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**АКТУАЛЬНЫЕ ПРОБЛЕМЫ ЭКОНОМИКИ
И УПРАВЛЕНИЯ НА ПРЕДПРИЯТИЯХ
МАШИНОСТРОЕНИЯ, НЕФТЯНОЙ
И ГАЗОВОЙ ПРОМЫШЛЕННОСТИ
В УСЛОВИЯХ ИННОВАЦИОННО-
ОРИЕНТИРОВАННОЙ ЭКОНОМИКИ**

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Представлены доклады секционных заседаний XI Международной научно-практической конференции «Актуальные проблемы экономики и управления на предприятиях машиностроения, нефтяной и газовой промышленности в условиях инновационно-ориентированной экономики». Рассматриваются проблемы экономики, менеджмента и маркетинга предприятий машиностроения, нефтяной и газовой промышленности, а также проблемы повышения конкурентоспособности с учетом специфики протекания инновационных процессов на микро-, мезо- и макроэкономическом уровнях. Кроме того, обсуждаются вопросы государственного и муниципального управления экономическими процессами, связанными с инновационной деятельностью предприятий, определяются меры по координации деятельности вузов и бизнес-структур.

Предназначены для студентов, аспирантов, специалистов в области управления экономикой предприятия и государственного управления.

Редакционная коллегия:

Е.Е. Жуланов, д-р. экон. наук, доцент, Российская Федерация
И.В. Елохова, д-р экон. наук, доцент, Российская Федерация
А.В. Молодчик, д-р экон. наук, профессор, Российская Федерация
Е.С. Лобова, канд. экон. наук, доцент, Российская Федерация
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Gábor Lux, Doctor of Economic Sciences, Research Fellow, Hungary.
Rudolf Pastor, Associate Professor, Doctor of Economic Sciences, Slovakia

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Malenkikh Denis Alexandrovich – Assistant, Tashkent Institute of Design, Construction and Maintenance of Automotive Roads, the Republic of Uzbekistan, e-mail: denis_777_84@mail.ru.

Sh.I. Bobokhujaev

Branch of Russian State University of Oil and Gas named after I.M. Gubkin in Tashkent, the Republic of Uzbekistan

**DIGITAL ECOSYSTEM FORMATION PATHS IN
POSTAL SERVICE OF UZBEKISTAN**

The main subdivision activity of postal communication of Uzbekistan in recent years has caused disturbance and concern of the government in connection with the deterioration of its main indicators. In the international sphere, the republic does not show high indicators either. In order to change the situation and reform the activities of Uzbekistan postal service, the country's leadership and the government have taken a number of decisive measures. However, to implement successful reforms, it is expedient to form a digital ecosystem in the national mail of Uzbekistan postal service of Uzbekistan.

Keywords: digital economy; postal communication; digitalization; "blockchain" technology; smart contracts; information infrastructure; digital ecosystem.

Today, the development trends of the world economy show a rapid growth and coverage of the digital economy segment in all spheres of society. Considering the existing trends, rapid measures are taken in Uzbekistan to develop the digital economy, including the field of postal communication. It should be noted that the activity of postal service of Uzbekistan is the most socially significant for the society due to the wide distribution and coverage of postal services of all social strata of society and maximum accessibility according to the proposed payment rates. As in any country, the postal service of the Republic has such an important advantage as a branched network of post offices in all corners of the country that provide postal and

related services. The strategic goal of the development of the national postal operator of Uzbekistan is to provide leading positions in the provision of postal services, the transformation of enterprise into a highly efficient and competitive company that implements world quality standards that is dynamically moving to profitable sectors of the economy. The achievement of this goal is largely determined by the level of provision of postal communication services, as well as applying new methods that will be used to improve the quality, expand the range of services provided, and digitize activities.

Today, the President of Uzbekistan, Sh.M. Mirziyoyev, paid special attention to the development and mass introduction of ICT in all spheres of society. This is facilitated by the adopted Integrated Program for the Development of the National Information and Communication System of the Republic of Uzbekistan, designed for 2013-2020. The development of ICT in Uzbekistan is characterized by several stages [1, p. 245]. Over the years of implementing, the Comprehensive Development Program of the National Information and Communication System, the industry's contribution to GDP has increased from 1.9 % to 2.2 %. The majority of the republic's indices in the UN rating on e-government were significantly improved (see Table).

The dynamics of changes in the UNO E-government rating
of the Republic of Uzbekistan [2]

Index	2008	2012	2016	2018	Change 2018/2008
E-Government Rank	109	91	80	81	+28
E-Government Index	0,40570	0,50991	0,54335	0,62070	+0,21500
E-Participation Index	0,09090	0,23680	0,67797	0,75840	+0,66750
Online Service Index	0,27424	0,49673	0,68841	0,79170	+0,51746
Human Capital Index	0,90882	0,82544	0,69535	0,73960	-0,16922
Telecommunication Infrastructure Index	0,03811	0,20748	0,24630	0,33070	+0,29259

The conducted analysis shows that over the past 7 years, total volume of services in the republic has increased almost 4.5 times and amounted to 47.3 % of GDP, and communication and information services have increased more than 3.8 times (see Fig. 1). The volume of production of services for 2017 made up 116795.7 billion soums and increased by 8.9 % [3]. In 2017, the volume of communication and information services comprised 7942.1 billion soums, which is 6.7 % of the total volume of services. The basis for increasing the volume of service production was the influence of a number of factors, such as the appearance of new types of services on the market, opening of new shopping centers, catering establishments, hotels, the expansion of educational services and the entertainment industry.

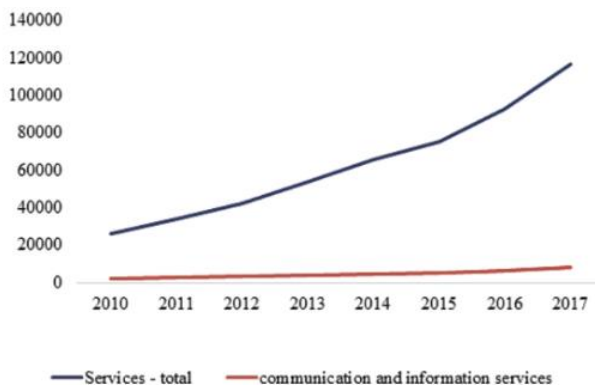


Fig. 1. The dynamics of changes in the volume of services provided for 2010–2017, in billion UZS [4]

At the same time, in 2010–2017, the share of communication and information services decreased to 6.8 %. In 2017, telecommunications services (wire line and mobile communications, Internet, satellite communication services, etc.) accounted for the largest share (87.3 %) in communication and information services. In the sphere of telecommunications services, the number of mobile subscribers and total number of Internet users has increased (see Fig. 2).

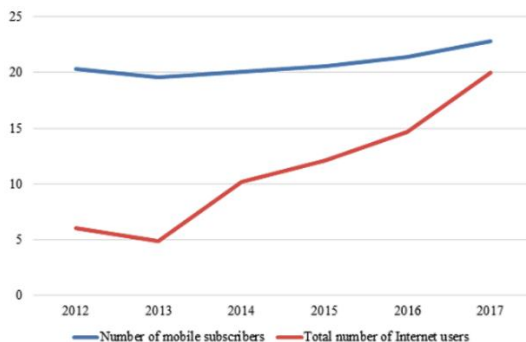


Fig. 2. Dynamics of growth in the number of Internet users and mobile subscribers in 2010–2017, mln [5]

Nevertheless, these actions do not bring the expected results.

The current situation in Uzbekistan is characterized by a rather intensive development of the information society and information and communication technologies. Uzbekistan is currently preparing to launch Digital CASA project approved by the World Bank and its implementation should start in 2019. At the national level, the goal of the program is to provide people with access to reliable and affordable Internet, attracting private investments in the ICT sector, and increasing the capacity of government to provide electronic public services to citizens and business [6].

To comply the postal services with modern requirements and consumer needs, as well as for digitalization, it is necessary to improve and modernize it regularly, to introduce new technologies and to create comfortable conditions for customers. Conducting scientific research in this area will allow studying and analyzing the current state of postal services in the republic and offering recommendations on improving and prospects for development, as well as using modern information and communication technologies and creating a digital ecosystem.

The investigation of international experience will enable to propose the creation of a qualitative, modern structure of rendering services and ways to optimize its provision in domestic and foreign

markets. The results of proposed scientific research can be used in the process of developing a program of priority directions of socio-economic development of postal service of the republic, improving the efficiency development of postal services in the republic, etc.

The use of country models of digitalization of postal communication in scientific research and conducting a comparative analysis of it makes it possible to single out its general features that are characteristic for all its national models:

- formation of a fundamentally new fifth technological order, based on the use of information and knowledge;
- creation of a global digital information environment;
- restructuring of employment in the direction of its remoteness;
- direct dependence of quality of life on the level of consumption of information resources;
- an aggravation of problem of ensuring information security.

In order to change the situation and reform the activities of Uzbekistan postal service, the country's leadership and the government took a number of decisive measures currently. Thus, on February 19, 2018, the President of the Republic of Uzbekistan signed a decree "On measures of further improvement of information technologies and communications sphere," which underlines the issues of development of the digital economy, as well as problems and issues of postal communication development in the country [7]. In particular, it was noted that effective measures on modernizing the postal services and logistics system, introducing new methods of work of the national postal service operator and enhance the prestige of its activity in the market have not taken. The decree also specifies the following directions of reforming the postal service of the republic:

- reforming the legal form of activity of JSC "O'zbekiston Pochtasi", as well as by attracting foreign consultants and studying best international experiences;

- provision of JSC "O'zbekiston Pochtasi" with the rights to render services as an agent of banking and insurance services, including reception and transfer of payments, servicing of bank cards, attraction of free monetary funds of the population, rendering services in voluntary and compulsory insurance and other services on outsourcing terms;

- development of network operators and couriers of postal communication;

- organization of offices for international exchange of postal items abroad.

Furthermore, on July 3, 2018, the President of the Republic of Uzbekistan signed a resolution "On measures for the development of digital economy in the Republic of Uzbekistan" [8], in which such important tasks of further development of the digital economy in the republic were noted:

- to take measures to develop the turnover of crypto-assets;

- to adopt measures for the development of "block chain" technology;

- to implement and develop smart contracts;

- to improve the training of personnel for the development and implementation of platforms;

- to take measures on developing cooperation with international and foreign organizations in the sphere of development and implementation of platforms, as well as for joint realization of projects.

Earlier, on June 4, 2018, there were significant changes in JSC "O'zbekiston Pochtasi", where the general meeting of shareholders decided to approve Yevgeniy Vladimirovich Birger as a chief director. An experienced professional, a bright representative of the Russian "Post of Russia", has consulted for several months, and afterwards accepted the invitation of the republic's leadership to be a head of postal communication of the republic. Getting started, E. V. Birger addressed to the postal workers of the republic, noting a number of

significant features that characterize his future steps directed at carrying out reforms in the national postal communication [9]:

- to be aware of depth of postal communication crisis in the republic;

- the necessity of ensuring an appropriate positioning of mail in the state and society;

- creation of an appropriate information infrastructure and preparation of national mail for the process of Internet and mail convergence and the creation of a single global multi-functional communication system;

- changing the legal form of postal service from the joint-stock company to another;

- formation of new legislation not only for postal communications, but also in telecommunications, electronic document management, public-private partnership and a number of other laws;

- creation of worthy working conditions for postal workers is one of the primary tasks;

Special importance is given to industry veterans and pensioners who have invaluable knowledge and experience. For a long period of time workers will rely on them as the most responsible and reliable workers; conditions for working pensioners will be created and those who have left will be invited on any terms.

It should also be noted that the Draft concept of postal development for 2019-2023 was announced. It contains innovative approaches of national mail transformation into a digital ecosystem. The project proposes a radical transformation of the Postal Service of Uzbekistan with the total use of ICT, for setting the ambitious goal of turning the Post of Uzbekistan into one of the advanced postal services. The implementation of this approach will create a powerful multiplicative effect in all areas by integrating national mail into the life of society and the state. Thus, the national mail will be transformed into a digital ecosystem soon (about 5-10 years).

The basis for creation and development of the concept of national mail reformation proposed by E. V. Birger into a digital ecosystem is likely to become a national mail cluster created as an independent unit on the basis of consolidation of leading enterprises within the framework of state regulation. Conceptually, the structure of the given ecosystem can be represented in several levels, interacting with each other according to developed and coordinated rules of developed concept [10, p. 24]:

1. The semantic core, in the role of which a specially organized (transformed) enterprise must act in the form of institution for development, support and dissemination of ecosystem.

2. The infrastructure of functioning of digital services is a technological component of the ecosystem (a development and support group, an operation group, a marketing group, a financial group, investors, developers, experts, specialists, etc.).

3. The user application and digital security services, including visual interfaces and market place applications, open tools for designers.

4. Personalized devices and facilities of Internet products and goods.

Proceeding from the above-stated theses of E.V. Birger and the presented structure of the digital ecosystem, there is a great probability of transformation of JSC "O'zbekiston Pochtasi" into an enterprise in the form of an institution for the development, support and spread of an ecosystem, whose legal form will not be JSC. In the role of cluster core, this enterprise will support and promote the organizations belonging to the cluster (project office, competence center, R & D center), branch enterprises, infrastructure institutions (digital transformation center and adaptation of products and services of digital market), consumers (access center to applications), development companies (a site for monitoring the quality and distribution of developments, a competence center and a business accelerator) and etc.

Earlier, the digital ecosystem formation was started by the post of Russia, which announced the creation of ecosystem for the development of e-commerce, a strategic partner of which is VTB Bank. Such well-known companies as "Amazon" and "Alibaba" can also be partners. It is planned to create the most extensive electronic trading system in Russia, on the basis of extensive network of branches which will be involved in similar foreign projects.

In accordance with Article 17 of the Universal Postal Convention, approved by the 25th Congress of the Universal Postal Union (Doha, 2012), the use of modern ICT, the development of electronic mail services are one of the priorities for the UPU members [11]. Based on this article, UPU member countries should agree on the provision of electronic mail services such as e-mail, registered e-mail, an e-mail stamp for certification and an e-mail box with each other. Such electronic postal systems are formed in a number of postal services in such European countries as Italy (Postal Registered electronic Mail), France (e-mail addresses "laposte.net", digiposte service), Germany (De-mail, state e-mail system, epost, e-mail system Deutsche Post), Estonia (Electronic mail center), Switzerland (Incemail), Sweden (ePostboxen) and Denmark (eboks) [12]. The unified electronic postal systems of these countries are based on the recommendations of Article 17 of the Universal Postal Convention. According to it, while registering in this system, the user (individual or legal person) receives a recognized (official) e-mail address, which in fact is an electronic post office box. Unified electronic mail systems provide electronic judicial significant document circulation, fixing the facts of sending and delivering electronic mail between users of electronic post office boxes, the invariability and safety of such postal items during their electronic transfer, storage of documents are in electronic form. In addition, the functionality of the systems allows the provision of additional services such as appeals to the authorities for obtaining various services, payment of utilities, electronic money transfers, etc. [13, p.17].

According to the above stated, the main task for postal communication of Uzbekistan in this direction is formation and development of a comprehensive mail service in electronic form through the creation of a single postal system that will provide legally significant electronic document interchange between state, local and physical authorities, and also legal entities.

Thus, for implementation of successful reforms in the national post of Uzbekistan, creation of a digital ecosystem and a single global multi-functional communication system, it is advisable to formulate a system of state regulation, to ensure the legitimacy of rendering digital services, to develop a system of state support measures for industry, to develop a methodology for formation and filling of the semantic core, to develop infrastructure of digital services functioning, create pilot digital services (as e-commerce of post of Russia) and ensure their testing and transfer of innovative solutions to industry enterprises, etc.

References

1. Bobokhujaev Sh.I., Otakuziyeva Z.M. Information economy: world tendencies and specifics of development in Uzbekistan // Innovative Economy and Social Infrastructure: a Collection of Scientific articles. – Tashkent: LESSON PRESS, 2015. – Part 2. – P. 241–249 (*in Russian*).

2. United Nations / UN E-Government Knowledge Database. Uzbekistan. – URL: <https://publicadministration.un.org/egovkb/en-us/Data-Center> (accessed 15 May 2019).

3. The web site of State committee of the Republic of Uzbekistan on statistics, 2018, The development of service industry, The statistics of services, January-December 2017 (preliminary data). – URL: [https://stat.uz/uploads/docs/%D0%A3%D1%81%D0%BB%D1%83%D0%B3%D0%B8%20%D0%B7%D0%B0%20%D1%8F%D0%BD%D0%B2%D0%B0%D1%80-%D0%B4%D0%B5%D0%BA%D0%B0%D0%B1%D1%80%D1%8C%202017%20%D0%B3%D0%BE%D0%B4%D0%B0%20%D1%80%D1%83%D1%81\).pdf](https://stat.uz/uploads/docs/%D0%A3%D1%81%D0%BB%D1%83%D0%B3%D0%B8%20%D0%B7%D0%B0%20%D1%8F%D0%BD%D0%B2%D0%B0%D1%80-%D0%B4%D0%B5%D0%BA%D0%B0%D0%B1%D1%80%D1%8C%202017%20%D0%B3%D0%BE%D0%B4%D0%B0%20%D1%80%D1%83%D1%81).pdf). (accessed 15 May 2019).

4. The web site of State committee of the Republic of Uzbekistan on statistics, 2018, Services of the main types of economic activity in (2010–2016). – URL: <https://stat.uz/ru/ofitsialnaya-statistika/sferauslug/uslugi/2453-uslugi-po-osnovnym-vidam-ekonomicheskoy-deyatelnosti-v-2010-2016-godu>. (accessed 15 May 2019).

5. The web site of the Ministry for the Development of Information Technologies and Communications The Republic of Uzbekistan, 2018, “The number of mobile subscribers and the total number of Internet users”, (2012–2017). – URL: <http://mitc.uz/ru/stat/4>, <http://mitc.uz/ru/stat/7> (*in Russian*).

6. The World Bank is preparing to launch a project to develop the digital economy in Uzbekistan // Web site: Uzdaily.uz. – URL: <https://news.mail.ru/economics/34167657/?frommail=1> (accessed 15 May 2019).

7. Decree No PD-5349 from February 19, 2018, National Legislation Database, 20.02.2018, № 06/18/5349/0792. The site of the Center for Legal Informatization under the Ministry of Justice of the Republic of Uzbekistan. – URL: <http://www.lex.uz/docs/3564975> (accessed 15 May 2019).

8. The site of the Center for Legal Informatization under the Ministry of Justice of the Republic of Uzbekistan: Resolution No 3832 from July 3, 2018. – URL: <http://www.lex.uz/ru/pdfs/3806048> (accessed 15 May 2019).

9. Birger E. It is necessary to ensure the appropriate positioning of mail in the state and society // Infocom.uz. Monthly information and analytical magazine. – No 5 (197). – P. 20–21. – URL: <http://infocom.uz/2018/06/08/evgenij-birger-neobxodimo-obespechit-pravilnoe-pozicionirovanie-pochty-uzbekistana/> (accessed 15 May 2019).

10. Digital economy: conceptual architecture of ecosystem of digital field / Y.M. Akatkin, O.A. Karov, V.A. Konyavskiy, Y.D. Yasinovskaya. – Moscow: Business-informatics, 2017. – No 4 (42). – P. 17–27.

11. Decisions of the 25th Doha Congress, 2012, Final texts of the Doha Acts and decisions that do not change the Acts / International Bureau of the Universal Postal Union. – Bern, 2013. – URL:

[http://minsvyaz.ru/uploaded/files/Resheniya %2025 %20Kongressa %20VPS.pdf](http://minsvyaz.ru/uploaded/files/Resheniya_%2025_%20Kongressa_%20VPS.pdf) (accessed 15 May 2019).

12. The concept of the development of postal communication in the Russian Federation for the period until 2020. The main directions of development of electronic technologies in the field of postal communication // The site of the Ministry of Digital Development, Communications and Mass Communications of the Russian Federation. – P. 23–25. – URL: <http://minsvyaz.ru/ru/documents/4551/> (accessed 15 May 2019).

13. Bobokhujayev Sh.I., Otakuziyeva Z.M. Current state postal service of Uzbekistan and the role of the digital economy in the forthcoming reforms // Polish Science Journal. – 2018. – P. 10–18 (*in Russian*).

About the author

Bobokhujayev Shukhrat Ismoilovich – Associate Professor, Department of Oil and Gas Economics, Head of the Research Activity of Gifted Students, Branch of Russian State University of Oil and Gas named after I.M. Gubkin in Tashkent, Republic of Uzbekistan, e-mail: bobshuh@rambler.ru.

Д.Х. Вахабова

Институт прогнозирования и макроэкономических исследований при Министерстве экономики,
г. Ташкент, Республика Узбекистан

ТЕНДЕНЦИИ РАЗВИТИЯ НАУКИ И СИСТЕМЫ ВЫСШЕГО ОБРАЗОВАНИЯ

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Адрес: 614990, г. Пермь, Комсомольский проспект, 29, к. 113.

Тел. (342) 219-80-33.