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ВЛИЯНИЕ ЦИФРОВОЙ ЭКОНОМИКИ НА ФИНАНСОВЫЕ РЫНКИ

DIGITAL ECONOMY AND ITS INFLUENCE ON FINANCIAL MARKETS

Исследование посвящено обращению российской экономики в сторону цифровизации, а также влиянию цифровой экономики на финансовые рынки РФ. Авторами выделены ряд факторов влияния цифровой экономики на финансовые рынки, положительные и отрицательные стороны цифровизации. Чтобы достичь высоких результатов компании, работающие на финансовых рынках, должны понять динамику формирующегося экономического порядка. Даже текущий кризис на мировых финансовых рынках, который вызвал серьезные изменения в отрасли, вряд ли повернет текущий ход событий назад к прежнему состоянию. В настоящее время трудно давать какие-либо четкие прогнозы относительно того, как будут выглядеть финансовые рынки в будущем. Эта отрасль всегда имела несколько ключевых характеристик, которые были усилены переходом к многополярному миру в докризисный период и которые вряд ли исчезнут в дальнейшем.
Ключевые слова: цифровая экономика, финансовые рынки, цифровизация, индекс цифровизации BCG, развитость, мировой финансовый кризис.

The investigation is dedicated to the turning of Russian economics into digitalizing and also, to the influence of digital economy on the Russian Federation financial markets. The authors highlight the influencing factors of the digital economy on the financial markets, positive and negative sides of the process of digitalizing.
Keywords: digital economy, financial markets, digitalizing, index of digitalizing BCG, developmentness, world financial crises.

INTRODUCTION

On May 3, 2017 Igor Schegolev, the Assistance of the President of the Russian Federation, defined the main federal interests in the Russian digital economy. Forming new high-tech markets is one of the most important directions. In the beginning of 2017, the Government of the Russian Federation Council has been created that to legislative ensuring development of digital economy at the Chairman of the State Duma, many questions have appeared according to what is digital economy.

FORMULATION OF THE PROBLEM

In 2017, the Government of the Russian Federation has developed and approved the program for creation of conditions for transition of the country to digital economy. The coordination of participation expert and business communities in realization planning, development and assessment of efficiency of the program is

carried out by ANO «Tsifrovaya ekonomika» (ANO «Digital economy»), created by the successful Russian hi-tech companies.

RESULTS

The main directions of digital economy are:

1) Staff and education

Improvement of an education system which has to provide digital economy with competent personnel. Transformation of labor market which has to be guided by requirements of digital economy. Creation of system of motivation on development of necessary competences and participation of staff in development of digital economy in Russia;

2) Information infrastructure

Development of communication networks, development of system of the Russian data-processing centers, introduction of digital platforms of work with data for ensuring needs of citizens, business and power;

3) Information security

Achievement of a condition of security of the personality, society and state from internal and external information threats at which realization of constitutional rights and freedoms of the person and citizen, worthy quality and the standard of living of citizens, sovereignty and sustainable social and economic development of the Russian Federation are provided;

4) Formation of research competences and technological reserves

Creation of system of support of basic, applied researches in the field of digital economy (research infrastructure of digital platforms) providing technological independence on each of the directions of through digital technologies, competitive at the global level and national security;

5) Standard regulation

Formation of the new regulatory environment providing a favorable legal regime for emergence and development of modern technologies and also for implementation of the economic activity connected with their use.

One of the generalized concepts of digital economy is the system of the economic and political, social and cultural relations based on use of digital (computer) information and communication technologies. Digitalization of economy will lead to the fourth industrial revolution. It is the predicted event, mass introduction of cyberphysical systems in production (the industry 4.0), service of human needs, including life, work and leisure [1]. Consequences of introduction will capture all aspects of life: work and life, policy and medicine, education and others.

The digital economy is an economy which is based on digital computer technologies. Also, the digital economy is called by «Internet economy», «new economy» or «web economy», «electronic economy», «API economy», «economy of applications», «creative economy» etc. With ever increasing frequency, the digital economy intertwines with traditional economy doing accurate differentiation more complicated.

The term «digital economy» was entered in 1995 by Don Tapscott (the author of the book «Electronic and Digital Society»). In 2001 Thomas Mesenburg has marked three main components of the concept «Digital economy»:

- The supporting infrastructure (the hardware, the software, telecommunications, networks, etc.);
- Electronic business;
- Electronic commerce.

Development of digital economy has begun with digital revolution. Digital revolution is a transition from mechanical and analog electronic technology to digital electronics which has appeared in the late 1950s.

The term also belongs to the radical changes caused by digital computing and communication technologies in the second half of the 20th century. As to agricultural and industrial revolutions, digital revolution has marked the beginning of new, but already information era.

Digital economy of Russia at the government level began to develop after Vladimir Putin's message to Federal Assembly on December 1, 2016 when the president has indicated the need to create new web economy for increase in efficiency of branches due to information technologies.

On December 8, 2016 Dmitry Medvedev has instructed to execute Putin's orders according to which the government had to prepare the Digital Economy program till May 11, 2017. The program has been approved on July 28, 2017.

The main task of the Digital Economy program is to improve life of citizens, having increased quality of the goods and services made with use of modern digital technologies.

As it is said in the document, the effective development of the markets in digital economy is only possible in the presence of the developed technologies therefore the program is focused on two basic directions. The first is institutes where conditions for development of digital economy will be created: standard regulation, staff and education. The second is the basic infrastructure elements of digital economy: information infrastructure and information security.

The government will develop digital economy by using modern technologies, such as big data, neurotechnologies, artificial intelligence, systems of the distributed register, quantum technologies, new production technologies, the industrial Internet, robotics, sensory, a wireless communication, the virtual and complemented realities.

The main aim of the program in the document is the emergence not less than 10 hi-tech enterprises working at the global market and forming around themselves the system of startups and research collectives which will provide development digital economies further.

Until 2024 the government has marked 5 basic directions of development of digital economy in Russia. This standard regulation, stuff and education, formation of research competences and technical reserves, information infrastructure and also information security.

The program will be operated at three levels: strategic, operational and tactical. At the strategic level the system approves the direction of development of digital economy, the purpose and plans. On operational the functions of management of realization are provided. At the tactical level there is a management of implementation of plans and realization of projects.

Implementation of the program can be considered successful if all planned indicators are reached by 2024, namely:

1. In Russia, not less than 10 national leading companies will appear. These are the hi-tech companies which develop «cross-technologies» and operate digital platforms.
2. In the country at least 500 small and medium-sized enterprises that have relations to the sphere of creation of digital technologies will work.
3. The number of graduates in the directions of information telecommunication technologies has to be at least 120 thousand people a year, and the number of graduates with competences in information technologies at the average level should be more than 800 thousand annually.
4. 40 % of the population have to have digital skills.
5. The number of the realized projects in the field of digital economy of 100 million rubles has to be more than 30.
6. The number of the Russian organizations, which participate in realization of large projects in the field of digital economy of $3 million in the priority directions of the international technical cooperation, has to be more than 10.
7. As for formation of research competences and technological reserves, the number of the realized projects has to be more than 30, the number of the Russian organizations participating in implementation of large projects in the priority directions of the international scientific and technical cooperation has to be more than 10.
8. 97 % of citizens will get access to the broadband Internet with a speed of 100 Mbps.
9. In all cities where the population is more than 1 million will work 5G.
10. The rate of internal network traffic of RuNet routed via foreign servers will stop for 5 %.

It is always pleasant when the government tries to create a basis for development of technologies instead of interfering with things, which not always understands. However, experts consider that the digital economy in Russia existed also without special program as ICO without regulation and cryptocurrency without tax on a mining.

Why has the government actively undertaken digital and how will it influence those who has already worked under laws of digital economy? Alexander Yefimov, the founder of Etalon.io, considers that the government has several reasons of interest in digital technologies. The main of them is economic blockade as Russia can't borrow money and buys technologies. For this reason the Ministry of Finance, the Central Bank and the government change as often as the priorities in relation to cryptocurrencies, the expert has told:

The digital economy has to facilitate a capital entrance to innovative projects. Also, the openness and availability of information, the government is afraid of anarchists and anonymity. And correctly does because the complexity of fight against terrorism grows quickly. Therefore, in particular, the blockchain will be pushed in all management systems now.

Sergey Kuleshov, the deputy of the executive general manager 1C-Bitrix is sure that the state is interested in development of digital economy as in a source of huge tax revenues in the budget.

The main objective of the program is a creation of a basis for development of technologies in Russia. This basis has to consist of legal regulation, education, infrastructure, stimulation of developments and researches, information security of the country.

In Russia, it is almost impossible to do without support of the state expensive and in-depth scientific researches with unwarranted successful result today. In my opinion, now all state regulation in the IT sphere causes only positive emotions.

By the way, a recent visit of our president to «Yandex» is a strong positive signal to all market.

According to the expert, such factors as low taxes, protection of the Russian software producers, preferences of the domestic IT companies in tenders for state procurements, simplification of the procedure of export currency transactions, show that the power not only «climbs» in digital economy, but also tries to bring her to the level of the international export.

However, the government wants not only to develop digital economy, but also to control it. Sergey Gudkov, the managing partner Initsium, thinks that the aspiration of the state to regulate use of new technologies is a natural process:

The digital economy cannot avoid Russia as it is process global. Cryptocurrencies and the adjacent directions are not for many Russians something far and unclear any more. When there is a new market affecting the rights and freedoms of citizens need for regulation of new branch, at least, of understanding of nuances of her functioning appears.

Another thing is that the state not always manages to inform citizens of the reason of the decisions in the field of regulation of digital-processes. Sometimes decisions overdue, often cause from a smile as have purely declarative character and are technically unrealizable.

In due time, society perceived with mistrust such initiatives as the Electronic government, the Open government, universal introduction of services of one window and MFTs. Time has shown that these initiatives have led to the essential growth of level of service for citizens.

About 15 years ago, we only dreamt of it, and now electronic state services are clear and became a natural element of life. I believe that the digital economy in Russia will be able successfully to develop with participation of the state.

The country leaders have realized that Russia in the development plan for information systems has fallen behind, thus that resources are both financial and human. We have, said Ilya Sharapov, the head of analytical division on information security of LLC 'TSS'. However, as the expert considers, Russia has turned into similarity of the big transit point long ago.

We want to make nothing as it costs money and labor costs, at the same time we like to earn and we are engaged in resale of foreign IT technologies and the equipment. The country which considers itself the great power is obliged to have also own platform on development of the IT equipment. And at the market there has to be a competition, and the state is obliged to welcome and in every possible way to support the companies which are engaged in developments in IT sphere. The monopoly of one producer in any of IT spheres is disastrous.

Unfortunately, very often Russian companies represent a foreign product with new design for the development. The ban on access to our market of the foreign companies will not go to us to a hand as the foreign companies guarantee the competition and allow to remain «in a tone». Our equipment and ON have to be not worse, at least, than foreign analogs, and ideally is to surpass them.

How the program will influence digital economy of Russia experts consider it is unambiguously difficult. What results will bring us by the state initiative, except 5G.

Today the share of digital economy in GDP of the country makes 3,9 %. According to a research of the consulting company McKinsey, digitalization of economy can increase GDP of Russia by 4,1–8,9 trillion rubles.

In total on implementation of four plans of measures about 522 billion rubles will be required. Most of all it is necessary on the Information Infrastructure direction — according to the approved plan of measures, on implementation of the plan for this direction from the federal budget allocation of 100,46 billion rubles is provided. From them nearly 2 billion rubles have been allocated in 2017, 27,17 billion rubles will be allocated in the 2018th, 33,73 billion rubles — in the 2019th and 37,61 billion rubles — in the 2020th. Financing from non-budgetary sources in a total amount of 336,1 billion rubles in 2018–2020 is also provided. Thus, totally to the 2020th financing of actions for information infrastructure within the Digital Economy program almost on 437 billion rubles is inclusive supposed.

The idea of creation of system of hybrid communication belongs to Roskosmos. According to the plan of measures, by July, 2018 the decision on creation of consortium for implementation of the project with the assistance of Roskosmos, Vnesheconombank and the interested organizations will be made. The sketch of a communication system can appear to the middle of the 2019th and cost 30 billion rubles. Prototypes of components of system will be made by 2021, is planned to spend 250 billion rubles for them.

5G on the Russian equipment

The plan of measures on information infrastructure assumes a statement in the 2018th the general scheme of development of communication networks in Russia for 2018–2024 which will become a reference point for all direction of information infrastructure. At the same time in summer 2018, the concept of creation and development of networks 5G in Russia has to appear, in June the commission has to approve her.

Thanks to this concept the Ministry of Telecom and Mass Communications can receive additional powers «for work by definition of a perspective range of radio frequencies for development of networks of a radio

communication 5G/IMT-2020 in the Russian Federation». Also in June requirements and conditions of creation of uniform infrastructure operator 5G have to be prepared. The state commission on radio frequencies has to decide on separate ranges of frequencies for development 5G in Russia in November-December, 2018, however, in the full-fledged volume of frequency will become available to operators only by the end of the 2020th (if necessary conversion of a radio-frequency range will be carried out).

At the same time during 2018, the Ministry of Telecom and Mass Communications, Minpromtorg and FSB together with operators have to designate requirements to a telecommunication equipment for communication networks of the fifth generation to estimate a possibility of his production in Russia. In the spring of 2019 the government has to approve the plan of start of production and introduction of the domestic telecommunication equipment for networks 5G/IMT-2020. Rostec will be engaged in the organization of such production. The separate concept will appear for communication networks of «the Internet of things». Also the general scheme of development of infrastructure of data-processing centers will be developed.

Among actions for infrastructure also is a connection to the Internet of hospitals and educational institutions, ensuring communication (including, for work of GLONASS) along federal highways and the railroads and also implementation of the project on elimination of digital inequality regarding providing inhabitants of settlements with the broadband Internet from 250–500 inhabitants by 2021. The document raises also the question of providing state agencies with the Internet. In the plan of measures special attention is also paid attention to questions of import substitution in the telecommunication sphere (both regarding the software, and regarding the equipment). In addition, the creation of interconnected system of authorization of users of Wi-fi in Russia and facilitation of registration of points of access of low power is supposed (up to 100 MW).

Laws, «cross-cutting» technologies and information security.

Concerning other directions of digital economic programs, they provide the investment which is smaller than infrastructure. For example, in 2018–2020s 48, 12 bin roubles from budget funds and 2, 04 bin extrabudgetary resources, in conjunction — 50,16 bin roubles are provided for the formation of the research competence and technological capacities. This direction must provide the development of so-called cross-cutting technologies — in particular, the big analytics, blockchain, quantum computation, artificial intelligence.

In total more than 34 bin roubles has been provided for the cyber security events in 2018-2020s. 22,33 bin roubles of which are the federal budget‘s assignment (5,67 bin roubles — in 2018 year, 8,87 bin roubles — in 2019 year and 7,8 bin roubles — in 2020 year).

In three years the financing out of extrabudgetary resources will be 11,71 bin roubles. In general, this direction provides the national and regional centers‘ creation for responding to computer incidents, encouraging import substitution and ensuring control over processing and access to personal data of Russians, in particular, to larger user data, including social networks. During the first year it is expected sampling the risk and threat‘s analysis of the communication systems in Russia and the infrastructure of the Russian Internet (Runet), the improvement security standards for application development.

The Action plan on the regulation, which is aimed on the formation of legislative condition of the digital economy’s development, involves 269 bin roubles allocation with addition of 15 bin roubles of extrabudgetary resources in 2018. Thus, the funding of 284 million rubles is provided for this direction in 2018, for other years the financing is not provided.

The ecosystem of the digital economy is a partnership of organizations which ensures the constant interaction of their technological platforms, applied Internet services, analytical systems, information systems of government bodies of the Russian Federation, organizations and citizens («The Strategy Development of the Information Society in the Russian Federation for 2017–2030» (approved by Presidential Decree No. 203, May 9, 2017).

The Internet has become an integral part of modern economic interaction. The digital economy has already penetrated all branches of the world economy and continues to develop significantly [2]. In the era of the digital economy, which has a number of basic features, the main resource is the endless information, the main characteristic of which is accuracy (truthfulness) and timeliness. The main platform of the digital economy’s development is the virtual Internet, the «areas» of which are endless. In the era of the market economy and on the days of Adam Smith, it made sense to calculate the break-even point and the optimal sizes of firms and companies, for the digital economy — it is not important: the company can be very small and at the same time successfully developed. The owner can be both the manager and the executor of all stages of the company’s work. The main «value» in the digital economy is the client — who becomes central in business operations, because without him, there is no point of it. The client chooses the goods relying on advice, personal experience and advertising, the seller does not have the opportunity to contact the buyer personally. At the same time, advertising still has its own power, calling it Internet advertising, Internet fashion, Internet friends, Internet hobbies, etc.

In April 2017, Savings Bank (Sberbank) launched the Ivanovo Digital Index, which will be calculating the level of penetration of digital technologies into Russians‘ lives. Ivanov is an average Russian aged 14–64 who lives in a city with a population of more than 100,000 people.

The project, created in Sberbank Investment Research (analytical department of Sberbank CIB corporate and investment division of Sberbank) is designed to assess and forecast the dynamics of various sectors of the «new economy», as well as to determine the most promising directions for their further development. The index includes five components: Internet access, human capital, Internet use, commercial services and e-government.

The first value of the «Ivanov Digital Index» is 51 %. Sberbank Investment Research believes that this indicator reflects a turning point in the penetration of digital technologies into the life of the Ivanovs: on the one hand, many Russians have the technical capabilities to try certain digital products, on the other hand, there is a great potential for further growth and technology's penetration.

The highest value in the index is recorded in the blocks of «e-government» (61 %) and «Internet access» (58 %), and the largest growth potential is for «paid services» (40 %) and «human capital» (45 %). Most Ivanovs have technical and financial opportunities to use digital services on the Internet. 85 % of Ivanovs use the Internet: 76 % — wired, 63 % — mobile, 54 % both kinds.

The old way, in which economic power was concentrated in three stable economic centers — North America, Europe and Asia — disappears. It is replaced by the world economic order, under which economic power is divided among numerous centers. Aksenture names this phenomenon a «multipolar world.» Even the current crisis in the global financial markets, which caused serious changes in the industry, is unlikely to reverse the current course of events back to its previous state.

At the present, it is difficult to give any predictions how the financial markets will look like in the future. This industry always had several key characteristics that were reinforced by the transition to a multipolar world in the pre-crisis period and which are unlikely to disappear in the future. Such characteristics include:

- Permanent negative impact on marginal profit
- Unexpected appearance of new competitors
- The necessity of quick creating new products and bringing them to the market

During the period when the digital economy began to be carefully monitored in the Russian Federation (2011), the contribution of the digital economy to Russia's GDP was estimated by one of the analytical agencies at 1.6 %. At the same time, the average for G20 countries was more than 4 %. In 2015, the share of the digital economy in Russia's GDP was 2.1 (1.3 times growth). On average in Europe, the share of the digital economy exceeds 5 % of GDP, in the US — 6 and annually these indicators are growing. Analytics believe that by the end of 2020, Russia's lag in the digital economy may be about 15–20 %.

And what does the digital economy include today? Today, the main components of the digital economy for the Russian Federation are consumption, investment, government spending, exports and imports. The largest share in the total volume of the digital economy is consumption as a form of virtual commerce. In recent years, the share of electronic commerce has grown by 35–40 %, in the total volume of retail sales it is about 5 %, but still very little compared to the G20 countries. The greatest distribution of virtual commerce was in the segments of domestic appliances and electronics, clothing and footwear, furniture and household goods. These categories account for 80 % of the e-commerce market in Russia.

The market of virtual food products in the Russian Federation is widening, especially in larger cities. Feeling the potential of the online segment, a number of large offline retailers already have, or launch services for the food products' sale and delivery to the house.

With the technological aspect, the digital economy is defined by four trends: mobile technologies, business analytics, cloud computing and social media; in the global plan — social networks, such as Facebook, YouTube, Twitter, Linkedln, Instagram, etc. It means that it is important to use their opportunities in the national segments forming. In recent years, the Internet-dependent markets such as tourism, games and e-sports, media and banking services, etc got the active development. At present, these markets form about 50 % overall of the e-commerce's total volume. Systematic digitalization of the mass segment changes the nature of online consumption. In the segment of tourism and travel, it is worth mentioning the changing from online booking tickets to full-fledged selection, the tours' comparison and payment. In the segment of banking services — private offices replace the standing in the queue at the bank's cash desk to pay utility bills, to top up an account, pay for loans, etc.

At present, Russia takes the 39th place in the world in the development of the digital economy. The index of digitalization of the country in 2016 was 113 points. As a result, Russia was able to move from the category of catching-up countries to the main group. For example, Romania, Slovenia, Italy and Greece are neighbors. The main problem of the country is the incomplete use of the potential digital transformation of industries.

In total, 85 states are included in the BCG rating. The leader of 2015 was Denmark, which scored 213 points. The second place went to Luxembourg (212 points), and the third — to Sweden (208). Also the top five countries included South Korea (205) and the Netherlands (198). Cameroon encloses this list with an index of 12 points.

The calculation of the digitalization index BCG is based on the dynamics of the population‘s online growing and user activity. However, like most indexes, the digitalization index BCG is a statistical indicator that has a percent of conventionality. A large proportion of the population of our country are people over 45, with secondary education, who live in small towns.

Such citizens often do not know how to use Internet services to purchase goods or pay for services, therefore, the level of digitalization will be lower than in a country with more active users.

Finally, it should be noted that the digital economy is the future of the country’s economic development, this is a new stage in the development of economic thought, production and consumption systems, it is a direct way in the era of space technology and the virtual future.

The order and time frames of the implementation of the directions have been outlined on the work flow chart. On its basis, a plan of actions will be developed to achieve specific objectives, indicating the responsible people for their implementation, as well as sources and amounts of funding.

The work flow chart will be approved for three years, which implies its annual renewal.

The «work flow chart» identifies three main stages in the development of the digital economy’s directions — 2018, 2020 and 2024. According to the results of each stage, the achievement of the target state for each of the directions is envisaged.

Also, the factors has been foreseen, due to which the planned realization of the digital economy’s characteristics will be achieved by 2024.

Regarding to the ecosystem of the digital economy, this is:

- successful operation of at least 10 leading companies (ecosystem operators), competitive in global markets;
- successful functioning of at least 10 industrial (digital) digital platforms for the main subject areas of the economy (including for digital healthcare, digital education and «smart city»);
- successful operation of at least five hundred small and medium-sized enterprises in the development of digital technologies and platforms and the provision of digital services.

Regarding to the qualified personnel and education:

- the number of graduates of educational institutions of higher education in the areas of training related to information and telecommunication technologies — 120,000 people per year;
- the number of graduates of higher and secondary vocational education, possessing competences in the field of information technology at the average world level — 800 000 people per year;
- the share of population with digital skills is 40 percent.

Regarding to the formation research competencies and technological reserves:

- number of implemented projects in the field of the digital economy (with a volume at least 100 million rubles) — 30 units;
- number of Russian organizations involved in the implementation of major projects ($ 3 million) in the priority areas of international scientific and technical cooperation in the field of the digital economy — 10;

Regarding to information structure:

- proportion of households with broadband Internet access (100 mbps), in the total number of households — 97 percent;
- in all big cities (1 million people or more), sustainable coverage of 5G and above;

Regarding to information security:

- share of entities using standards of secure information interaction between state and public institutions is 75 percent;
- share of internal network traffic of the Russian Internet segment, routed through foreign servers, is 5 percent.

In conclusion, should be noted that the implementation of the Program will create favorable conditions for the application of information and communication technologies in Russia. The legislation of the Russian Federation, administrative procedures and business processes of commercial organizations will be improved, in particular, in electronic form.

CONCLUSIONS

What will the digitization of the economy lead to in 2018:

1. The government will remove key legal restrictions for the development of the digital economy in 2018.
2. Educational and professional regulatory documents, requirements will be developed for describing the competencies of the digital economy and their pilot version will be launched too.
3. The system of mechanisms for selecting promising areas of research and development will be formed in the field of digital technologies.
4. The regulatory environment will be established. It will determine the interaction between participants in digital platforms.
5. The frequency resource for deploying 5G networks will be determined.

6. The general layout of data centers will be approved.
7. The system of benefits and preferences will be formed. This will create conditions for investment.

REFERENCES

1. Andieva E.Yu. Digital economy of the future, Industry 4.0 / E.Yu. Andieva, V.D. Filchakova // Applied Mathematics and Fundamental Informatics. — 2016. — № 3. — P. 214–218.
2. Borsch L.M. Transformation of rational and irrational technology relations in the development of the digital economy / L.M. Borscht, D.D. Burkaltseva // Actual problems and prospects of economic development: Proceedings of the XVII International Scientific and Practical Conference. — Simferopol, 2018. — P. 18–20.
3. Burkaltseva D.D. Digital society as the next stage of the transformation of socio-economic systems / D.D. Burkaltseva, A.S. Tyulin // Growth potential of the modern economy: opportunities, risks, strategies: Proceedings of the V international scientific-practical conference. — 2018. — p. 589-594.
4. Izmodenova N.K. Digital economy and its impact on financial markets / N.K. Izmodenova // Financial markets and investment processes: IV International Scientific and Practical Conference (May 12, 2017, Simferopol). — Simferopol, 2017. — P. 93–95.
5. Korobeynikova O.M. Payment systems as an element of the financial security of the digital economy / O.M. Korobeynikova, D.A. Korobeynikov // Financial and economic security of the Russian Federation and its regions: Collection of materials of the II International Scientific and Practical Conference. — Simferopol, 2017. — p. 92–95.
6. Norets N.K. Threats of the digital economy / N.K. Norets, A.A. Stankevich // Financial and economic security of the Russian Federation and its regions: II International Scientific and Practical Conference (September 21–22, 2017, Simferopol). — Simferopol, 2017. — P. 119–120.
7. Norets N.K. Digital economy: state and development prospects / N.K. Norets, A.A. Stankevich // Innovation Clusters in the Digital Economy: Theory and Practice (INPROM-2017), (St. Petersburg, May 17, 2017). — SPb, 2017. — P. 173–179.
8. Panshin B. Digital economy: features and development trends / B. Panshin // Science and Innovations. — Belarus Science Publishing House, Minsk. — 2016. — V. 3. — № 157. — P. 17–20.
9. Solomatin M.S. The role of the digital economy in the development of the state / M.S. Solomatin, N.Yu. Saibel // Institutional and infrastructure aspects of the development of various economic systems; collection of articles of the international scientific-practical conference: in 2 parts. — 2017. — P. 137–139.
10. Digital economy and «Industry 4.0»: problems and prospects (industry-2017) Proceedings of a scientific-practical conference with international participation. — SPb.: St. Petersburg Polytechnic University of Peter the Great, 2017. — 685 p.

СПИСОК ЛИТЕРАТУРЫ

1. Андиева Е.Ю. Цифровая экономика будущего, Индустрия 4.0 / Е.Ю. Андиева, В.Д. Фильчакова // Прикладная математика и фундаментальная информатика. — 2016. — № 3. — С. 214–218.
2. Борщ Л.М. Трансформация рационального и иррационального отношения технологий в развитии цифровой экономики / Л.М. Борщ, Д.Д. Буркальцева // Актуальные проблемы и перспективы развития экономики: Труды XVII Международной научно-практической конференции. — Симферополь, 2018. — С. 18–20.
3. Буркальцева Д.Д. Цифровое общество как следующий этап трансформации социально-экономических систем / Д.Д. Буркальцева, А.С. Тюлин // Потенциал роста современной экономики: возможности, риски, стратегии: Материалы V международной научно-практической конференции. — 2018. — С. 589–594.
4. Измоденова Н.К. Цифровая экономика и ее влияние на финансовые рынки / Н.К. Измоденова // Финансовые рынки и инвестиционные процессы: IV Международная научно-практическая конференция (12 мая 2017 г., г. Симферополь). — Симферополь, 2017. — С. 93–95.
5. Коробейникова О.М. Платежные системы как элемент финансовой безопасности цифровой экономики / О.М. Коробейникова, Д.А. Коробейников // Финансово-экономическая безопасность Российской Федерации и ее регионов: Сборник материалов II Международной научно-практической конференции. — Симферополь, 2017. — С. 92–95.
6. Норец Н.К. Угрозы цифровой экономики / Н.К. Норец, А.А. Станкевич // Финансово-экономическая безопасность Российской Федерации и ее регионов: II Международная научно-практическая конференция (21-22 сентября 2017 г., г. Симферополь). — Симферополь, 2017. — С. 119–120.
7. Норец Н.К. Цифровая экономика: состояние и перспективы развития / Н.К. Норец, А.А. Станкевич // Инновационные кластеры в цифровой экономике: теория и практика (ИНПРОМ-2017), (г. Санкт-Петербург, 17 мая 2017 г.). — СПб, 2017. — С. 173–179.
8. Паньшин Б. Цифровая экономика: особенности и тенденции развития / Б. Паньшин // Наука и инновации. — Издательский дом «Белорусская наука» Минск. — 2016. — Т. 3. — № 157. — С. 17–20.
9. Соломатин М.С. Роль цифровой экономики в развитии государства / М.С. Соломатин, Н.Ю. Сайбель // Институциональные и инфраструктурные аспекты развития различных экономических систем сборник статей международной научно-практической конференции: в 2 частях. — 2017. — С. 137–139.
10. Цифровая экономика и «Индустрия 4.0»: проблемы и перспективы (industry-2017) Труды научно-практической конференции с международным участием. — СПб.: Санкт-Петербургский политехнический университет Петра Великого, 2017. — 685 с.

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