

Vestnik MIRBIS. 2020; 3(23)':122–126.

Вестник МИРБИС. 2020. № 3 (23)'. С. 122–126.

Original article

УДК 339.97

doi: 10.25634/MIRBIS.2020.3.13

Features and prospects of digital transformation of Cuba: services and the real sector of the economy

Vladimir F. Ukolov^{1,2}, Gozel D. Chariyarova^{1,3}, Perez Dieter Castello^{1,4}, Etse Dadson Gomado^{1,5}

1 Peoples' Friendship University of Russia (RUDN University), Moscow, Russia.

2 Ukolovdom@mail.ru, <https://orcid.org/0000-0002-1233-7562>

3 ms.chariyarova@mail.ru

4 dietercp79@gmail.com

5 dadfrango@mail.ru, <https://orcid.org/0000-0002-6261-9728>

Abstract. The process of digitalization of the economy and society is inherent in economic development. Most of the countries of the world community and their governments are interested in the need for an increasingly widespread provision of digital services that contribute to the improvement of social, cultural and economic processes, as well as in the use of digital technologies adaptation of the real sector of the economy to the conditions of digitalization, which provides a combination of the integrity and flexibility of the production system, an increase in the technological level of production, also increase in labor productivity and the competitiveness of intensive science corporations. In this article, we will focus on the digitalization processes taking place in the Republic of Cuba. Based on statistical data, we come to interesting conclusions that will determine the course of digitalization in the coming years in the Republic of Cuba. This is done so that you can take useful experience and use it in other countries, taking into account the specifics of their development, or offer the Republic of Cuba. its innovations in the development of digital transformation and the use of digital management technologies.

Key words: digitalization, digital culture, real economy, digital services, digital economy.

For citation: Ukolov V. F. Features and prospects of digital transformation of Cuba: services and the real sector of the economy. V. F. Ukolov [et al.]. *Vestnik MIRBIS*. 2020; 3(23)': 122–126. doi: 10.25634/MIRBIS.2020.3.13

JEL: O14; O33; O55

Научная статья

Особенности и перспективы цифровой трансформации Кубы: услуги и реальный сектор экономики

Владимир Федорович Уколов^{6,7}, Гозель Джумамухамедовна Чарыярова^{1,8}, Перес Дитер Кабель^{1,9},
Этсе Дадсон Гомадо^{1,10}

6 Российский университет дружбы народов (РУДН), Москва, Россия.

7 Ukolovdom@mail.ru, <https://orcid.org/0000-0002-1233-7562>

8 ms.chariyarova@mail.ru

9 dietercp79@gmail.com

10 dadfrango@mail.ru, <https://orcid.org/0000-0002-6261-9728>

Аннотация. Процессу цифровизация экономики и общества присуще экономическое развитие. Большинство стран мирового сообщества и их правительства заинтересованы в необходимости все более широкого предоставления цифровых услуг, способствующих улучшению социальных, культурных и экономических процессов а также в использовании цифровых технологий адаптация реального сектора экономики к условиям цифровизации, обеспечивающей сочетание целостности и гибкости производственной системы, повышение технологического уровня производства, рост производительности труда и конкурентоспособности наукоемких корпораций. В этой статье мы сосредоточимся на процессах цифровизации, осуществляемом в Республике Куба.

Основываясь на статистических данных, мы приходим к интересным выводам, которые определяют ход цифровизации в ближайшие годы в Республике Куба. Это делается для того, чтобы можно было взять полезный

опыт и использовать его в других странах, с учетом специфики их развития, либо предложить Республике Куба свои инновации в развитии цифровой трансформации и использовании цифровых технологий управления.

Ключевые слова: цифровизация, цифровая культура, реальный сектор экономики, цифровые услуги, цифровая экономика.

Для цитирования: Уколов В. Ф. Особенности и перспективы цифровой трансформации Кубы: услуги и реальный сектор экономики / В. Ф. Уколов [и др.] // Вестник МИРБИС, 2020. № 3 (23). С. 122–126. doi: 10.25634/MIRBIS.2020.3.13

JEL: O14; O33; O55

Introduction

Cuba is the most largest island in the Caribbean, with a population of about 11 and a half million people. It covers an area of 110 thousand square kilometers. In the South, Cuba is washed by the Caribbean Sea, in the South-West-The Yucatan Strait, and in the North-the Florida Strait. The minimum distance from the coast of the USA of Florida to Cuba is only 180 kilometers, which is one of the important features taken into account in the development.

In 2020, GDP in Cuba was 100 billion USD, with a growth rate of more than two percent.

In the United Nations ranking on the e-government development index, Cuba ranks in 134th places. The index is 0.4, although its maximum is equal to one¹².

The initiative to start Cuba's digital transformation comes from the State. The branches of the national economy, business and the population of the country are interested in holding it. Our government has taken all the decisions and documents necessary to start the transformation and organize systematic work on its implementation [Cuba presents advances., 2019].

Cuba has been implementing projects to digitize industry, society and the state for several years. We started with updating and activating the intellectual capital of the population. In the year 2002, a unique University of Computer Science was founded in Cuba, a kind of "pioneer" in Latin America, which became a link between technological development, training, and the staff of which was the export of innovative projects for the production sector. The University has produced thousands of students in computer science and telecommunications, many of whom have become participants in the country's digitalization projects. Forums of entrepreneurs and information technology leaders are held to exchange

information and discuss digital opportunities. They discuss a wide range of issues, from the digital transformation of medicine, the participation of Cuban companies in export activities, innovative projects for the development of hospital digital medical documents of people, to the creation of new versions of platforms for transmobile e-Commerce, on the basis of which payments are made for the provision of electricity, gas and telephony, money transactions are made, Bank transfers are made and mobile line accounts are replenished. The solution of such problems in Cuba is facilitated by a 4G system that works with an excellent service with high data transfer speeds for all users, including consumers of home Internet services¹³.

The question often arises: how can the process of digitalization contribute to the development and improvement of the quality of life of Cuban society?

The answer is this. For the impact to be felt, digitalization must be made a working tool of government, business and society, penetrating into the daily life of the country and constantly demonstrating its usefulness in various fields. Here are some of the tasks and plans for the future in this direction facing the Ministry of Communications of Cuba. First of all, it is the development of the culture of the people, with the preservation of its inherent value orientations; changing the psychology and ways of thinking of people, but to such an extent that the human qualities that distinguish people from robots and other machines based on artificial intelligence are not destroyed; creating new information and communication technologies; providing public services and creating a digital government; introducing e-Commerce in large wholesale companies; using cybersecurity tools in

© Ukolov V. F., Castello P. D., Chariyarova G. D., Gomado E. D., 2020

12 Economy in Cuba from: https://en.wikipedia.org/wiki/Economy_of_Cuba

13 La television Cubana es un milagro. *Televisión Cubana* : [website]. URL: <http://www.tvcubana.icrt.cu/seccion-informaciones/1355-continua-el-proceso-de-digitalizacion-de-la-tv-en-cuba>. Publication date: 07 Septiembre 2020.

the country to protect its interests¹.

By the way, there is already much to ensure that the impact of digitalization is felt in society. For example, The transfermovil digital national payment system is already used by more than 680,000 people who make more than 11 million transactions per

1 Cuba presenta avances en tecnologías de la digitalización. *Radioreloj*.cu: [website]. URL: <http://www.radioreloj.cu/noticias-radio-reloj/nacionales/cuba-presenta-avances-en-tecnologias-de-la-digitalizacion/>. Publication date: 25 septiembre, 2019

month. In addition, according to data provided by ETECSA, a unique national telephone company, there are currently more than 300,000 mobile phone users in Cuba. EZona, a Cuban online payment platform, is also working, which helps the population to make financial transactions and conduct digital business. This is a useful and easy-to-use tool that allows you to send money online without visiting institutions that accept payments for services, Bank transfers or virtual purchases, saving time [Fernandes, 2016].



Fig.1. Digital Cuba 2019²

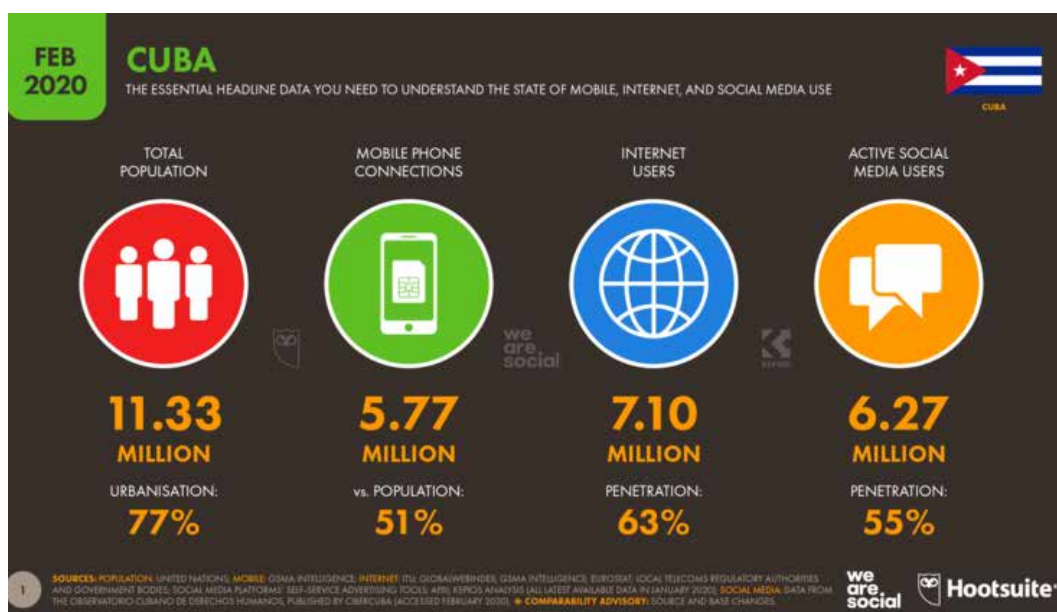


Fig.2 Digital Cuba 2020³

2 Digital Cuba from: <https://datareportal.com/digital-in-cuba>

3 Ibid.

Along with this, conditions are being created for the launch of a fifth-generation mobile telephony network (5G), a strategy is being implemented for the use of blockchain, cryptocurrency technologies and banking applications that provide financial information to users' mobile devices. The tasks of digitalization of education in e-Commerce technologies in accordance with the policy of assistance to the government of our country are being solved. In the future, it is planned to expand electronic payments to the accounts of the Central budget of the state, including tax obligations of both legal entities and individuals; establishing electronic document formats that underpin e-Commerce activities, including contracts and invoices. It is also planned to start e-Commerce in wholesale companies with a large volume of sales [Gavric, 2019].

We will add some specific references on the main areas of digitalization in Cuba

Digitization

Now public archives in Cuba have been digitized – this is one of the fundamental steps that determines the development of e-Commerce, e-government and other areas of the country's transformation. The Central register of sanctioned persons and the Register of wills and declarations of heirs have been digitized. Reports from various ministries and departments and other organizations are digitized.

E-government

In Cuba, the e-government system is being developed, the infrastructure is being improved and the list of services provided is being expanded. Currently, portals for citizens operate not only in the capital, but also in the provinces.

The Ministry of Communications has identified four stages of implementing e government development:

- extension of information on the government website of departments and the government with useful information for the population.
- interaction of government, business and society;
- transformation, which includes people's participation in the construction of public policy and in the management of administration and government.

Currently, more than 830 data transmission channels are used in the structures of the National Assembly of People's Power at the level of higher and local government bodies. This contributes to the interconnectedness of institutions and optimizes

public administration. In addition, almost all government agencies have their own websites on the Internet. In addition, more than 700 data transmission channels in institutions are associated with the creation of public registers.

In the strategic perspective, the electronic platform of Cuba has 70 thousand visits per month and 270 thousand searches from your national search engine. There are also: a collective poster of La Papeleta, with hundreds of thousands of visits; a backpack-a product with 400 GB of digital content; an application center for the Android operating system with three million downloads; a portal of video games Ludox-which has more than 67 thousand downloads; a platform for collective messaging, exceeding 600 thousand subscribers [Future of e-commerce., 2016].

Cybersecurity

Cuba has developed a system for the protection of national cyberspace and has made some progress in using it as an effective tool for digital management in the field of cybersecurity.

Infrastructure

The digital infrastructure related to telecommunications and Internet connection has been significantly improved, resulting in the launch of an Internet service for mobile data transmission for the population. More than 5 million users access the Internet service through various channels, 60% of which are from training and work centers [Brooklyn, 2020].

The driving force of the digital transformation.

The driving force behind the promotion of digitalization and the use of new technologies in Cuba is cooperation with all developed countries in the field of digitalization and digital management. This process involves representatives of the government, ministries and departments, as well as society, which will eventually be the main consumers of electronic services [Del Toro, 2017].

Conclusions

Cuba is making progress in digitalizing the state through its own resources and using opportunities to attract foreign direct investment. In the future, Cuba will have to improve the national innovation system of the state as a whole, with the emphasis on the development of such innovations as digitalization of the country in accordance with the available opportunities. All the given values of indicators, and the examples presented to a certain extent, characterize our achievements in the field of

digitalization, which you can compare with your own development and draw useful conclusions.

As part of the process of digitalization of Cuban society, an unprecedented project has emerged: the assembly of latest-generation laptops and tablets in Havana [ibid].

Despite all of the obstacles, which have not succeeded in isolating the country, the infrastructure, as well as the legal and institutional framework, needed to defend the country and guarantee the viable development of the digitalization of Cuban society has been created. At the same time, international cooperation in this arena is being sought. Cuba is advancing in the secure digitalization of its society, without haste, but without pause, conscious that the era of the Internet and new technology

must be one of learning, development, inclusion and must also secure, to guarantee the invulnerability of the Revolution, the defense of our culture, and the sustainable socialism our people are constructing¹.

Conflict of interests

The authors confirm that the submitted materials do not contain any conflicts of interest.

Acknowledgments

The research was carried out with the support of the Russian Foundation for Basic Research within the framework of scientific project No. 20-010-00137. The work was prepared with the assistance of the Peoples' Friendship University of Russia.

¹ The digitalization of society, a priority for Cuba. Granma : [website]. URL: <http://www.granma.cu/idiomas/ingles/cuba-i/15diciembre-editorial.html>. Publication date: 12/15/2014.

References

1. Brooklyn, 2020 – Brooklyn C. Cuba is getting a crash course in internet culture – and it's changing everything. *Digitaltrends* : [website]. URL: <https://www.digitaltrends.com/features/cuba-internet-connectivity-digital-culture/>. Publication date: 08/10/2020.
2. Cuba presents advances., 2019 – Cuba presents advances in digitalization technologies. *Radio Grito de Baire* : [website]. URL: <http://www.radiogritodebaire.cu/English/cuba/cuba-presents-advances-in-digitalization-technologies/>. Publication date: 09/25/2019.
3. Fernandes, 2016 – Fernandes S. In Cuba, Will the Revolution Be Digitized? *The Nation* : [website]. URL: <https://www.thenation.com/article/archive/in-cuba-will-the-revolution-be-digitized/>. Publication date: 03/18/2016.
4. Future of e-commerce., 2016 – Future of e-commerce in Cuba and prospects of digitization. *Norbert Biedrzycki* : [website]. URL: <https://norbertbiedrzycki.pl/en/future-of-e-commerce-in-cuba-and-prospects-of-digitization/>. Publication date: 07/05/2016.
5. Gavric, 2019 – Gavric D. Digital Technology and Communications in Today's Cuba. *Electronic Thesis and Dissertation Repository*. URL: <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=8911&context=etd>. Publication date: 09/18/2019.
6. Del Toro, 2017 – Del Toro D. G. A step forward in Cuba technology. Danae González Del Toro. *Granma* : [website]. URL: <http://en.granma.cu/cuba/2017-02-20/a-step-forward-in-cuban-technology>. Publication date: 02/20/2017.

Information about the authors:

Ukolov Vladimir F., Doctor of Economics, Professor, Head of the Department of Digital Enterprise Management in the Fuel and Energy Complex. RUDN University, 6 Miklukho-Maklaya str., Moscow, 117198. AuthorID 641366; **Chariyarova Gozel D.**, **Castello Perez Dieter & Gomado Etse Dadson** are postgraduate students of the RUDN University.

Информация об авторах:

Уколов Владимир Федорович, доктор экономических наук, профессор. Российский университет дружбы народов (РУДН), 117198, г. Москва, ул. Миклухо-Маклая, 6. AuthorID 641366, **Чарьярова Гозель Джумамухамедовна**, **Кастель Перес Дитер** и **Гомато Этсе Дадсон** — аспиранты РУДН, 117198, г. Москва, ул. Миклухо-Маклая, 6.

The article was submitted 08/14/2020; approved after reviewing 08/28/2020; accepted for publication 09/25/2020

Статья поступила в редакцию 14.08.2020; одобрена после рецензирования 28.08.2020; принята к публикации 25.09.2020.