

УДК 334.02

JEL-codes: O 32, O 33, O 38

## Information Processes for the Formation of a Digital State in the Republic of Tajikistan

**Chiniev Jami Badriddinovich**

Ph.D. of Economics, economist,

The international monetary fund, National Bank of Tajikistan,

107A, Rudaki Avenue, 734003 Dushanbe, Tajikistan

JChiniev@imf.org

**Abstract.** The article presents the author's analysis of the process of forming elements of a digital state in the Republic of Tajikistan. The necessity of this process, its stages, and current state are grounded. The author identifies the main problems hampering the formation of a digital state in Tajikistan, the most important of which is the insufficient qualification of personnel. The author proposes a set of measures to improve the situation, among which is the intensification of cooperation with the EAEU countries in the process of formation of a digital state in Tajikistan based on common standards and requirements.

**Keywords:** Republic of Tajikistan, digital state, digital economy, digital government.

DOI: 10.31432/1994-2443-2019-14-3-4-19-25

**Цитирование публикации:** Чиниев Д. Б. Информационные процессы формирования цифрового государства в Республике Таджикистан // Информация и инновации. 2019. Т. 14, № 3-4. С. 19–25. DOI: 10.31432/1994-2443-2019-14-3-4-19-25.

**Citation:** Chiniev J.B. Information processes for the formation of a digital state in the Republic of Tajikistan // Information and Innovations 2019. T. 14, № 3-4. pp. 19-25. DOI: 10.31432/1994-2443-2019-14-3-4-19-25.

### Introduction

One of the most important tasks of the Republic of Tajikistan remains the formation of a digital state, which will strengthen the country's independence and economic se-

## Информационные процессы формирования цифрового государства в Республике Таджикистан

**Чиниев Джами Бадридинович**

кандидат экономических наук, экономист,

Международный валютный фонд,

Национальный Банк Таджикистана,

проспект Рудаки, 107А, 734003, Душанбе,

Таджикистан

**Аннотация.** В статье представлен авторский анализ процесса формирования элементов цифрового государства в Республике Таджикистан. Обоснована необходимость этого процесса, его этапы и современное состояние. Автором выделены основные проблемы, затрудняющие формирование цифрового государства в Таджикистане, из которых важнейшая – недостаточно высокая квалификация кадров. Автором предлагается комплекс мер по улучшению ситуации, среди которых – активизация сотрудничества со странами ЕАЭС в процессе формирования цифрового государства в Таджикистане на основе единых стандартов и требований.

**Ключевые слова:** Республика Таджикистан, цифровое государство, цифровая экономика, цифровое правительство.

curity, as well as ensure long-term sustainable socio-economic growth and progress. The digital state is an effective state of the future, in which technologies play a fundamental role. Many countries around the

world, including the Russian Federation (Strategy 2016), have come to the need for a digital State and appropriate development strategies.

The understanding of the importance of the formation of a digital (information) state in the Republic of Tajikistan has developed long ago, both at the governmental level, in the business environment and the society as a whole. However, to date, the scientific community of the Republic of Tajikistan has not paid due attention to fundamental research on these processes.

### Methodology

The article analyzes the main documents of the Republic of Tajikistan, which to some extent provide for the formation of a digital (information, electronic) state. The article aims to show the state and prospects of the formation of a digital state in Tajikistan, as well as the problems and ways to solve them.

### Results

Digitalization or the process of introducing digital technologies is characterized by the introduction of breakthrough information and communications technologies (ICTs) that involve new forms of interaction, provision of services, and consumption (Ahmad, Schreyer, 2016). Accordingly, the digital economy is how traditional forms of business and production relations, forms of interaction between the public and enterprises with the state are systematically and consistently converted into digital form (Melanyina, 2019).

This model is increasingly being used by many, including developing countries, and all those who have achieved success in social and economic development by forming a digital state (Rusakovich, 2018). According to the experts, it is based on several components – ‘digital government’, ‘smart city’, ‘smart transport’, etc. All of them, to some extent, should be represented in the national economy, and the

countries of the world are actively investing in the creation of appropriate infrastructure.

At present, the effective introduction of information and communication technologies in developing countries has become a key factor in their development. Therefore, the serious challenges facing the Republic of Tajikistan (Program 2016-2020) and the strategic goals of the state development, including ensuring economic security, sustainable GDP growth, growth of external (electronic) trade (Turdibekov, 2018), reducing inflation, increasing state budget revenues and implementing the investment program in 2020-2022, and in the longer term – require the Republic of Tajikistan to form a digital state.

This is especially important due to the current macroeconomic situation in the country (Table 1). As can be seen from the analysis of the presented data, the Republic of Tajikistan has quite a high GDP growth rates (significantly above the world average), but per capita income remains extremely low (\$827 in 2018) with a steady population growth, and the country is among the least developed countries according to the classification of international organizations. Both the reduction of inflation, which remains one of the country's most important tasks (Economy of Tajikistan 2020) and the growth of trade turnover (although mainly due to an increase in the value of imports) can be considered positive points. There is also an increase in the volume of foreign direct investment (FDI), although this process is not sustainable. Remittances from emigrants serve as certain support for the population, and as for capital transfers, the situation leaves much to be desired, yet the very fact of their appearance gives rise to optimism.

One of the problems of the economy of the Republic of Tajikistan remains a high degree of dependence on external – regional and global factors. At the same time, protection-

ism and wars of sanctions have increased significantly in modern world trade alongside a weakening of the role of WTO, which hurts the entire global trade system. That is why new opportunities to strengthen economic security and ensure the sustainability of social and

economic dynamics are so important for the country, and as the world practice shows it is to a large extent the digitalization and formation of the foundations of a digital state that can ensure this.

Table 1

### Dynamics of main macroeconomic indicators of the Republic of Tajikistan in 2009-2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP, current prices at the current exchange rate, million US dollars.	4 979	5 642	6 523	7 633	8 506	9 237	7 855	6 953	7 146	7 530
Average annual GDP growth rate, %	4.02	6.54	2.41	7.55	7.43	6.69	5.97	6.95	7.08	7.8
GDP per capita, US dollars	676	750	847	969	1 055	1 119	929	803	805	827
Average annual per capita growth rate income, %	1.84	4.23	0.15	5.12	4.96	4.19	3.45	4.36	4.47	4.50
Population, thousand pers.	7 365	7 527	7 698	7 875	8 060	8 253	8 454	8 664	8 880	9 101
Average annual population growth rate, %	2.12	2.18	2.23	2.28	2.32	2.37	2.41	2.45	2.47	2.45
Inflation, average annual growth rate, %	6.45	6.42	12.43	5.83	5.01	6.10	5.71	6.00	7.31	3.85
Exports, current prices at the current exchange rate, million US dollars	1 010	1 195	1 257	1 360	1 162	977	891	899	1 198	1 160
Imports, current prices at the current exchange rate, million US dollars.	2 570	2 657	3 206	3 778	4 151	4 297	3 436	3 031	2 775	3 150
FDI inflow, million US dollars	131	155	209	255	215	432	559	344	270	317
FDI outflow, million US dollars	..	..	..	..	..	..	..	35	159	57
Remittances from migrants	..	2 021	2 722	3 222	3 698	3 384	2 259	1 867	2 237	2 275
Capital Transfer	39	120	69	50	72	133	124	144	161	123

Source: based on UNCTADSTAT data.

The President of the Republic of Tajikistan, His Excellency Emomali Rahmon, in his Address to the Majlisi Oli of the Republic of Tajikistan (20 April 2012) noted that the use of information and communication technologies

in various spheres of public life is an important requirement of our time (Presidential Address, 2012).

Therefore, using the world experience in the field of training of highly qualified person-

nel, development of necessary information infrastructure, formation of digital platforms, it is necessary in the Republic of Tajikistan, step by step, both to create technical and technological basis of a digital state and to raise the level of knowledge and skills of civil servants, law enforcement agencies, investors and entrepreneurs in the field of implementation of e-government and targeted use of modern technologies.

The first step towards the formation of a digital state is the widespread introduction of information and communication technologies (ICT) in the country and the creation of an efficient and effective e-government system.

The First State Program for Development and Implementation of Information and Communication Technologies in the Republic of Tajikistan for 2014-2017 was adopted in 2014 (Decree, 2014), which was a continuation of the work within the implementation of the Decree of the President of the Republic of Tajikistan dated November 5, 2003, № 1174 'On State Strategy for Information and Communication Technologies for Development of the Republic of Tajikistan'.

To improve the level of technical education in various segments and structures of the society and to introduce information and communication technologies into the national economy of the Republic of Tajikistan, the Government of the Republic of Tajikistan adopted Decision No. 643 of December 30, 2011, on the 'Concept of e-government formation in the Republic of Tajikistan'. (Decree 20211). The first meeting of the Working Group on Management and Technical Work with the participation of the representatives of the Executive Office of the President of the Republic of Tajikistan and relevant ministries and agencies was held on February 21 in Dushanbe (Tajikistan is implementing... 2019).

Implementation of the Concept provides an opportunity to provide a wide range of public

services in electronic form promptly – both to citizens and business, as well as to eliminate such negative phenomena as bureaucracy and corruption in the society.

The Concept defines 3 stages of e-government implementation:

**The first phase is 2012-2013** – envisaged the formation of a unified computer and Internet network and connecting to it the ministries and departments, executive bodies of government, enterprises, and institutions of all cities and districts based on sectoral and institutional programs in the field of information and communication technologies development. All public and private structures (business entities) are required to maintain their websites, which reflect the daily processes of their activities, thus becoming transparent. The formation of such a network is a key part of the e-government system in Tajikistan. At the same time, the electronic system has standard departmental technological solutions to support and provide public services, and access to information about the activities of government agencies, secure document circulation, and certain necessary sections.

However, such a system in the Republic of Tajikistan is not yet fully operational in some regions.

**The second phase (2013-2015)** was generally implemented:

- improving the legal, administrative and technical status of e-government;
- developing bilateral and multilateral communication mechanisms to introduce unified electronic documentation;
- widening the departmental and interdepartmental sources of information;
- bridging the digital divide in the country;
- creating interdepartmental electronic systems in local government structures.

**The final stage (2015-2020)** provides for the development of e-government, automation of the process of providing public ser-

VICES to the general public, institutions, and businesses, as well as the receipt of services of the public authorities for the public needs.

Introduction of e-government information system and ensuring information security of this system has some organizational, economic, legislative, legal, technological and personnel problems, which need to be addressed through a systematic and integrated approach.

Today, Tajikistan can identify the following problems that hinder the development of the digital economy:

- lack of appropriate professional staff, inappropriate education and/or low level of expertise at the local level. At the same time, as the world experience shows, it is the quality of human capital and its professionalism that can ensure the success of a digital state and digital economy as a whole.;

- lack of forecasting tools in cities and districts for effective implementation of e-government;

- negligence or irresponsibility of the industry officials;

- inadequate installation and application of modern technologies;

- misallocation of funds;

- low level of the Internet providers' services;

- lack of control and specific requirements, as well as lack of algorithmization by the authorities.

It should be noted that in the following Address of the President of the Republic of Tajikistan His Excellency Emomali Rahmon Majlisi Oli on 26 December 2019 it was stressed that "further attention is paid to the qualitative aspects of the development of the national economy. The main attention should be paid to innovations, increasing production of final products, increasing economic activity of the people, improving the system of business and investment support and expanding the digital

economy" (Presidential Address, 2019).

We have developed the following suggestions the implementation of which seems to ensure targeted implementation of e-government and the transition to the digital economy:

1. Ensuring information security and compliance of governmental and other official websites with the established requirements (technical and information) by establishing a special structure (e.g. a specialized agency) to assist economic entities and government agencies in creating, maintaining, and operating both websites and servers, as well as programming, etc., and which could also promptly review incoming documents and control materials.

2. Applying the confidentiality of Tajnet, Babilon, Esther, Tarena and other companies' programmers, especially that of a super administrator, administrator, moderator, and technical specialist, to ensure the security of government websites in most cities and regions.

3. Organizing training courses, seminars, and round tables, thus promoting 'e-government', 'smart cities', etc. to inform the public and businesses about the possibilities of a 'digital state' and to improve the professional knowledge of specialists in the realm of the digital economy.

4. Creating financial opportunities (provide for allocations from local budgets) to support the work of local authorities' infrastructure using modern technologies, i.e. particular servers and new computers (experience of cities and districts of Soughd region).

5. Authorities' monitoring of e-government spending and the effectiveness of its activities.

6. Responsible authorities should develop and approve a unified form of official websites taking into account the national strategic goals of the country (to recommend the website of the Executive Body of State Authority

of the city of Dushanbe ('Hushmand') as an example for other cities and regions of the country).

7. Creating a single Internet portal for authorities and their subordinate bodies (by industry or sector) to inform on the state of the national industries and news of the day.

As for the implementation of digital economy and a digital state, the digital promotion mechanisms which provide for the formation and monitoring of indicators to improve the situation of the country, broadband and mobile Internet access, the growth of international traffic, the number of enterprises connected to the unified state digital system – there are also still many problems both of technical and qualification nature.

## Conclusions

Due to the existing problems, it can be concluded that the implementation of 'e-government' is far from being fully consistent with the stages of implementation of the approved Concept, which requires more serious attention from those responsible for its implementation and formation of the foundations of the digital state.

The task of increasing the number of users of digital services, improving the quality of services provided in digital form, and creating new jobs in the digital sector is being updated. The main basis for the development and formation of a digital state in the future should be defined too.

Closer cooperation with the EAEU countries in forming the foundations of a digital state in the Republic of Tajikistan, including the organization of professional development of those working in this area, is also relevant.

At the same time, it appears that there are opportunities to implement digital state programs in the country, which, of course, requires consistent and significant efforts. However, the digital state is not a 'hottest new

trend', but a vital necessity for the country. And as the Oriental wisdom says, 'keep putting one foot in front of the other...'

## REFERENCES

1. Strategy for the development of the information society in the Russian Federation for 2017-2030. (In Russian) URL: [http://d-russia.ru/wp-content/uploads/2016/12/2016-strategia\\_IO\\_proekt\\_dec.pdf](http://d-russia.ru/wp-content/uploads/2016/12/2016-strategia_IO_proekt_dec.pdf)
2. Ahmad N., Schreyer P. (2016) Is GDP Still Measured Correctly in an Era of Digitalization? // *Statistical issues*. No 8. Pp. 15-26.
3. Melanyina M.V. (2019) Digitalization of the world economy: stages, rates, prospects // *Economics and management: problems, solutions*. Vol. 11. No. 2. Pp. 141-147. (In Russian)
4. Rusakovich V. I. (2018) Oman: structural transformations and economic growth // *Asia and Africa today*. No. 3 (728). Pp. 48-55. (In Russian).
5. Turdibekov B.A. (2018) The modern state of the formation of the digital economy in the Republic of Tajikistan // *The Eurasian Scientific Journal*, Vol. 10, No 1, (10). Pp. 32-37. (In Russian).
6. Navigant Research. Smart Cities; Intelligent Information and Communications Technology Infrastructure in the Government, Buildings, Transport, and Utility Domains (research report) Retrieved 9 February 2012. URL: <http://www.navigantresearch.com/research/smart-cities>
7. Medium-term development program of the Republic of Tajikistan for 2016-2020 (in Russian). URL: [https://nbt.tj/files/program/programm\\_ru.pdf](https://nbt.tj/files/program/programm_ru.pdf)
8. Экономика Таджикистана 2020 [Economy Of Tajikistan 2020 (In Russian)] URL: <https://tj.sputniknews.ru/infographics/20200116/1030554741/Ekonomika-Tajikistan-osnovnye-pokazateli-2020-god.html>
9. Resolution Of the government of the Republic of Tajikistan dated July 3, 2014 "On the

state program for the development and implementation of information and communication technologies in the Republic of Tajikistan for 2014-2017» (In Russian) URL: [https://base.spinform.ru/show\\_doc.fwx?rgn=69380](https://base.spinform.ru/show_doc.fwx?rgn=69380)

10. Resolution of the government of the Republic of Tajikistan No. 642 of December 30, 2019 “on approval of the Digital economic justification of the Republic of Tajikistan”. (In Russian).

11. Decree of the President of the Republic of Tajikistan No. 1174 of November 5, 2003 «On the State strategy in the field of information and communication technologies for the development of the Republic of Tajikistan». (In Tajik).

12. Decree of the President of the Republic of Tajikistan No. 1713 of March 15, 2006 «On the strategy for reforming the public admin-

istration system of the Republic of Tajikistan». (In Tajik).

13. Annual address of the President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan on December 26, 2019. (In Tajik). URL: <https://nbt.tj/tj/news/492815/>

14. Annual address of the President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan on April 20, 2012. (In Tajik). URL: <http://www.mmk.tj/president/letter/2012>

15. The concept of the digital economy is being introduced in Tajikistan (In Russian). URL: <https://e-cis.info/news/567/74469/>

16. UNCTADSTAT. URL: <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx>

