

# *Digital economy and retail competitiveness*

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**Abstract** — The article presents the results of a study that determine the need for the widespread introduction of innovations in the practice of accounting and analytical work for economic entities in retail trade. This is due to the general trend of the digital economy and related innovations.

The relevance of the topic is determined by the need to increase the competitiveness of retail representatives on the territory of the Sverdlovsk region. The purpose of the study is to identify problematic aspects of the implementation of strategic directions within the framework of the digital economy of the development of accounting and analytical support for financial management and digitalization of account data. To achieve this goal, the following tasks were completed: 1) the general condition and prospects of retail development was assessed; 2) the impact of the digital economy on industry development was determined; 3) the need for innovative adjustment of accounting and analytical support for financial management, in the context of the "digital economy", was substantiated. Subject of research - the priority area that ensures competitiveness. Object of study - representatives of the Sverdlovsk region retail. The study was conducted using methodology, field and cabinet methods; the methods of analysis and synthesis were used to summarize the data obtained and formulate analytical conclusions.

Digital technologies in the practice of financial and economic activities determine the general development trend of the territory economy and society in general. The results obtained necessitate the introduction of innovations, which, in turn, requires increased competence from financial managers and accounting and analytical staff. The vector of the digital economy has a positive, innovative impact on all aspects of the financial and economic processes of retail. There is a transformation of various information into quantitative and qualitative indicators, which brings the economy of the territory and its constituent elements to a qualitatively new level of development.

**Keywords** — *digital economy, retail, financial and economic activities, accounting and analytical support, business processes, account data, digitalization*

## I. INTRODUCTION

The level of socio-economic development of the territory can be judged on the basis of a comprehensive assessment of the development of retail trade. Sufficient competition among its representatives necessitates the use of best practices in chain retailing. The effectiveness of retail has been proven by world economic practice, since it is chain retail that ensures high survival in conditions of high competition.

In the framework of Industrialization - 4.00, there is an innovative restructuring of all the financial aspects of network retail management, which is due to the vector of the digital economy. Today, many representatives of chain retail are switching to a new business model that is focused on working with various databases in real time mode. In relation to the industry, there are sufficient opportunities to use Internet services. It allows one to assess competitiveness by a number of indicators (for example, such as price level, assortment, financial situation, etc.), and it is also possible to study demand and preferences on-line. This has become available thanks to the Internet and IT-products, which are created in the framework of the digital economy.

Today, financial and network retail executives are more than serious about the impact of digital technology on business processes. They are sure that without the introduction of modern digital technologies, it is no longer possible to maintain their positions in the market in the face of growing competition.

## II. TERRITORY RETAIL DEVELOPMENT

In a general sense, "retail" means "purchasing". Therefore, retail refers to the sale of goods to the final consumer. Economic entities involved in retail are called retailers.

At the present stage of socio-economic development in the Sverdlovsk region, based on the results of financial and economic activities of retail, one can estimate the level of socio-economic development of society and business activity. The main indicator characterizing the financial and economic activity of the territory's retail is the turnover, which is understood as the volume of sales or the volume of consumption by the population of the territory in exchange for cash income [1].

The formation of goods turnover in the territory is carried out mainly due to the sale of goods by trading organizations and individual enterprises operating in the stationary retail trade chain. The structure of the territory's retail trade turnover has remained constant over several observation periods (2013 - 2018), with 48.6% of the total turnover of food products and 51.4% of non-food products. In the ranking of the Urals Federal District, the Sverdlovsk region in retail trade turnover

holds a stable leading position among the constituent entities of the Russian Federation, yielding to retail trade turnover in Moscow and the Moscow region, Krasnodar region and St. Petersburg.

Retail sales of the territory in the 1st quarter of 2019 is amounted to 276.4 billion rubles, which in actual prices is 7% higher than the same indicator in 2018, and in comparable prices by 1.8%.

In the system of indicators for assessing the development of the level of retail, a criterion is allocated - retail turnover per capita of the territory, which in actual prices amounted to 64 thousand rubles, which is 7.2% higher than the same period last year.

Chain retail of the Sverdlovsk region in the total turnover for the 1st quarter of 2019 formed 61% of the retail turnover. For the same period in 2018, chain retail turnover amounted to 59.6%.

Thus, the development of retail in the Sverdlovsk region has positive dynamics despite the presence of a negative phenomenon caused by the widespread increase in network retail and causing a transition from the free competition market in its pure form to the manifestation of oligopoly in the industry.

### III. THE CONCEPT AND IMPACT OF THE DIGITAL ECONOMY ON THE DEVELOPMENT OF THE TERRITORY

In Russia, there is a general tendency to ensure the accelerated implementation of digital technologies in the economy of the territories and the social sphere at all levels of state, municipal government and private business. This is determined by the Decree of the President of the Russian Federation of May 7, 2018 No. 204 "On the national goals and strategic objectives of the development of the Russian Federation for the period up to 2024".

The absence of a common unified concept of "digital economy" is revealed during the analysis of references.

In the general sense, "digital economy" represents the level of development of the public reproduction system, which is characterized by the high quality of the information and communication structure and the ability to integrate all economic entities into a single information space for the effective use of digital technologies [2, 3].

Professor G.B. Kleiner [4] understands the "digital economy" as the processes of production, distribution, exchange and consumption, including all related communications, based on digital technologies. Real economic processes, objects, projects, environments during communications are replaced by their computer (digital) models.

The authors S. Alexandrov and R. Iskandarov [5] determine that the "digital economy" is an economy carried out using digital telecommunications.

It should be noted that the digital economy sets the directions for innovative development of economic sectors, but

is also the main parameter of competitiveness and determines the emergence (birth) of new business models [6].

V.I. Mayevsky and S.Yu. Malkov [7] state that in relation to the studied concept it is an economic production with the use of digital technology.

According to N.K. Norets and A. A.A. Stankevich [8] "digital economy" is a system of economic and political, social and cultural relations based on the use of digital (computer) information and communication technologies.

Critically examining the author's position in relation to the definition of digital economy, the fact that many authors assign a significant role to the Internet and digital technologies is highlighted.

Digital economy issues are a priority at the governmental level in various countries. The Australian Department of Broadband, Communications and the Digital Economy [9] describes "digital economy" as a global network of economic and social activities supported by platforms such as the Internet, as well as mobile and sensor networks. The UK government in its laws and regulations regarding the studied definition interprets "... the production of digital equipment, publishing, media production and programming".

Thus, the digital economy is a global trend that sets a new strategic direction for the development of the Russian economy, which requires a science-based approach, and is determined by a system of economic, social and cultural relations based on the use of digital information and communication technologies [10, 11, 12]. The basis of the digital economy is the growing need for the interconnection of production and society with information technology and the Internet. The mandatory use of digitalization in the practice of financial and economic activity is due to the need to improve efficiency and competitiveness. The introduction of digital technology in the economy of retail is possible under the following conditions.

First, retail must be ready for digital transformation (including all areas of management), which implies a radical change in the ways of organizing and conducting financial and economic activities, accounting and analytical work. This requires sufficient investment and competency from staff.

Second, a prerequisite is the availability of a technical proposal that ensures the adaptation of the used foreign IT-technologies and domestic analogues that are not-inferior in capabilities.

The third condition is the widespread demand for digital technology, both from retail and households (consumers).

Today, there is a tendency for widespread use of basic and relatively simple digital technologies in the practice of financial and economic management of retail. Few retail business structures carried out deep automation and restructuring of business processes for advanced digital technologies:

83% of Russian retail economic entities use the Internet;

63% - mastered the technology of electronic data exchange;

23% - cloud services;

12.2% - ERP systems ;

5% - RFID technologies.

In general, there is a positive trend in demand for digital technologies and Internet resources, but in comparison with foreign developed countries such as the USA, Great Britain, Germany, Japan, etc. Russia is far behind.

The digital economy by means of digitalization provides fundamental transformations in all areas of life support at the level of macroeconomic and microeconomic systems. With the help of the digital economy, a smart and comfortable economic space is formed, the basis of which are new values of the orientation of a man and society.

Digitalization creates technological complications, which requires appropriate competence and, in some cases, even contributes to the disappearance of professions with the emergence of new ones.

According to observations of the introduction of digital technologies in the financial and economic activities of retail in the Sverdlovsk region, the greatest manifestation of innovation is highlighted in comparison with other sectors. This is determined by the nature and behavior model of the modern consumer of the territory, which are households. They actively use digital technologies and various channels to obtain information of interest to them via the Internet and various services. A further increase in retail turnover achieved through Internet trading leads to the need for a radical change in all aspects of the financial and economic activities of retail in order to ensure competitiveness.

#### IV. COMPETITIVENESS AS AN ECONOMIC CATEGORY

The study of the essence of competitiveness as an economic category is currently an aspect open to question. Until now, there is no unequivocal opinion on this category. At the same time, the general concept of competitiveness is influenced by various innovations and the "digital economy" is no exception. There is a sufficient number of particular views on "competitiveness".

By competitiveness D.N. Babenko understands comprehensive characteristic that reflects the level of superiority in relation to real competitors, based on two components: first, market demand capable of satisfying consumer needs based on the quality of trade services and the image of a trade enterprise; secondly, the resource and financial situation, the use of strategic potential and commercial activity [13].

A.V. Bondarev defines "competitiveness" as an enterprise's possibility of effective financial and economic activity at the level of industries and when the prerequisite for profitable sales of manufactured products in a competitive market is met [14].

O.A. Bondarenko believes that competitiveness is a comparative competitive advantage in relation to other enterprises, which is achieved as a result of the transformation of various types of resources (financial, production, labor, innovative resources, etc.) into competitive goods, product or service, taking into account implementation based on a development strategy [15].

A.O. Blinov understands competitiveness as an opportunity to create superiority over competitors, which allows achieving strategic goals [16].

According to R.A. Fatkhutdinov, competitiveness is the state or ability of a business entity to be a leader in all financial and economic positions, to successfully operate in a specific market and at a specific time to achieve the goal [17].

M.G. Mironov determines the following in the relation to competitiveness: it is the ability of an enterprise to make a profit through the production and sale of products of appropriate quality at a price not higher and not lower than prices of other competitors in the market [18].

Thus, the existing theoretical positions presented above by modern author's views determine the need to assess competitiveness, taking into account the parameters of qualitative and quantitative indicators and current trends in the economy. Therefore, the digital economy, in our opinion, is a prerequisite for a modern vision and attitude towards retail competitiveness. The author's position regarding the competitiveness of the economic entity of retail is defined as the ability to compete in the market economy and have a positive impact on the socio-economic situation of the territory, subject to a sufficiently high business activity and financial performance, which is achieved through the use of innovative tools and products of the digital economy and high competency level of financial managers.

Based on the results of the study, four areas of practice of retail financial and economic activities were identified. They require a modern innovative approach and the need to use digital economy technologies to achieve the proper state of competitiveness:

- interaction with consumers (buyers), which consists in studying the occurrence of interest in a particular brand (within the framework of a particular product) until the time of purchase;
- ensuring operational efficiency, including the effectiveness of retail personnel, working with traded goods, which is determined by the boundaries of trade and technological processes (acceptance, storage, pre-sale preparation, design of price tags, layout, etc.);
- logistics and control of the supply of goods (taking into account the scientifically substantiated needs of demand, price and quality);
- monitoring the operation of IT infrastructure and security systems of the economic entity of retail.

Therefore, the competitiveness of retail is a complex economic category, which is determined by competitiveness factors and innovations of the digital economy, which are used

in the practice of financial and economic activity, taking into account trade and technological processes.

The factors of ensuring competitiveness, according to Mile E. Porter [19], include:

- macroeconomic factors formed by conditions at the level of the territory (region, region or state);
- microeconomic factors formed within the economic entity of retail.

The main factors ensuring the competitiveness of economic entities, according to experts and scientists include: adaptive organizational structure, technical resources, marketing, financial and information resources. Moreover, a special place is given to staffing [20].

Summarizing all of the above, one should pay attention to the fact that each economic entity of retail should use its strategic position, which differs from other competitors in the industry. At the same time, the objective and subjective prerequisite for success and competitiveness is the use of innovations within the framework of the digital economy, and investing in innovations and the level of staff competence are considered to be a condition for ensuring competitiveness.

#### V. INNOVATIONS IN THE ECONOMIC PRACTICE OF RETAIL. CONCEPTUAL POSITION

Modern financial and economic activity of retail involves improving the qualitative and quantitative results assessed by financial criteria. The digital economy and digitalization are driving the transformation of traditional management functions. The accounting and analytical component occupies a significant place in any business process and financial and economic activities [21, 22]. The introduction of the digital economy in the process of implementing the functions of accounting and analytical support for financial management can be successfully implemented in the economic entities of retail under the following conditions:

- first, the business should be ready for the digital transformation of account data, which is determined by the strategic goals and objectives of financial activity, while financial management is undergoing drastic changes in financial management and staffing;
- second, the costs (expenses) for digitalization should be commensurate with income and results, otherwise a negative effect arises;
- third, significant changes in relation to financial management by means of digitalization of credentials require adaptation and testing in order to identify problematic aspects of synchronization and evaluate the effects obtained not only within the economic entity, but also in the whole territory;
- fourth, there must be confidence that there are needs for the results of digitalization of account data and the mandatory presence of internal and external users of accounting and reporting information.

In Russia the experience of introducing unified digital control systems, technologies and competencies on digital platforms is in its infancy and is widely discussed in scientific and industrial communities [23, 24]. The current situation does not allow to respond quickly to possible macroeconomic and meso-economic changes.

Thus, the prerequisites for a comprehensive digitalization of the territorial space were formed, which affects industrial production that serve the sectors of the economy and households.

The competence of the digital economy is determined by three components and it is important to take into account the technological features of retail business processes, which is determined by industry [25, 26].

The first component characterizes the material, technical and personnel support, as the retail sphere cannot exist virtually; the result of any production is a product (work, service) that must be in demand on the market (the use of robot technology ensures consistent quality and has a positive deterministic effect on the result of labor).

The second component is determined by the need for a system of accounting and analytical support for financial management, which is a complex mechanism that combines the processes of various types of accounting in order to collect, register and summarize information using appropriate tools and methodology of economic analysis, planning, budgeting, and control. Information support for various users about the state of finances, financial resources and the effectiveness of financial and business processes allows us to form an objective and comprehensive view of the activities of the economic entity of retail and to develop or adjust a management decision aimed at increasing competitive advantages, dynamic, strategic and effective business development.

The third component includes information technologies that provide the process of automation and information support of business processes, transformation and digitalization of account data into various types of accounting and reporting, which is determined by the needs of users.

All of the above predetermined the author's conceptual position in relation to the digital economy in the practice of financial and economic activities of retail (Table 1).

TABLE I. RETAIL INNOVATION MANAGEMENT CONCEPT

Components	Conceptual positions		
Theoretical Provisions	Foreign experience in promoting the digital economy	Terms and Definitions	Regulatory and legislative framework
	Digitalization Configuration and Technology		
Methodical provisions	Technological and industry-specific features of business processes	Technological parameters of the digital platform	Methodical support for users
Personnel and competency support	Competent staff training in accordance with the needs and development of R&D	Visualization of final digitalization parameters	Compliance with unified requirements
	Functions and tasks of managing the digital economy (based on level)		
Instruments	Computer technology	IT-technologies	Software
Business model			
The risks of the digital economy	Lack of investment	Lack of adapted IT servers	Lack of qualified staff

The presented conceptual position is a fundamental component of innovation management at the level of the economic entity of retail. In order to digitalize the Russian economy, society and territory, this process must begin with the primary link of the economy, which is the economic entity (enterprise, organization). It will provide management of all aspects of the financial and economic activities of retail at the industry level and will contribute to a positive impact on the economic and social life of the territory.

In order to reach the largest possible target audience and spend money on maintenance as efficiently as possible, new retail technologies are constantly being developed. They affect the essence of the sales process [27, 28]. Foreign practice of financial and economic activities of retail uses modern digital technologies, such as:

1) "Smart" carts that combine a traditional shopping cart with a barcode scanner and minicomputer. Such developments are already presented by American companies IBM and EDS. Among the abilities of new devices is the compilation of shopping lists, the analysis of prices and product characteristics, the search for products on the shelves of the store due to a kind of a GPS navigator. The advantages of "smart" carts are obvious: for customers - saving money and time, the ability to reduce the time spent in the store; for store owners - reducing the cost of consultants and getting a unique tool for analyzing customer preferences.

2) Electronic price tags, which are gradually being introduced into the practice of financial and economic activities of retail and many experts are sure that the future of retail is behind this new technology. The new type of price tags has the form of a small display, where information about

the product is provided with numbers and letters. The main advantage of the device is the ability to change information: the price and other characteristics of the goods without involving staff, but using a central computer. Electronic price tags are especially relevant in stores with a large assortment, as well as during the periods of promotions, when the prices of some products change twice a day in order to attract customers. In near future, electronic price tags will be capable of replacing traditional analogs of paper, because they are convenient to use and can minimize the cost of consumables and labor.

3) Self-service checkouts provide the complete automation of checkout lines through the use of instrumentation, barcode scanners that will transmit information to a display and terminals that read information from a bank card.

4) The combination of offline and online trading, which contributes to the popularity of the concept of integrated sales (omni-channel). This is a new technology in trading, which provides the combination of online and offline channels to meet customer expectations. Technologies include: the ability to pick up goods ordered on the Internet at a convenient time in an offline store; registration of "smart" zones in the retailer's premises, which, thanks to the use of terminals, allow online sales in a traditional store.

5) The information kiosk is a multifunctional device with a touch monitor. It allows you to get detailed information about the characteristics of the selected product, as well as supplement it with reminders of related promotions and sales.

Thus, modern digital technologies expand the capabilities of retail to optimize technological processes.

## VI. CONCLUSION

Digital economy issues are becoming relevant at various levels of the macroeconomic and microeconomic system. The implementation of the goals and objectives formulated by the Government of the Russian Federation determines the development directions of the modern scientific community, engineering and production technology. At the same time, there is a need to search for investment resources and increase the level of competence of human resources in all sectors of the economy. The results of the presented study cover the basic foundations of building a digital system (digital economy) at the level of the economic entity of retail.

The directions of further research are determined within the framework of building, adapting and testing a comprehensive system for managing the economic entity of retail, which is based on innovative products of the digital economy and synchronization of all production and financial aspects, which determines the result of the activity. Particular interest is manifested in the context of building accounting and analytical support for an integrated retail management system.

## References

- [1] Necheukhina, N.S., Mustafina, O.V., Kuklina, L.N. (2018) Konkurentosposobnost' razlichnykh segmentov potrebitel'skogo rynka regiona. Ekonomika regiona. T. 14. vyp. 3. S. 836 – 850.

- [2] Zhukova, M.A. (2016) Tsifrovye tekhnologii i platformy kak instrument tsifrovoy transformatsii. *Problemy predprinimatel'stva v agrarnoy sfere*. S. 84-88.
- [3] Vanchukhina, L.I., Leybert T.B., Khalikova E.A., Rudneva Y.R., Rogacheva A.M. (2019) Industry 4.0 and closed-loop economy in the context of solving the global problems of modern. *TIMES Studies in Systems, Decision and Control*. T. 169. S. 31-53.
- [4] Kleyner, G.B. (2009) Mikroekonomika znaniy v svete sistemnoy paradigmy, Innovatsionnoe razvitiye: ekonomika, intellektual'nye resursy, upravleniye znaniyami, GOU VPO «REA im. G.V. Plekhanova», M.: INFRA-M, Gl. 5. S. 82–105.
- [5] Aleksandrov, S., Iskandarov, R. (2009) Tsifrovaya ekonomika (Digitaleconomy) – ekonomika, osushchestvlyаемaya s pomoshch'yu tsifrovyykh telekommunikatsiy. *Tekhnologii i sredstva svyazi*. № 5. S.26 – 28.
- [6] Vanchukhina, L.I., Leybert, T.B., Khalikova, E.A., Khalmetov, A.R. (2008) New approaches to formation of innovational human capital as an element of institutional environment. *Advances in Intelligent Systems and Computing*. T. 622. S. 343-352.
- [7] Maevskiy, V.I., Malkov, S.Yu., Rubenshteyn, A.A. (2016) Teoriya perekryvayushchikh pokoleniy osnovnogo kapitala // *Vestnik. RAN*. № 86 (1). S. 39-47.
- [8] Norets, N. K., Stankevich, A. A. (2017) Tsifrovaya ekonomika: sostoyaniye i perspektivy razvitiya. *Innovatsionnye klasteriy v tsifrovoy ekonomike: teoriya i praktika: trudy nauchno-prakticheskoy konferentsii s mezhdunarodnym uchastiem 17–22 maya 2017 g.* SPb.: Izd-vo Politekh. un-ta.
- [9] Department of Broadband, Communications and the Digital Economy, *Australia's Digital Economy: Future Directions (2009)*.
- [10] Golyshko, A. (2017) Tsifrovaya ekonomika dolzhna byt' tsifrovoy. *Radio*. S4-6.
- [11] Vanchukhina, L.I., Leybert, T.B., Khalikova, E.A. (2016) Methodological approaches to evaluation and analysis of labor efficiency in the spheres of fuel and energy complex. *Journal of Environmental Management and Tourism*. T. 7. № 4 (16). S. 585-593.
- [12] Geliskhanov, I.Z., Yudina, T.N. (2018) Digital platform: a new economic institution. *Quality Access to Success*. T. 19. № S2. S. 20-26.
- [13] Babenko, D.N. (2004) Obespecheniye ustoychivogo funktsionirovaniya predpriyatiya na osnove upravleniya ego konkurentosposobnost'yu: avtoref. dis. kand. ekonom. nauk. Krasnodar, 25 s.
- [14] Bondarev, A.V. (2005) Upravleniye konkurentosposobnost'yu promyshlennykh predpriyatiy na osnove vybora strategii funktsionirovaniya: avtoref. dis. kand. ekonom. nauk. Krasnodar, 27 s.
- [15] Bondarenko, O.A. (2006) Upravleniye konkurentosposobnost'yu rossiyskikh promyshlennykh predpriyatiy na baze protsessnogo podkhoda: avtoref. dis. kand. ekonom. nauk. Krasnodar. 26 s.
- [16] Blinov, A.O. (2013) Imidzh organizatsii kak faktor ee konkurentnosti. *Menedzhment v Rossii i za rubezhom*. №4. s. 20-24.
- [17] Fatkhutdinov, R.A. (2008) Upravleniye konkurentosposobnost'yu organizatsii: ucheb. Posobie. M.: Market DS. s.19-22.
- [18] Mironov M.G. (2014) *Vasha konkurentosposobnost'*. M.: Alfa-Press, 160 s.
- [19] Porter, M. (2002) *Konkurentsia*.: Per. s angl. Moskva: Izdatel'skiy dom «Vil'yams», 496 s.
- [20] Belkin, V. N., Belkina, N. A., Vladykina, L. B. (2015) Teoreticheskie osnovy otsenki konkurentosposobnosti predpriyatiy. *Ekonomika regiona*. T.1. S.145 – 155.
- [21] Necheukhina, N.S., Mustafina, O.V., Buyanova, T.I. (2018) Theoretical and conceptual bases of new industrialization process in life support. *Proceedings of the 2nd International Scientific conference on New Industrialization: Global, national, regional dimension*. <https://dx.doi.org/10.2991/sicni-18.2019.43>
- [22] Necheukhina, N.S., Mustafina, O.V. (2018) The genesis of accounting and analytical support for management of revenues and expenditures of economic agents in the retail segment of the consumer market. *St. Petersburg State Polytechnical University Journal. Economics*. Vol. 11. No. 2. 70-80 r.
- [23] Charykova, O. G., Markova, E. S. (2019) Regional'naya klasterizatsiya v tsifrovoy ekonomike. *Ekonomika regiona*. T. 15, vyp. 2. S. 409-419.
- [24] Mel'nik, M.V., Salin, V.N. (2018) Predposylki effektivnogo razvitiya tsifrovoy ekonomiki. *Uchet. Analiz. Audit*. № 6 T.5. S. 6 – 16.
- [25] Savina, T.N. (2018) Tsifrovaya ekonomika kak novaya paradigma razvitiya: vyzovy, vozmozhnosti i perspektivy. *Finansy i kredit*. V. 11. № 4. S. 579-590
- [26] Kuznetsova, S. A., Markova, V. D. (2018) Problemy formirovaniya biznesekosistemy na osnove tsifrovoy platformy: na primere platformy kompanii 1S. *Innovatsii*. № 2 (232). S. 55-60.
- [27] Ogorodnikov, P. I., Zaloznaya, G. M., Borovskiy, A. S. (2018) Sistemnyy analiz obespecheniya stabil'nosti effektivnogo funktsionirovaniya innovatsionnoy i tsifrovoy ekonomiki na osnove intellektualizatsii sistemy kompleksnoy bezopasnosti. *Ekonomika regiona*. T. 14, vyp. 4. S. 1221-1231.
- [28] Necheukhina, N.S., Polozova, N.A., Buyanova, T.I. (2017) Kontrolling kak mekhanizm uspešnoy transformatsii promyshlennosti v tsifrovuyu ekonomiku. V knige: *Tsifrovaya transformatsiya ekonomiki i promyshlennosti: problemy i perspektivy*. Sankt-Peterburg. S. 256-277.