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ВЕСТНИК

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1

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NAS RK is pleased to announce that Bulletin of NAS RK scientific journal has been accepted for indexing in the Emerging Sources Citation Index, a new edition of Web of Science. Content in this index is under consideration by Clarivate Analytics to be accepted in the Science Citation Index Expanded, the Social Sciences Citation Index, and the Arts & Humanities Citation Index. The quality and depth of content Web of Science offers to researchers, authors, publishers, and institutions sets it apart from other research databases. The inclusion of Bulletin of NAS RK in the Emerging Sources Citation Index demonstrates our dedication to providing the most relevant and influential multidiscipline content to our community.

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DIGITALIZATION AS AN ENGINE OF ECONOMIC GROWTH

Abstract. The analysis of modern publications on the stated problem suggests a great interest of the scientific community about the digital development of economic systems at various levels. However, the Russian experience of developing and implementing digital technologies has not been studied well. As a result, Russian features of digital economy development and systematization of existing approaches provide a great scientific and practical interest. It is noted that the digital economy, which generates a continuous stream of innovations, involves the development of human capital, which, in turn, requires a systematic approach to knowledge management. The development of the digital economy in Russia is declared as one of the most important directions of state policy and is considered as a prerequisite for competitiveness in the modern global market and a strategic component of the state's economic sovereignty. An organization that embarks on a digital transformation strategy needs a vision of its final achievement, and that vision should be more than a statement on the website. For the transformation to be successful, the organization must adapt its vision every day, and employees must know the way of their contribution. To make digital transformation real, you need a vision and ability to do it. Digital solutions, meanwhile, represent digital products or services – for example, a medical platform that connected to Phillips or GE's offerings on the industrial Internet.

The results of the study: The analysis of the digital economy of the Russian Federation was carried out. The main directions in solving the identified problems of digitalization in Russia were Proposed. The methodological basis of the research is the scientific works of Russian and foreign scientists in the field of the digital economy, the results of various applied research on the formation of the knowledge economy.

Keywords: media, digital economy, e-government, knowledge, information technology, a national project, program.

Introduction. The rapid pace of penetration of digital technologies into all spheres of modern society leads to changes in the usual models of the economic and social structure of governments. In the wave of this trend, the leading countries of the world to maintain their leadership are betting on the digitalization of the economy; Russia is also involved in this process. E–government and the digital economy are identified as priorities of the Informatization strategy 2019–2024. During this period, the development of the national project "Digital Economy of the Russian Federation" is planned [1–6].

The definition of the "digital economy" was used in 1995 by the American computer scientist Nicholas Negroponte at the University of Massachusetts. However, he did not give a clear definition, he used this concept more as a figurative expression, but not a scientific definition [2–13]. At the present moment, scientists have not come to a common judgment about the digital economy. Scientists' research often uses synonyms of the digital economy such as: "electronic economy", "new technological way of the world", "API economy", "application economy", "creative economy" and others.

Materials and methods. Questions about the analysis of the digital economy are reflected in many scientific studies.

To date, the economy has developed certain methods and approaches for analyzing the digital economy. However, none of them can be considered universal for studying this process.

Dialectical, system-functional, economic-statistical and formal-logical methods are used as a methodological basis.

Results. The digital economy refers to all economic activities based on digital technologies, without structural changes in the organization of key financial flows and the work of regulators. Generally, this is the same consumer economy, but with different emphasizes: the customer interacts with the seller through information platforms and the product represents information. That's why technologies for big unstructured data analysis processing fast, accurate and less expensive are coming to the fore. These terms also indicated as Big Data, DataMining [6–12].

These are also machine learning technologies of neural networks, artificial intelligence, designated by such terms as DeepLearning, AI. There is so much data, and it is so heterogeneous and diverse, that simple computational methods do not give the desired results. This allows you to create global information peer–to–peer (P2P) platforms, that exclude mediator chains from the supply of items or services.

Besides, this term reflects the ability to use technology to perform tasks and apply activities that were not possible in the past. The concept of digital transformation covers opportunities for existing organizations, such as: do better, do something different, and add new things [4-10].

Organizations are implementing digital methods of management, resource accounting, financial accounting, etc. All of this affects not only the employees' activities but also on the life of citizens, significantly reducing time losses in particular. For example, digital technologies allow you to quickly send and receive any information, participate more actively in the discussion of public issues (issues of landscaping, urban planning, etc.) through online services of regional and regional administrations, etc.

To compete in the coming years, whether organizations are for–profit, service–oriented organizations, such as health systems or nonprofit and government agencies, will need both leaders and employees who can add innovative ideas [3]. They'll need to use modern technologies such as IoT and prescriptive Analytics *t*o better connect with existing and potential customers and be more responsive and efficient.

Moreover, they should be either prepared to explore the best ways to develop and use new technologies or there is a risk of being left out as the digital economy evolves.

IT Directors will be required to create a technical basis for digital transformation. Key components include a strong operating basis for efficient and reliable transaction processing, a digital service platform with reusable data and technology components, that enables data transfer between the base station and the platform.

Organizations in the digital economy have built business architectures to improve efficiency. In the digital economy, with a focus on unified product lines and presenting a unified face to customers, companies will need an architect to accelerate and integrate.

Digital transformers can find a solution to a complex architectural issue because it requires a different organizational structure [1-18].

The Russian Federation ranks first in Europe and sixth in the world in terms of the number of Internet users. At the same time, knowledge is an integral factor in accelerating technological development and increasing the competitiveness of products (including on the world market). There is no accident that the digital economy is called the knowledge economy because knowledge plays a crucial role. Thus, it can be claimed that an important component of the digital economy is human capital as a set of knowledge, skills, and abilities. This means that investment in its development, ensuring a continuous stream of innovations that meet dynamically changing needs is the most important condition for creating and implementing digital technologies [12-19].

According to the international development rating, Russia is not a world leader in the digital economy and export of IT services (figure 1) In our country, there are significant barriers for service imports. According to the Organization for Economic Co–operation and Development (OECD) digital services trade restrictions Index, which is used as an indicator of the Going Digital toolkit, Russia ranks 4th out of 44 countries.

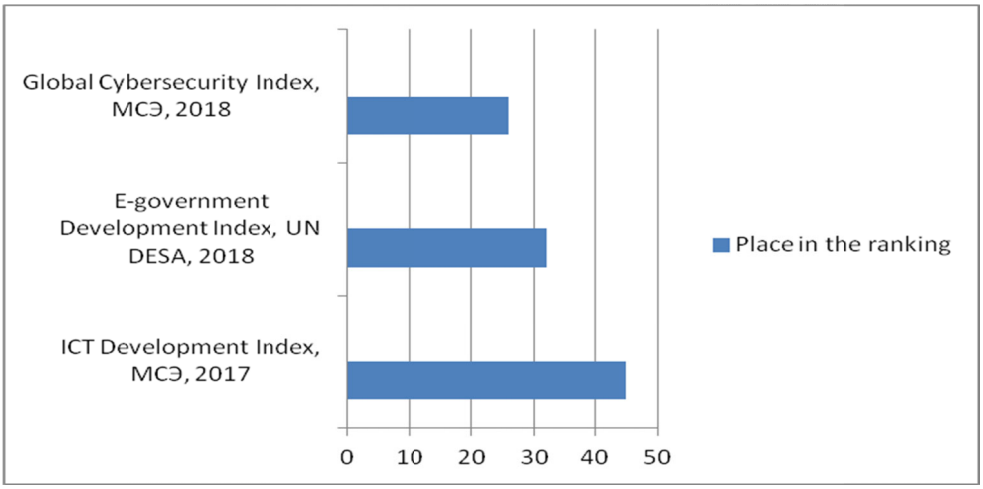

Figure 1 - Russia's place in international ratings of digital economy development

In Russia, there are prospects for the development of the digital economy. First of all, because the Russian school of programming remains strong, developers compete on an equal basis at the world level. For example, the world's leading oilfield services company Schlumberger claims that more than 80% of its specialists in the field of artificial intelligence development are from the CIS. About half of Samsung's advanced artificial intelligence research Department is also "Russian". Also, the country has a high level of readiness for digital transformation: PwC analysts include Moscow in the top 5 cities in the world for this indicator [3-17].

The need for deep legal reform is one of the key challenges of the digital economy. The national project "Digital Economy of the Russian Federation" includes six key areas (Federal projects) required to create good conditions for the introduction of advanced technologies. In General, the project meets the practice of the OECD countries, which also implement strategies and programs for the digitalization of the economy. The project focuses on creating conditions for the development of breakthrough technologies (blockchain, IoT, AI, big data), but does not eliminate barriers to the development of the digital economy (data localization, high load on information mediators). Besides, the development of the platform economy does not pay due attention.

Currently, Federal law No. 34 of March 18, 2019, which creates the basis for regulating relations in the digital economy is still in force. The law establishes the concept of digital rights and their features in the Civil code of the Russian Federation and regulates the use of smart–contracts. Specific rules that information systems must comply with the types of digital rights and the specifics of their issuance, must be established by special laws [5].

The law “Digital financial assets” is currently being adopted. It was expected that these two documents will determine the legal status of cryptocurrencies in Russia, but it has not happened yet. After a major revision, which was subjected to the law on digital rights, the provisions on cryptocurrency were removed from it.

In 2017, the OECD identified four key breakthrough digital technologies: big data analysis technology, artificial intelligence, Internet of things, and blockchain technology. OECD countries develop strategies for these technologies, create observatories for implementing research projects and bringing together stakeholders (for example, the EU's blockchain technology Observatory). In Russia, it is important to develop these four areas [15-20].

The most important tasks to be solved within the basis of the national Digital economy project are to create conditions for the development of the crypto economy, implement a risk–oriented rather than total approach to the data localization requirement, eliminate legal uncertainties in the processing of personal data, and create a favorable condition for the development of big data analysis technologies (usage of new approaches to obtaining consent for data analysis, access to depersonalized data of researchers, and others) [9]. Besides, it is necessary to abolish currency control especially if it restricts the requirement of repatriation. This restriction greatly burdens the development of young companies whose products are

exported. And often such companies refuse to export. The adoption of the Federal law on digital financial assets is won't give a strong effect, but the establishment of an AML/CFT requirement for crypto exchanges, thereby legalizing the activities of banks with crypto assets, as well as the recognition of cryptocurrency as a contractual means of payment will allow the Russian crypto–economy market to develop.

Another main thing is blockchain technology. The emergence of a mechanism of mutual trust and new money changes the structure of society, making a decentralized economy out of just a digital economy. There was a phase transition within the social organism. Now every community can create its own money, or rather, a kind of material containment that needs to be filled with people's labor — capital, the only value of money.

One of the main trends in global digitalization is analytics. New audit tools and automated information security Analytics will soon become key technologies. Information security in Russia was handled by people who came out of law enforcement agencies. In developing security solutions (for example, DLP systems to prevent information leaks), they focused on the real problems of organizations and analyzed the scenarios for which incidents occur. In the West, which traditionally sets trends in the IT industry, they focus only on data, though risks from the human factor are not controlled.

One of the weak aspects is the lack of support for science and research. Support applies only to issues of training of personnel and improvement of IT literacy. In Russia, there are few patents on the Internet of things and AI, blockchain, quantum technologies, automation in production, business, and services. Research and development costs in Russia are no lower than the global average, and their performance is three times lower than the global average [15-20].

In addition, there are regulatory issues. For example, for implementing a "smart" and accessible urban environment, citizens are offered digital services — public transport schedules in Telegram bots. At the same time, regulators recognize Telegram as illegal and try to block it. The Russian software registry requires that Russian software developers support databases and operating systems. There is almost no Russian software system, and even Linux is not widely used both in the country and abroad. Currently, the software is focused on international Windows and iOS. It turns out that the development of software, that is in demand in certain segments of the local market is stimulated. At the same time, based on the national project "Digital economy", the task is to reorient domestic developers for export [10-15].

To change the situation, the first step is to review the current legislation. Taking into account the peculiarities of the Russian economy – uneven rates of development even within one sector – it is necessary to change the laws gradually. And after the contradictions are eliminated, it is necessary to regulate fundamentally new things: the turnover of cryptocurrencies, digital transactions (separate the concepts of digital offer and digital acceptance), the very concept of information and digital financial assets as objects of civil law. Besides, the legal status of robots or unmanned vehicles is not taken into account.

Conclusion. Russia's potential in the digital economy is linked to a traditionally strong technical education and mathematical school, whereas regulatory restrictions and the lack of special support measures for digital companies remain problematic areas.

In order to effectively develop the digital economy we need effectively functioning 3 components:

– legal and regulatory, that would promote competition and market entry for companies, allowing firms to fully utilize digital technologies to compete and innovate;

– skills needed by employees, entrepreneurs, business people, and government employees to take advantage of digital technologies;

– effective and accountable establishments, that use the Internet to empower citizens.

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ЦИФРЛАНДЫРУ – ЭКОНОМИКАЛЫҚ ӨСУДІҢ ҚОЗҒАУШЫ КҮШІ РЕТІНДЕ

Аннотация. Аталған проблема бойынша қазіргі заманғы жарияланымдарды талдау ғылыми қоғамдастықтың әртүрлі деңгейдегі экономикалық жүйелерді сандық дамытуға деген үлкен қызығушылығын көрсетеді. Алайда, сандық технологияларды әзірлеу мен енгізудің ресейлік тәжірибесі жеткілікті зерттелген жоқ. Нәтижесінде, сандық экономиканы дамытудың ресейлік ерекшеліктері және қолданыстағы тәсілдерді жүйелеу үлкен ғылыми және практикалық қызығушылық тудырады. Инновациялардың үздіксіз ағымын қалыптастыратын сандық экономика адами капиталды дамытуды көздейді, бұл өз кезегінде білімді басқаруға жүйелі көзқарасты талап етеді. Ресейде сандық экономиканың дамуы мемлекеттік саясаттың маңызды бағыттарының бірі ретінде жарияланды және қазіргі әлемдік нарықтағы бәсекеге қабілеттіліктің алғышарты және мемлекеттің экономикалық егемендігінің стратегиялық құрамдас бөлігі ретінде қарастырылады. Сандық трансформация стратегиясын жүзеге асыруды бастайтын ұйым өзінің соңғы жетістігін көруді қажет етеді және бұл көрініс веб-сайтқа кіруден гөрі көп нәрсе болуы керек. Трансформацияның сәтті болуы үшін ұйым күн сайын өзінің көзқарасын бейімдеуі керек, ал қызметкерлер өз үлестерін қалай қосатынын білуі керек. Сандық түрлендіруді нақты ету үшін көру және оны жасау мүмкіндігі қажет.

Зерттеу нәтижелері. Ресей Федерациясының сандық экономикасына талдау жүргізілді. Ресейде цифрландыру бойынша анықталған мәселелерді шешудің негізгі бағыттары ұсынылды. Зерттеудің әдіснамалық негізі – сандық экономика саласындағы ресейлік және шетелдік ғалымдардың ғылыми еңбектері, білім экономикасын қалыптастыру бойынша түрлі қолданбалы зерттеу нәтижелері болып саналады.

Түйін сөздер: БАҚ (бұқаралық ақпарат құралдары), сандық экономика, электрондық үкімет, білім, ақпараттық технологиялар, ұлттық жоба, бағдарлама.

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ЦИФРОВИЗАЦИЯ КАК ДВИГАТЕЛЬ ЭКОНОМИЧЕСКОГО РОСТА

Аннотация. Анализ современных публикаций по заявленной проблеме свидетельствует о большом интересе научного сообщества к цифровому развитию экономических систем различного уровня. Однако российский опыт разработки и внедрения цифровых технологий изучен недостаточно. В результате российские особенности развития цифровой экономики и систематизация существующих подходов представляют большой научный и практический интерес. Отмечается, что цифровая экономика, генерирующая непрерывный поток инноваций, предполагает развитие человеческого капитала, что, в свою очередь, требует системного подхода к управлению знаниями. Развитие цифровой экономики в России декларируется как одно из важнейших направлений государственной политики и рассматривается как предпосылка конкурентоспособности на современном мировом рынке и стратегическая составляющая экономического суверенитета государства. Организация, которая приступает к реализации стратегии цифровой трансформации, нуждается в видении своего конечного достижения, и это видение должно быть чем-то большим, чем просто заявление на веб-сайте. Чтобы трансформация была успешной, организация должна каждый день адаптировать свое видение, а сотрудники должны знать, каким образом они вносят свой вклад. Чтобы сделать цифровую трансформацию реальной, необходимо видение и способность сделать это. Цифровые решения, между тем, пред-

ставляют собой цифровые продукты или услуги – например, медицинскую платформу, которая подключается к предложениям Phillips или GE в промышленном Интернете.

Результаты исследования. Проведен анализ состояния цифровой экономики Российской Федерации. Предложены основные направления решения выявленных проблем цифровизации в России. Методологической основой исследования являются научные труды российских и зарубежных ученых в области цифровой экономики, результаты различных прикладных исследований по формированию экономики знаний.

Ключевые слова: СМИ, цифровая экономика, электронное правительство, знания, информационные технологии, национальный проект, программа.

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REFERENCES

[1] Akimov, M. (2018), “The government in 2019 will make a decision on the legal regulation of the digital economy”, available at: https://tass.ru/ekonomika/4975554 (access date: 12.02.2020).

[2] Demyanova O., Aetdinova R., Nikolaeya A., Mestnikova Ya. (2018) Application of Lean Manufacturing Methods in improving the quality of Educational services in conditions of digitalization // IIOAB JournaL(access date: 12.02.2020).

[3] Denisov, A. (2017), “Experts evaluate the contribution of the digital economy to the GDP of Russia”. From: RIA NEWS – “Russia today”. Society //, available at: https://ria.ru/20171213/1510858102.html (access date: 29.03.2020).

[4] Keshelava, A.V. (2017), “Introduction to the “Digital” economy” Geo–systems All–Union Scientific Research Institute, Moscow, 2017. 28 p. [Electronic resource]. available at: http://spkurdyumov.ru/uploads/2017/07/vvedenie–v–cifrovuyu–ekonomiku–na–poroge–cifrovogo–budushhego.pdf (access date: 27.03.2020).

[5] Kupchishina, E.V. (2018), “Evolution of the digital economy concepts as a phenomenon of neo–economics”. Public administration. Electronic Bulletin. 2018, #68, pp.426–442. available at: https://cyberleninka.ru/article/v/evolyutsiya–kontseptsiy–tsifrovoy–ekonomiki–kak–fenomena–neoekonomiki (access date: 01.02.2020).

[6] Bunevich K. G., Petrov D. M. Development of dual-use technologies based on the cluster approach // Bulletin of the Witte Moscow University. Series 1: Economics and management. 2013. № 1 (3). Pp. 75-79.

[7] Gavrilov E. N. INVESTMENT BANKING AS the DIRECTION of BANKING ACTIVITIES: the NATURE, CHARACTERISTICS AND problems of DEVELOPMENT // Vestnik of Moscow University. S. Yu. Series 1: Economics and Management. 2019. № 4 (31). Pp. 81-86. doi: 10.21777/2587-554X-2019-4-81-86

[8] Naumkin, M. (2018), “Five trends of the digital economy of Russia in 2018”. From: RB.RU – Author columns // Site RusBase March 29, 2018, available at: https://rb.ru/opinion/ekonomika–rossii/ (access date: 29.01.2020).

[9] Sazonov, D. (2018), “The challenges of the digital economy require appropriate legislative decisions”, available at: http://duma.gov.ru/news/28241/ (access date: 12.01.2020).

[10] Sologubova, G.S. (2017), “The phenomena of the digital economy”, in III international scientific and practical conference “Vladimir tract–the road to new technologies in tourism”, pp.13–26, available at: https://www.econ.msu.ru/sys/raw.php?o=44108&p=attachment (access date: 02.03.2020).

[11] Sologubova, G.S. (2018). “On the issue of digitalization of the economy and labor market problems”, availiable at: http://digital–economy.ru/stati/k–voprosu–o–tsifrovizatsii–ekonomiki–i–problemakh–rynka–truda/ (access date: 21.03.2020).

[12] Brodunov A. N., Ushakov V. Ya. Justification of financial decisions in conditions of uncertainty // Bulletin of the Witte Moscow University. Series 1: Economics and management. 2015. № 1 (12). Pp. 30–36.

[13] Aetdinova R.R., Balabanova O.N., Balabanov I. P. The modern methods of increase of management efficiency of small and medium businesses /R.R. Aetdinova,O.N. Balabanova, I.P.Balabanov // Life Science Journal Volume 11, Issue 11, 2014, Article №98, P. 558–561(access date: 21.01.2020).

[14] Nurzhanova A.N., Shamisheva N.K., K.Issayeva B. Risks in the development of small and medium–sized businesses. News of the national academy of sciences of the Republic of Kazakhstan. Series of social and human sciences. ISSN 2224–5294 https://doi.org/10.32014/2020.2224–5294.19 Volume 1, Number 329 (2020), 167 – 173.

[15] Sobol T.S. (2018) Modern level and quality of life of the population of Russia // Bulletin of Moscow University. S.Y. Witte. Series 1: Economics and Management. 2018. № 2 (25). P. 7–14. doi: 10.21777 / 2587–554X–2018–2–7–14

[16] Zueva I.A. (2017) On the development of methods for analyzing and evaluating the socio–economic development of regions // Bulletin of Moscow University. S.Y. Witte. Series 1: Economics and Management. 2017. № 4 (23). P. 27–36. doi: 10.21777 / 2587–9472–2017–4–27–36

[17] Nazarenko O.V., Niyazbekova S.U. Modern condition and prospects of development of the oil and gas sector of the Republic of Kazakhstan // Moscow University Herald. S.Y. Witte. Series 1: Economics and Management. 2018. № 4 (27). P. 7–14. doi: 10.21777 / 2587–554X–2018–4–7–14

[18] Rudenko L. G. 2017. Assessment of the possibility of sustainable environmental, social and economic development of Russia Bulletin of Moscow University. S.Yu. Witte. Series 1: Economics and Management 1(20) pp 20-27 DOI: 10.21777 / 2307-6135-2017-1-20-27

[19]. Rudenko L. G., Degtyar N. P. 2017. The essence of KPI and its role in enterprise management Bulletin of Moscow University. S.Yu. Witte. Series 1: Economics and Management 2(21) pp 50-54 DOI: 10.21777 / 2307-6135-2017-2-50-54

[20] Gavrilova E. N. CREDIT HISTORY BUREAU: The FORMATION, performance EVALUATION AND ways of its IMPROVEMENT // Bulletin of Moscow University. S. Yu. Series 1: Economics and Management. 2018. № 4 (27). Pp. 34-42. doi: 10.21777/2587-554X-2018-4-34-42

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