first of all, it is necessary to introduce fundamentally new approaches to training and ensure a high level basic digital literacy of the population. Thus, the digital economy is a powerful catalyst for innovation, growth and social well-being, and its development in Uzbekistan is a requirement of the modern era. Deepening and expanding digitalization will increase the competitiveness of the domestic economy on the world stage, provide conditions for a gradual transition to the level of an innovative economy and a knowledge economy, as well as improve the quality and standard of living of the population.

4 LIST OF USED LITERATURE

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