SCIENTIFIC RESEARCH OF THE SCO COUNTRIES: SYNERGY AND INTEGRATION

上合组织国家的科学研究：协同和一体化

Proceedings of the International Conference

Date: November 24

Beijing, China 2022

上合组织国家的科学研究：协同和一体化
国际会议

参与者的英文报告

International Conference
“Scientific research of the SCO countries: synergy and integration”

Part 1

2022 年 11 月 24 日，中国北京
November 24, 2022. Beijing, PRC

Proceedings of the International Conference
“Scientific research of the SCO countries: synergy and integration” - Reports in English

(November 24, 2022. Beijing, PRC)

ISBN 978-5-905695-82-7

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ISBN 978-5-905695-82-7

CONTENTS

DOI 10.34660/INF.2022.45.49.125

农业反危机发展中的数字化

DIGITALIZATION IN THE ANTI-CRISIS DEVELOPMENT OF AGRICULTURE

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抽象的。农业产业获得了高速发展，但进一步的反危机发展是通过有效利用人工智能、自动化和数字平台，在应用最新科学成果和最佳实践的基础上提高劳动生产率和竞争力这将有可能使技术突破到一个新的水平，这决定了这项研究的相关性。作者指出，国内农业是建立在最大的肥沃土地储备之上的，而俄罗斯只有 3% 的农业组织使用数字技术，相比之下，在美国这个数字达到 60%，在欧盟国家 - 80%。本文致力于农业产业现代化和进一步发展的问题，这些问题基于软件和硬件的引入以及数字经济的发展：农作物和畜产品的农业生产技术手段，监测软件农民经济活动的结果，技术规划和管理的软件工具。

关键词：农业，危机管理，数字经济，有机农业

Abstract. *The agricultural industry has gained high rates of development, but further anti-crisis development is due to an increase in labor productivity and competitiveness based on the application of the latest scientific achievements and best practices through the effective use of artificial intelligence, automation and digital platforms that will make it possible to make a technological breakthrough to a new level, which determines the relevance this study. The author notes that domestic agriculture is based on the largest reserves of fertile land, while only 3% of agricultural organizations in Russia use digital technologies, for comparison, in the United States this figure reaches 60%, in the EU countries - 80%. The article is devoted to the problems of modernization and further progressive development of the agricultural industry, which are based on the introduction of software and hardware and developments of the digital economy: technical means for agricultural production of crop and livestock products, software for monitoring the results of economic activity of farmers, software tools for technological planning and management.*

Keywords: *agriculture, crisis management, digital economy, organic agriculture*

The history of the development of economic systems from the standpoint of the concepts of anti-crisis development reflects a wave-like forward movement, in which stages of development through crises are clearly distinguished, which allow economic systems to move from one stage of development to another. This transition is a process of transition to a new qualitative level, overcoming the period of instability, the systems develop mechanisms of protection from adverse environmental factors, introducing innovative management and self-organization tools, under the influence of which the transformation and adaptation of the structure of the economic system to new economic conditions takes place. The trends in the development of the digital economy are associated with an intensive large-scale digital transformation of technologies and tools of the theory and practice of anti-crisis management. A new stage in the digitalization of the economy is due to the merging of online and offline spheres, thanks to the introduction of sensor devices that allow you to analyze large amounts of information used in business. But the development of the digital economy gives rise to new problems and risks, which is an important area for making anti-crisis decisions. The progressive and advanced development of the agricultural industry based on innovative production technologies and the introduction of elements of the digital economy into all stages of the production process in order to optimize costs and reduce the cost of production of standard and organic products is an urgent research problem and an integral part of the socio-ecological and economic sustainable safe development of agriculture. In the Strategy of sustainable development of rural areas of the Russian Federation for the period up to 2030, "..."sustainable development of rural areas" means stable socio-economic development of rural areas, an increase in agricultural production, an increase in the efficiency of agriculture, the achievement of full employment of the rural population and an increase in standard of living, rational use of land". In accordance with the Decree of the President of the Russian Federation dated May 9, 2017 No. 203 "On the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030" "... the digital economy is an economic activity in which digital data is the key production factor, processing large volumes and the use of the results of the analysis of which, in comparison with traditional forms of management, can significantly increase the efficiency of various types of production, technologies, equipment, storage, delivery of goods and services" [7]. The current stage of transformation of agricultural production is characterized by the widespread use of the information approach, the transition from the stage of "post-industrial development" to the stage of "information society", characterized by the introduction of the achievements of science and technology into organizational processes, the use of information technologies that allow for economic growth, sustainable development and an effective system of social protection of the population, environmental safety. Digital technologies contribute to the control of the full complex cycle of the leading branches of agriculture - crop production or animal husbandry, as well as to move to a new level of development that optimizes labor processes, costs and allows increasing productivity and yields by several times. Undoubtedly, innovative digital technologies of the 21st century have a huge potential for the economic growth of agriculture through automation and modernization of management. The digital transformation of agricultural production is especially relevant, taking into account the complexity of production processes and high labor intensity.

It is necessary to respond in a timely manner and influence negative environmental factors in order to quickly return it to a stable state and gain the potential for economic efficiency, an increase in the quality of life of the population and environmental safety for the sustainable development of the agricultural industry. According to experts and analysts, further progressive development of the agricultural industry can only be considered subject to the introduction of new digital economy technologies that will increase the profitability of agricultural production through targeted cost optimization and more rational distribution of funds. Today, Russia ranks 41st in terms of readiness for the digital economy, respectively, this fact indicates that a significant gap from leading countries such as Singapore, Finland, Sweden, Norway, the United States of America, the Netherlands, Switzerland, Great Britain, Luxembourg, Japan does not allow for a big breakthrough in the agricultural industry [5]. In terms of innovative results of the use of digital technologies, the Russian Federation ranks 38th. But the conditions of modern reality and the active anti-crisis policy of the state contribute to and motivate business structures to invest and develop high-tech resources. The share of investment in the country's digital economy is 5% of GDP and is still weightless for demonstrating high rates of development, but it should be noted that Russia is in the top 5 countries with the best growth rate of the digitalization indicator. This is facilitated by the state policy of the state, adopted in 2017 by the program "Digital Economy" of the Russian Federation. In 2021, the execution of expenses for the implementation of the national project "Digital Economy" amounted to 95.8% of the planned value. The draft budget for 2022-2024 provides for 600 billion rubles for the implementation of the national program "Digital Economy", of which 342.1 billion rubles for financing the state program "Information Society" in 2022, 321.9 billion rubles - in 2023 and 314.6 billion rubles - in 2024.

According to the explanatory note to the draft federal budget for 2022-2024, in 2022 the budget expenditures for the project will amount to 210.7 billion rubles. [4].

Agriculture has ample opportunities and prospects for the introduction and use of digital technologies, despite significant specifics, which are due to the interdependence of technical processes and living organisms, the duration and complexity of the production cycle, the dispersion of controlled parameters and dependence on natural factors. But weighty arguments directly point to the urgent need for evolutionary sustainable development of agricultural production. This is the solution of the main tasks of state policy, the transition to a stable sustainable development of the Russian economy and overcoming the economic backlog from the advanced countries of the world; increase in gross grain harvest, productivity, livestock productivity by reducing labor intensity and increasing the productivity of agricultural production; conflict resolution to solve the above problems in connection with the use of technologies that have a harmful effect on the environment; improving the standard of living in rural areas. The main indicators of agricultural efficiency (table 1) demonstrate the following results.

Table 1.

Agricultural performance indicators

Index	2018	2019	2020
Revenue, billion rubles	8 492,3	9 099,7	10 233,4
Profitability %	13,3	12,1	14,6
Labor productivity %	103,6	106,7	99,5

Compiled by the author according to official statistical sources

Labor productivity indicators in agriculture, taking into account the specifics of production, generally correlate with the all-Russian trends, slightly exceeding them. Revenue and profitability show a growth trend, but the increase is due to government support and the implementation of government programs for concessional lending. The report "Indicators of the Digital Economy 2021" published the results of the index of digitalization and the intensity of the use of digital technologies in agriculture in 2019, which amounted to 23 conventional units (24 units in animal husbandry, 21 units in crop production). Agriculture in the field of mastering digital technologies demonstrates the minimum value, the average indicator for the Russian economy was 32 units. The level of innovative activity in the Russian Federation in 2020 was 10.8%, in 2019 -9.1%, for comparison, the same indicator in developed countries varies from 30% to 50%. While the digitalization of agriculture is proceeding at a very slow pace, according to various estimates, only about 10% of agricultural producers use digital technologies, while maintaining low levels of investment capital in IT, and it is observed that while the share of specialists in the emerging segment is naturally low, the share of specialists associated with intensive using ICT - 2.6% of the total number of people employed in the agricultural sector. Manufacturers are gradually introducing innovations into production, using individual elements, developers offer high-quality domestic IT solutions.

For the progressive development of the agricultural sector, higher growth rates of all financial and production indicators are required. According to the analytical center of the Ministry of Agriculture, about 40% of the crop is lost in crop production at various stages of work. According to the Fund for the Development of Internet Initiatives, digitalization covers a maximum of 10% of the acreage in the crop growing segment". In Russia there is a large groundwork for the introduction of digital agriculture technologies. The introduction of information technologies, intellectualization and robotization of mobile energy and transport-technological means of the agro-industrial complex will significantly increase productivity, labor productivity and environmental safety, as well as reduce crop losses and energy and material consumption by 2.5-3 times. This is shown by the experience of the USA, Canada and Europe, which are already using "smart" technologies for agriculture [2]. The Russian government pays special attention to the modernization of agriculture. In 2019, the Ministry of Agriculture of the Russian Federation developed the departmental project "Digital Agriculture", implementation deadlines: 01.01.2019-31.12.2024. Its main goal is the digital transformation of agriculture through the introduction of digital technologies and platform solutions to ensure a technological breakthrough in the agro-industrial complex and achieve productivity growth for "digital" agricultural producers. The objectives of the project are presented in the table.

Table 2.

Goals of the agro-industrial complex digitalization project

Indicators		**2020**	**2021**	**2022**	**2023**	**2024**
Share of data included in the digital platform	Agricultural land	75	90	100	100	100
	Draft and productive livestock	35	50	75	90	100
	Agricultural machinery	60		90	100	100
Labor productivity growth rate		125	150	175	190	200
Share of electronic contracts with recipients of subsidies		25	50	75	100	100
Share of regions that have implemented digital planning		6	29	59	100	100
The share of specialists who have been retrained to work with digital technologies		15	20	30	40	50

Source. Agroinvestor.

The project includes the following stages. The *first stage* is the development and implementation of the national platform for digital state management of agriculture "Digital Agriculture", integrated with other specialized sub-platforms at the regional and municipal levels. The *second stage* is the development and implementation of the "Agrosolutions" module of the Digital Agriculture national platform. The *third stage* is continuous training and retraining of agricultural specialists in order to develop their competencies in the field of the digital economy. Within the framework of this project, there are the following sub-projects: - “Efficient Hectare”, integrating existing databases on agricultural land with the databases of Rosreestr and Roskosmos, which will help ensure land verification and effective planning and cultivation of crops throughout Russia. Remote sensing of the earth allows you to verify the earth from space and predict the gross harvest and grain yield using space data. - “Electronic contracts for recipients of agricultural subsidies”, the creation of a single super service for agricultural producers who receive state support in the form of federal and regional subsidies, and related services: loans, insurance, leasing services.

The active development and use of the possibilities of the digital economy is also evidenced by the developed projects in the field of agricultural exports, namely the project of integration into the commodity and logistics infrastructure, which will allow linking plans for the production of crops with the plans for the transportation of Russian railways, and evenly carry out the transportation of export products for export and to places of processing, consumption. The national project “distance learning environment” involves the placement of accessible content for agricultural producers who will train agricultural specialists on this platform with new skills and competencies.

However, in order to obtain the maximum effect, it is important to introduce not only individual elements of digitalization and smart technology, but also integrated solutions for automating processes in the agro-industrial complex, taking into account the change in people’s consciousness in the urgent need for healthy nutrition, changes in the consumer basket due to the increased worldwide demand for high quality products and organic products. The task of the state is determined by the creation of optimal regulatory regulation for the development of digitalization and its application, stimulating commercial organizations that introduce innovations.

The new paradigm of sustainable development is confirmed by a number of important regulatory acts in the field of anti-crisis management, including Decree of the President of the Russian Federation of July 21, 2016 No. scientific and technical support for the development of agriculture and reduction of technological risks in the food sector; development and implementation of measures aimed at the creation and implementation until 2026 of competitive domestic technologies based on the latest achievements of science [6].

According to forecasts, the digitalization of agricultural production in the Russian Federation should provide for the next period: an increase in crop and livestock production up to 1.5 times in 2025; improving product quality; reducing the labor intensity of agricultural production by 1.5 times in 2025; cost reduction and reduction of energy and material consumption; promotion of automation, robotization, intelligent machine technologies. According to research by Goldman Sachs, the application of new generation technologies can increase the productivity of world agriculture by 70% by 2050 [1]. Today, the indicators of the agricultural industry reflect good results, as the production index in agriculture in 2020 reached 101.5%. The labor productivity index in agriculture for 2012-2019 was 139.2%, while the general one was 114%. But the further driver for the development of the agricultural industry is the introduction of innovative digital technologies that are being actively implemented and have proven their relevance during the pandemic. The digitalization of agriculture will also solve the problem of food security and the production of environmentally friendly products. The Strategy for Scientific and Technological Development of the Russian Federation was approved by Decree of the President of the Russian Federation of December 1, 2016 No. 642, it notes an increase in anthropogenic pressures on the environment to a scale that threatens the reproduction of natural resources, and the growth of risks for the life and health of citizens associated with their inefficient use. Therefore, among the priorities and prospects for the scientific and technological development of the Russian Federation in the next 10-15 years, the transition to a highly productive and environmentally friendly agricultural economy is named [8].

In the modern economy, the complexity of organic business is the high cost of production, and digital technologies can play a key role in reducing it, and will make it possible to widely popularize the consumption of organic products among the population. Currently, the production of organic products, due to the high final price, is focused on a narrow segment of Russian consumers and for export, and a new segment is actively developing - baby organic food, for consumers with an average income. Digital transformation and robotization of crop production will replace unskilled labor, the most routine and labor-intensive operations, increase the efficiency of decision-making in agronomy, forecasting, increase the accuracy of processing a large amount of data, which ultimately ensures compliance with technological discipline, optimization of the use of resources used at each stage of production and general management of the agricultural organization [3]. Based on the data of the Analytical Center of the Ministry of Agriculture of Russia, indicators of the development processes of digital agriculture in Russia are proposed (Table 3).

Table 3.

Indicators of the development of agriculture in the Russian Federation

Indicators of development	2018	2021	2024
Share of coverage of agricultural land by various communication technologies	Less than 10%	30%	70%

The volume of products sold on electronic platforms	Less than 10%	50%	100%
The share of agricultural producers using the Internet of Things, precision farming, digital herd, smart greenhouses, etc.	Less than 1%	20%	60%
Creation of end-to-end open information flows for agricultural management	Creation of the Unified Federal Information System on Agricultural Lands	Creation of a prototype platform «digital agriculture»	Creation of a «digital agriculture» platform within the framework of the current legislation
Increasing the competitiveness of the industry	$20 billion	$30 billion	$45 billion
To increase jobs		10%	20%

Source Impact of the digital economy on agricultural development Sustainable agriculture 3(39)/2018

Thus, the solution of the main goals in the field of sustainable development of digital agriculture can satisfy the food needs of the population at the expense of the economic factor, increase the satisfaction of social and cultural benefits, and solve many environmental problems. This requires a number of basic conditions - the availability of appropriate infrastructure, financial accessibility; the level of education; high level of skills in the use of digital technologies; a cultural environment that encourages rural entrepreneurs to introduce digital technologies and increase innovative activity and uniformity of innovative development; institutional support. The potential benefits of digitalization of the agri-food industry are convincing. However, their implementation requires major changes in agricultural production systems and has barriers in the current period of time, such as the lack of ready-made integrated digital solutions on the market, which implies the need for additional integration of individual digital tools into a single system. The main digital technologies that domestic agricultural producers use today are developed abroad; high costs for the creation of a national digital infrastructure, as well as the formation in each subject of the federation of a profile information system, its integration into other information bases. But these barriers are temporary and can be overcome, since in Russia the trends in the use of digital technologies correspond to global trends, and the digitalization of the agricultural industry can provide significant economic, social and environmental benefits. The priority areas for the further progressive development of the agricultural sector are: analysis of data on digital technologies and digitalization at the level of subjects; creation of sustainable business models that provide viable digital solutions for the involvement of small and medium-sized businesses in the agricultural industry; monitoring the adoption of digital technologies through an index that reflects the development of digital agriculture in the context of cultural, educational and institutional dimensions.

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DOI 10.34660/INF.2022.80.19.126

现阶段反制裁背景下的俄罗斯汽车工业和信息通信技术
AUTOMOTIVE INDUSTRY AND INFORMATION AND COMMUNICATION TECHNOLOGIES IN RUSSIA AT THE PRESENT STAGE IN THE CONTEXT OF COUNTER-SANCTIONS

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抽象的。　汽车操作系统和软件涵盖具有竞争场景、驱动因素和制约因素的业务观点，以及行业动态、某些增长机会以及与产品类型和应用程序相关的市场份额。　该报告与主要参与者一起分析了市场状况的最新发展趋势和关键统计数据。　对汽车操作系统和软件市场报告的全面分析侧重于销售、增长模式、市场趋势和全球行业总量。　该报告维护品牌知名度并评估行业进入、分销渠道、分销商和波特五力分析的风险和障碍。　在本文中，作者分析了反制裁背景下俄罗斯汽车行业对 ICT 的使用。

关键词：车载电子、Autonet、操作系统、汽车工业、导航器。

Abstract. *Automotive Operating Systems and Software covers business perspectives with competitive scenario, drivers and constraints, as well as industry dynamics, certain growth opportunities and market shares associated with product type and applications. The report provides an analysis of the latest development trends and key statistics on the state of the market with key players. A comprehensive analysis of the Automotive Operating Systems & Software market report focuses on sales, growth patterns, market trends, and global industry* *total volume. The report maintains brand awareness and assesses the risks and barriers to industry entry, distribution channels, distributors and Porter's five forces analysis. In this article, the author analyzes the use of ICT in the Russian automotive industry in the context of counter-sanctions.*

Keywords: *on-board electronics, Autonet, operating system, automotive industry, navigator.*

Today, the on-board electronics of a modern car is a whole system consisting of many functional elements. These include all kinds of sensors, controllers, etc. To exchange information between them, it was necessary to create a single bus. In the mid-80s of the last century, Bosch proposed a new concept for the CAN (Controller Area Network) network interface. In the 2000s, it was replaced by a new high-speed (up to 10 Mbit / s per device) network protocol for cars, developed by the worldwide FlexRay consortium. FlexRay controllers are built with full vehicle digitalization in mind. Today you won't surprise anyone with an "electronic gas pedal", and tomorrow we will get a "digital steering wheel" (Steer-by-wire) and electronic brake control (Brake-by-wire). As a high-speed bus for transmitting bulk data (audio, video, etc.), modern cars use the MOST (Media Oriented Systems Transport) bus, which is capable of transmitting data at speeds up to 21.2 Mbps over an optical cable, which has increased noise immunity, which is very important for automotive electronics.

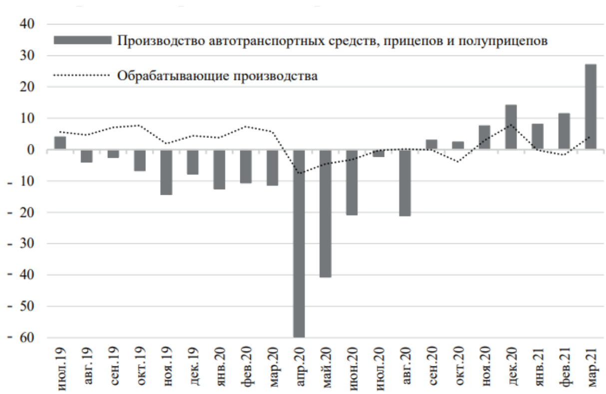
The purpose of this article is to study the automotive industry and ICT in Russia at the present stage in the context of counter-sanctions.

The global automotive industry is gradually experiencing a transformation based on digital technologies. According to Frost & Sullivan analysts, in 2015-2023, the cost of digitalization in the industry will more than double, reaching 82 billion dollar. The total volume of digital technologies used in the global automotive industry will increase by 2025 by an average of 16.1% annually, reaching 168.8 billion dollars [6].

In the structure of these expenses, the largest items are Industrial Internet of Things (30% of total investments), Connected Cars and Internet of Things (10%), Security Systems (7%). The most promising and fastest growing segment is the development of "big data" processing technologies: if today it accounts for 500 million dollars (2% of total costs), by 2025 spending on this segment will amount to $10.5 billion. The digital retail segment will also develop dynamically. In the context of the development of the latter, one should expect increased competition between technology companies and dealers. Experts expect that by 2025 the number of dealers in the market will fall to 30-50%.

The roadmaps of the largest transnational corporations in the automotive industry, first of all, involve the development and development of digital services, then (from the beginning of the 2020s) - the formation of business models such as "car as service", and, finally, by 2025 – the transition to the implementation of a model called "Mobility as a Service".

In the automotive industry, as in other Russian industries, the current crisis has not only led to the emergence of new problems, but has exacerbated pre-existing problems and contradictions. At the same time, the decline in production in the industry began in the third quarter of 2019 (see fig. 1).



Source: Rosstat

Figure 1. *Monthly dynamics of production in 2019–2021 in the automotive industry and the manufacturing industry as a whole - an increase compared to the corresponding month of the previous year, %*

According to AC&M research, the market for technology for vehicles connected to the global network is growing rapidly. By 2023, there will be at least 2-3 million of these vehicles on Russian roads.

This market consists of several segments: entertainment, security, driver condition monitoring, smartphone control, control automation systems, diagnostics, voice control.

In the context of counter-sanctions after the departure of foreign companies, Yandex specialists consider the automotive market as a strategic one and are actively developing their products in this area, for example, Yandex.Navigator. The Russian IT company began integrating its services into vehicles from leading manufacturers in 2015.

First, Yandex.Navigator appeared in Honda CR-V cars. Then, in 2016, Toyota Camry Exclusive became the first model on the Russian market for which several services ("Navigator" and "Browser") became part of the standard equipment at once. In March 2017, Yandex signed a memorandum of cooperation with "AvtoVAZ" [4].

The agreement involves the joint work of "Yandex" specialists and the automaker in several areas: the creation of telematic services, the integration of "Yandex" services into car multimedia systems, and work on projects in the field of cars connected to the global network.

The software must take into account all the features of a particular model in order to make the movement around the city comfortable and safe. Each car has its own technical features that software manufacturers need to take into account.

The Russian company Cognitive Technologies develops and implements software. One of the key areas of work is the development of a self-driving truck based on the "KamAZ" chassis.

Now Cognitive Technologies is developing ADS (advanced driving system - vc.ru) C-pilot, which corresponds to the second level according to the international classification SAE International (Society of Automotive Engineers). At this level, the system provides partial automation of the processes of taxiing, acceleration and braking.

By 2023, the company plans to create a fully autonomous vehicle control system.

Now C-Pilot is able to accurately recognize the main objects of the road scene: road signs, cars and pedestrians, including those partially obscured by other objects.

The company pays special attention to system testing. One of the goals is to collect as much data as possible about rare traffic situations and weather conditions (for example, snow and ice in June). To do this, Cognitive Technologies seeks help from volunteers who send data from video recorders [5].

But video materials are only a starting point for modeling new situations. Tests of the system on the ground are critically needed, where it is possible to collect high-quality data on road conditions that are close to real.

To service cars connected to the network, the manufacturer can produce components for several years, or even decades. Therefore, the operating system for such vehicles must be backward compatible and have a long life cycle.

In addition, by 2035 the world market of "Avtonet" will amount to 12.7 trillion dollars, the Russian one - 1.17 trillion dollars. The corresponding forecasts are contained in the road map prepared as part of the NTI project. The "Autonet" market consists of three areas: telematic transport and information systems, intelligent urban mobility, and transport and logistics services.

The Autonet market is divided into three areas: telematic transport and information systems (platforms, control systems, vehicles), intelligent urban mobility and transport and logistics services.

Markets for smart urban mobility and transport and logistics services meet the needs of end users and are at the last stage of the value chain. But the market for telematic transport and information systems, in fact, is a market for technological solutions used both for the first two market areas and for other industries.

The "Autonet" market ecosystem includes market consumers and service operators/aggregators, including service platform operators of new business models. The latter include consumer services in vehicles, insurance telematics, infotainment content, vehicle monitoring, security and search services, technical assistance and response in case of accidents, video surveillance and registration, parking, collection of tolls, maintenance, outsourcing of transport and logistics services, freight forwarding, route forwarding, warehouse rental, rental and short-term rental of vehicles, on-demand services, search for fellow travelers, multimodal routes and using online ordering. The ecosystem also includes providers of supporting infrastructure and services (cartography, GNSS, payment systems, V2X infrastructure, ITS infrastructure, energy and housing and communal services infrastructure, road and roadside infrastructure, multimodal transport and logistics centers, warehouses, terminals), government regulators (FOIVs and subordinate organizations, regulatory authorities, etc.), manufacturers (car manufacturers, developers of personal vehicles, equipment, systems and components for vehicles, IT platforms, etc.).

Analysis of the market segment "Autonet" "Telematic transport and information systems" shows an uneven level of technology development in various sub-segments. On the one hand, thanks to public infrastructure projects and initiatives, a high level of penetration of connected devices in vehicles is ensured. On the other hand, the functions of different devices partially overlap each other, but none of them has access to all data groups.

Thus, we can conclude the following.

The Russian transport telematics market is highly fragmented: it has a large number of devices and players providing complex and expensive services that drivers want to receive for free. Automakers are restricting access to factory systems data, while insurance companies, dealers, services and fleet management operators are offering their own devices and platforms in addition to systems required by law. Fragmentation creates access risks, increases cost and complexity for the driver. You must have a minimum of three devices with communication channels required by law in addition to fleet monitoring systems, cargo monitoring systems and traditional CB radios.

Due to various legal requirements, it is difficult to combine all devices into one. Competition is not the only driver of fragmentation. The disparate regulation of devices and the types of vehicles on which they must be installed makes the combination of these devices economically unprofitable. The most requested feature of the standard vehicle system is the integration with a smartphone, which allows you to combine the "zoo of technologies".

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DOI 10.34660/INF.2022.98.65.127

服务业在城市环境生态系统中的作用
THE ROLE OF THE SERVICE SECTOR IN THE ECOSYSTEM OF THE URBAN ENVIRONMENT

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注解。 文章提出了服务业在城市生态环境形成中的作用问题。 城镇化的快速发展导致城镇开发速度失控，常住地和就业地人口所需服务供需矛盾突出。 由于单一行政区划范围内的利益分配不均，纹章空间不能满足居住在其中的人们对舒适度的期望。 由于缺乏明确的标准和评估标准，无法充分确定满足人口基本需求的必要服务的发展水平/

关键词：服务业、城市、生态环境、人口、生活质量。

Annotation. *The article raises the problem of the role of the service sector in the formation of the urban eco-environment. The rapid development of urbanization leads to an uncontrolled increase in the development of urban areas, creating a disparity in the supply and demand of services needed by the population in places of their permanent residence and employment. As a result of the uneven distribution of benefits within the boundaries of a single administrative division, heraldic spaces do not meet the expectations of comfort for the people living in them. The lack of clear standards and evaluation criteria does not allow one to fully determine the level of development necessary services that meet the basic needs of the population/*

Keywords: *service sector, city, eco-environment, population, quality of life.*

The service sector is an important component of the quality of life of a modern person and the urban environment. Indicators of its development are among the indicators that allow assessing the level of quality of life of the population, the state and dynamics of infrastructural and economic transformations taking place in the ecosystem of the urban environment. According to the UN, the number of megacities in the world with a population of more than 10 million were 34persons in 2020. This number may grow up to 43 by 2030 [1].

In the Russian Federation, the rapid development of large cities (with a population of more than 500 thousand inhabitants) with multi-storey housing complexes, for obvious reasons, primarily reflects the interests of developers. At the same time, the question of the comfort of urban space, the quality of the ecosystem of the urban environment, is pushed into the background.

For example, only in Novosibirsk, with a population of 1,620 thousand citizens, at the beginning of 2022, 133 high–rise buildings were built and put into operation, which is 20% more than in 2020. As in 2020, in 2021, almost half of these new buildings (73 houses with a total area of 729 thousand square meters) belong to microdistricts of mass development [2].

Unequal conditions for the distribution of benefits of urbanization form urban spaces that do not meet the expectations of the population about the level of comfort of places of residence and employment.

The implementation of the priority project "Formation of a comfortable urban environment" for 2018-2022, approved by Order No. 691 of the Ministry of Construction and Housing and Communal Services of the Russian Federation dated April 06, 2017 [3], should significantly help to solve this problem. However, the lack of clear criteria does not allow us to fully assess the level of development of the comfort of urban spaces as a whole, although it makes it possible to determine the improvement of individual courtyards. In the context of the study of the directions of the state of the ecosystem of the urban environment as a whole, this is clearly not enough.

In our opinion, the service sector is an important element of the ecosystem of the urban environment, since it is able to activate entrepreneurial activity: it allows entrepreneurs to form initial capital, to meet the growing needs of the population in a variety of services, it can serve as a point of attraction for the concentration of financial, labor and other resources, to influence the development of the modernization of the economy, to free up the free time of citizens necessary for them to effectively use their forces in other areas of production.

At the same time, the maximum effect of the influence of the service sector on the development of the ecosystem of the urban environment can be achieved by applying the approach of cooperative-network interaction of subjects, when service companies are geographically close to each other and consumers, which allows them to use the same resources, quickly supply each other with raw materials, products, exchange tasks, i.e. interact (Figure 1).

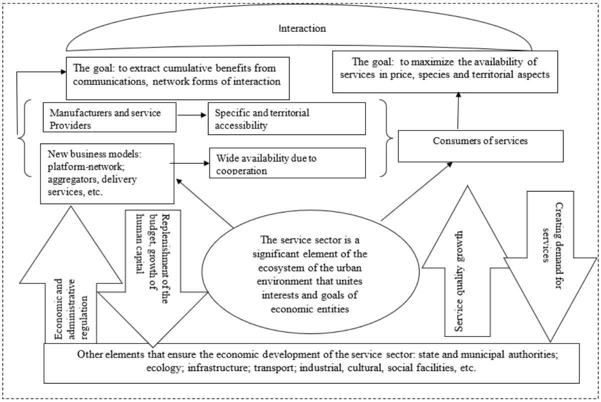

Figure 1. *The system structure of the service sector based on the approach of cooperative-network interaction of subjects*
Source: the figure is compiled by the author.

As a unit of measurement of the strength of interaction between producers and consumers of the service sector (key market participants) in the study of the urban environment, we applied an integral indicator of the completeness of services, having previously divided the territory of Novosibirsk into equal parts (according to V. Kristaller 's theory), hexagonal areas of 500-meter radius. As a result, 513 areas were obtained, in which the number of operating enterprises in the service sector was calculated (Figure 2). Further, the districts of Novosibirsk were ranked according to the level of completeness of the service sector (Figure 3).

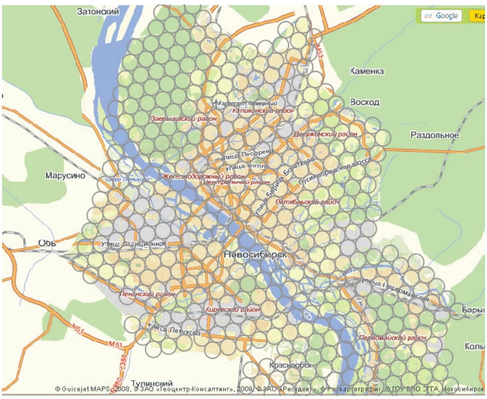

Figure 2. *Continuous division of Novosibirsk into 500-meter areas*
Source: the figure is compiled by the author.

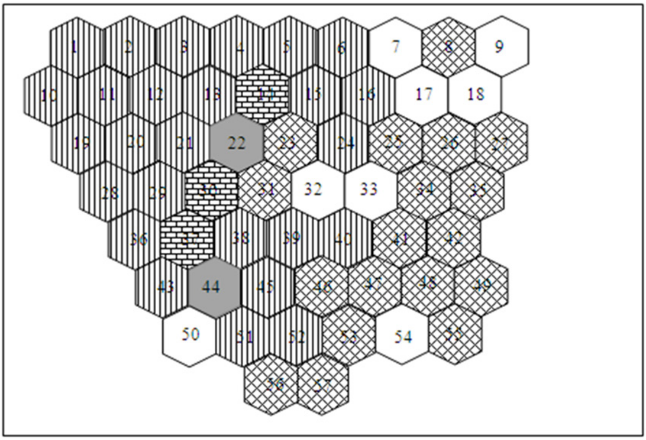

Figure 3. *An example of calculating the level of integral completeness of services in 500 areas of the Oktyabrsky district of Novosibirsk (as of January 1, 2018). Source: the figure is compiled by the author.*

It should be noted that the classification group of 10 types of paid services collected by us as an indicative standard is not fully justified, but during the implementation of the experiment, it proved the effectiveness of the developed by us methodological approach, which can be used to study any types of services that are identified as significant for the ecosystem of the urban environment.

The quantitative criterion for assessing the degree of development of the service sector, which we obtained as a result of applying a methodological approach to assessing the level of development of the urban environment, the indicator of completeness, allows us, unlike existing gross measures, to quantify the objective level of provision of city residents in each of the 513 areas with services in specific and territorial aspects, to determine the level of geographical proximity of enterprises providing services to each other and to potential consumers. During the monitoring process, this allows you to determine:

1) the following categories: “Leaders”, “Following the leaders”, “Medium” and “Lagging” territories of the urban environment in terms of the level of development of the service sector (Figure 4);

2) points of application of the concept of “cooperative-network interaction of subjects”, when building plans for socio-economic development of the ecosystem of the urban environment in the conditions of digitalization of the economy, when the “new management systems are being formed, in which the partnership interaction of manufacturers, developers, logisticians and active consumers becomes the main thing” [4, p. 8].

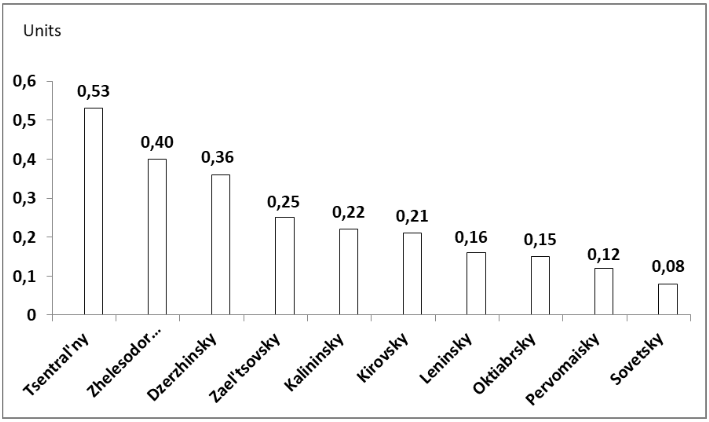

Figure 4. *Ranking of districts of Novosibirsk by the level of the integrated completeness of consumer services indicator as of January 1, 2018.*
Source: the figure is compiled by the author.

To this end, we plan to use the achievements of scientists and specialists in the theories of cooperative network interactions in modern conditions in the future research.

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DOI 10.34660/INF.2022.49.65.128

加密货币作为洗钱非法收入的工具

CRYPTOCURRENCIES AS A TOOL FOR LAUNDERING ILLEGAL INCOME

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抽象的。　随着世界经济和国际贸易的发展，经济的影子部门也在发展，在数字化的背景下，影子部门也在采用包括加密货币在内的最新技术呈现出新的形式。　加密货币在经济和金融技术领域是一个相当新的现象，但它迅速渗透到人们的日常生活中需要对该活动领域进行仔细研究。　目前，没有充分涵盖使用加密货币作为犯罪手段以及在全球经济犯罪化背景下的话题。 这项工作包含对加密货币的本质和特征的分析，并在经济犯罪化的背景下考虑加密货币。

关键词：加密货币、区块链、法律法规、洗钱、加密犯罪、影子经济。

Abstract*. Along with the development of the world economy and international trade, the shadow sector of the economy is also developing, which, in the context of digitalization, is also taking on new forms, using the latest technologies, including cryptocurrencies. Cryptocurrency is a fairly new phenomenon in the field of economics and financial technology, but its rapid penetration into a person's daily life requires a close study of this field of activity. At the moment, the topic of using cryptocurrency as a means of committing crimes and in the context of the criminalization of the global economy is not sufficiently covered. This work contains an analysis of the essence and features of cryptocurrencies, and also considers cryptocurrencies in the context of the criminalization of the economy.*

Keywords: *cryptocurrency, blockchain, legal regulation, money laundering, cryptocrime, shadow economy.*

The beginning of the XXI century is characterized by the dynamic development of technologies and innovations. Innovations affect the way of life of every modern person and transform his needs, in accordance with the realities that have arisen. Information technologies penetrate almost every field of activity, gaining more and more popularity and acquiring great importance in the economic development of society and the state. The new conditions of the digital economy required a modern solution in the field of financial technologies, the transformation of traditional money was required. As a result, the cryptocurrency has become a revolutionary phenomenon in this context.

The first concepts of cryptographic finance appeared at the end of the 20th century, but they did not materialize in those years, leaving only a theoretical basis for future transformations. At that time, the scientific base of such a discipline as cryptography was mainly developing, which in the future will form the basis of the idea of developing cryptocurrencies.

Cryptocurrency is a digital currency within a decentralized payment system, the transactions of which are cryptographically protected.

The basis for the functioning of cryptocurrencies is the blockchain, which is a continuous connected chain of blocks with information that provides reliable storage of records of all transactions made on the network.

Attempts to define cryptocurrency are also found in legal acts, including Russian ones. In 2020, Federal Law №259 “On Digital Currency” was adopted, which developed the legislative framework for the circulation of digital financial assets and digital currency in the Russian Federation. In accordance with №259-FZ of the Russian Federation “On Digital Currency”, a digital currency is a set of electronic data (digital code or designation) contained in the information system that are offered and (or) can be accepted as a means of payment that is not the monetary unit of the Russian Federation, the currency of a foreign state and (or) an international monetary or accounting unit, and (or) as an investment and in respect of which there is no person liable to each owner of such electronic data, with the exception of the operator and (or) information system nodes obliged only ensure compliance with the procedure for issuing these electronic data and the implementation of actions in relation to them to make (change) entries in such an information system with its rules.

Since its inception in 2009, the cryptocurrency market has undergone many shocks, including sharp rises and falls, but it is necessary to note the general trend of development and rapid growth of the market, the capitalization of which at its peak was about $ 3 trillion, and in the future, the market potential is even more significant. The cryptocurrency market is only at the initial stages of its formation, however, in such a short period, it has managed to gain the trust of users. Cryptocurrency has firmly established itself as a reliable tool for storing, accumulating and transferring funds, becoming an integral part of the life of a considerable number of people in the world.

The rapid development of financial technologies, the digitalization of the economy, the evolution of payment systems based on crypto-currencies and the lack of a common understanding on the regulation of the crypto-currency sphere have allowed criminal elements to actively involve crypto-currencies in criminal schemes for the legalization of illegal income.

Money laundering (legalization of proceeds from crime) is giving a legal appearance to the origin of funds by transferring, converting or exchanging them, as well as hiding or concealing the true nature and source of the origin of funds if the funds were obtained as a result of criminal activity.

The money laundering process is quite structured and can be divided into 3 stages:

Accommodation. The stage at which illegal income is transferred to financial institutions through transfers, deposits, etc. The introduction of "dirty" money into the financial system, for example, in a business based on the use of cash;

Stratification. At this stage, there is a separation of income received from illegal activities from their source through a complex system of multi-level financial transactions. Moving illicit funds to make them more difficult to trace. The use of cryptocurrency is one of the ways to hide the origin of "dirty" money;

Integration. At this stage, funds are legalized through the conduct of outwardly legal transactions to disguise the source of criminal proceeds.

In an attempt to find ever more sophisticated ways to launder money, attackers are resorting, among other things, to the latest technologies, such as cryptocurrencies. Money laundering using cryptocurrencies follows the general placement-stratification-integration pattern, however, it has a number of characteristic features:

One of the main principles of cryptocurrencies is anonymity. For this reason, the placement stage in the process of legalizing criminal proceeds through cryptocurrency may be absent;

Unlike traditional bank accounts, cryptocurrency wallets are created instantly and can be created and used in the scheme in almost unlimited quantities;

The volatility of cryptocurrencies can be used as an argument when trying to explain the sources of income.

The main advantage of cryptocurrencies in the legalization of income is undoubtedly the speed of transactions and the low commission for these transactions, especially against the background of traditional bank transfers, where the commission can reach several percent of the amount, and with a large number of transactions, a significant part of the initially “laundered” amount is lost.

Also, speaking about the advantages, it is necessary to note the anonymity of a number of cryptocurrencies. If in such cryptocurrencies as bitcoin it is quite simple, knowing the address of the wallet, to find out its balance, the source of origin of funds on the wallet, as well as all the transactions made by this wallet, then with such cryptocurrencies as Monero or Zcash such information cannot be tracked.

At the same time, most cryptocurrencies do not sufficiently meet the requirements of anonymity, which is so necessary in the case of legalization of income. Most cryptocurrencies are created on the basis of an open blockchain, information about operations in which is publicly available, where every Internet user, if desired, can trace the path of each bitcoin from the moment it was mined. The argument in favor of using cryptocurrencies is, of course, the anonymity of decentralized electronic wallets, which, unlike the same bank accounts, do not identify the identity of their owner in any way.

Considering cryptocurrencies in the context of the legalization of illegal income, it is necessary to mention technologies such as cryptocurrency mixers, their purpose is to hide the source of origin of the cryptocurrency, this is achieved by dividing the entire amount into many small parts and multiple transfers to the addresses of other wallets. After that, it is almost impossible to trace the source of funds.

Currently, it can be said that cryptocurrency is becoming an increasingly important tool for criminal elements in their illegal activities. There are 3 main ways of using cryptocurrencies for criminal purposes: the use of cryptocurrencies as a means of payment for illegal trade, theft of digital assets and the legalization of criminal proceeds.

The growing role of cryptocurrencies in the criminalization of economic processes is due to an underdeveloped system of legal regulation and the lack of international cooperation in the field of combating criminal activity in the field of cryptocurrencies. To minimize cryptocrime, states first need to develop an effective model of legal regulation and develop a unified control mechanism.

Exploring cryptocurrencies in the context of new challenges and threats and analyzing methods to counter the threats of using cryptocurrencies as a tool for laundering illegal income, the following conclusions were drawn:

Cryptocurrency is a high-tech element of innovative developments in the field of financial technologies, which contains many risks and threats to the security and stability of the national and global economy.

The following features of cryptocurrencies have been identified that allow objects of the shadow economy to use them as a tool: transaction speed, complete anonymity and the inability to track the operations of a number of cryptocurrencies, the size of commissions for transactions, the convenience of illegal withdrawal of funds abroad through cryptocurrencies, the lack of legal regulation of cryptocurrencies.

The lack of a common understanding of the essence of cryptocurrencies and a variety of approaches to its definition in the developed countries of the world. In the US, cryptocurrencies are recognized as a digital asset, in Japan as a means of payment, in Canada they are recognized as property, and in Bulgaria as a financial asset. Without the unification of approaches, it is almost impossible to effectively counter threats to international economic security.

The lack of legal regulation creates fertile ground for the criminalization of the cryptocurrency sphere and their use in criminal activities.

Supervisory authorities are obliged to improve software and hardware that meets modern threats.

Cryptocurrency needs full legalization, since until it is fully part of the legal financial system of countries and is not an object of civil law relations, its use as a tool for committing crimes, including money laundering, will increase.

Thus, the risks associated with the use of cryptocurrency for the purpose of laundering illegal proceeds are complex, and the lack of legal regulation and countermeasures will only aggravate the situation and may lead to serious consequences and the threat of even greater criminalization of economic relations. As countermeasures, it is necessary to introduce requirements for mandatory identification of users from virtual asset service providers, establish a regime for controlling the conversion of cryptocurrency into fiat currency, introduce administrative and criminal liability for violations of the cryptocurrency circulation regime, and license participants in professional activities related to the creation and circulation of cryptocurrency, as well as the formation of a taxation regime for digital assets.

The fall of the New York crypto exchange and its connection with Ukrainian crime is beginning to undermine the confidence of global financial players in the very approach of using cryptocurrencies as the main means of payment for latent and global players in global financial markets.

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DOI 10.34660/INF.2022.73.16.129

人力资源品牌的发展作为组织吸引力和人力资源有效形成的工具

DEVELOPMENT OF THE HR BRAND AS A TOOL FOR THE ATTRACTIVENESS OF THE ORGANIZATION AND EFFECTIVE FORMATION OF HUMAN RESOURCES

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抽象的。　　分析了俄罗斯联邦的劳动力市场，确定了劳动力需求和雇主的建议。　在选择雇主时，年轻专家的需求会被排名。　提出了与潜在员工合作的人力资源品牌发展计划，这有助于通过　EVP　吸引、熟悉价值观，并为起始职位形成忠诚的人才储备。

关键词：人力资源品牌、人事、管理、人员潜力、EVP（员工价值主张）。

Abstract. *The labor market of the Russian Federation was analyzed, the demand for labor and the proposals of employers were identified. The needs of young specialists are ranked when choosing an employer. A program for the development of an HR brand for working with potential employees is presented, which contributes to attraction, familiarization with values through EVP and the formation of a loyal personnel reserve for starting positions.*

Keywords: *HR brand, personnel, management, personnel potential, EVP (Employee Value Proposition).*

Currently, in the context of a volatile economic and political environment, a demographic gap, a lack of qualified personnel, a coronavirus pandemic and a number of other factors, the labor market is undergoing a transformation. All these factors have forced people to reconsider their life priorities, and the requirements of employers for job applicants have changed. Most companies have changed the format of work, mastered new areas and adapted to modern realities. As a result, the situation on the labor market has also changed. Based on data from the HeadHunter website (hh.ru), we will analyze how much the demand for personnel from employers in all professional areas has changed in 2021–2022. As seen in fig. 1, in 2022 there is a decrease in demand for personnel relative to all professional industries.

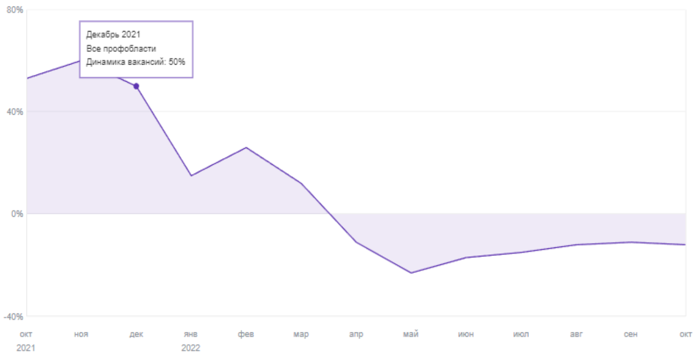

Figure 1. *Analysis of demand for personnel for 2021–2022*

An analysis of the number of posted resumes (Fig. 2) showed that there were also fewer of them. From this we can conclude that now it is impossible to accurately define the current situation as “the market of only the employer” or “the market of only the applicant”. However, at the same time, qualified sales managers, developers, IT purchasing managers are still in short supply in the labor market, which means they can dictate their terms and choose from the available offers.

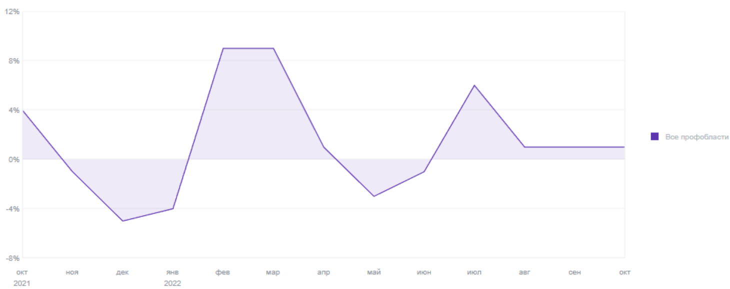

Figure 2. *Analysis of posted CVs for 2021–2022*

There are partial changes, that is, among the so-called “white collar” competition has increased, the number of vacancies has decreased due to an oversupply of candidates. While for blue-collar workers it has significantly decreased, here potential employees can choose the best working conditions for themselves, as the demand for these professions from employers is growing, and the number of relevant specialists is decreasing.

Let’s analyze the dynamics of hh.index. It shows how many people are currently applying for one vacancy in various professional fields (Fig. 3).

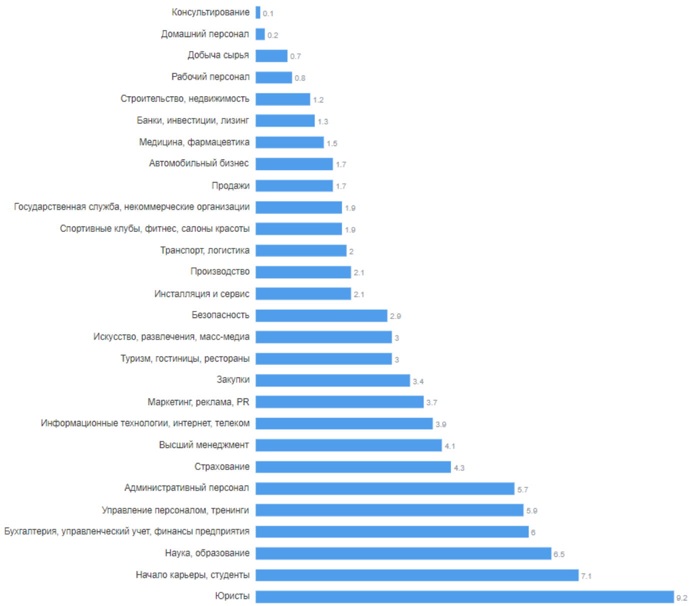

Figure 3. *Number of people per vacancy in various professional fields*

Based on the data, we can conclude that the highest level of competition per vacancy is in the legal, scientific fields, among accountants and young professionals who have just entered the labor market. At the same time, the number of applicants in the workforce, raw materials extraction and consulting has declined markedly.

If we consider the structure of vacancies and resumes by professional areas, we can notice the following trend (Fig. 4, 5).

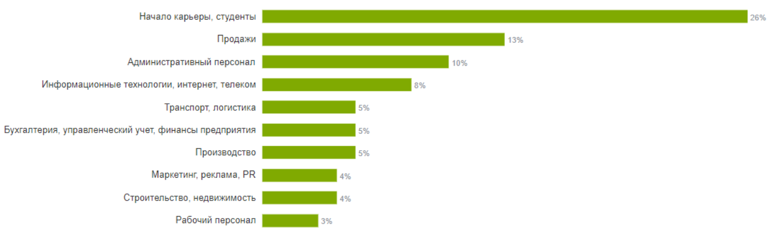

Figure 4. *Number of posted CVs by industry, %*

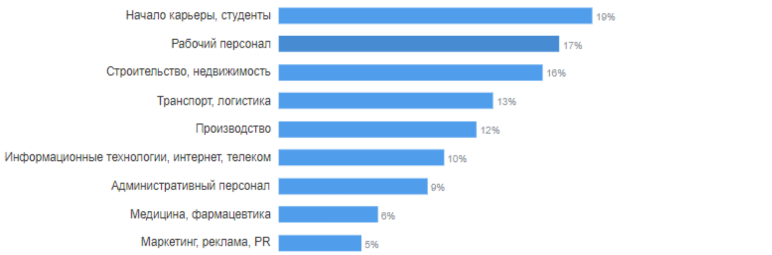

***Figure 5.** The need of employers for personnel by industry, %*

When comparing the graphs, we can conclude that the most popular at the moment are those areas where the number of CVs is significantly lower than the number of offers from employers. The most demanded at present are working personnel, specialists in construction, logistics, as well as young professionals, who can be called the "Fast Generation" or Generation Z. In connection with these changes, approaches to attracting the necessary candidates are also being transformed. In order to attract candidates who are not so numerous on the market, the main focus is on developing an attractive HR brand for the organization. An HR brand is the reputation and image of an organization as an employer.

Working with an employer brand helps to solve several issues at once: increase awareness, increase interest in the company, and at the same time the number of responses to vacancies, reduce hiring periods, and increase employee engagement. The result is an EVP (Employee Value Proposition) addressed to the target audience.

The EVP (Employee Value Proposition) is the benefits and profits that employees of an organization receive in exchange for their time, energy, skills and commitment to the company. It is the heart of an organization's HR brand and should convey what is unique about the organization and what the organization offers to employees. In order for the HR brand to work effectively, and EVP to be its main advantage and attract the best employees, it is necessary to analyze the fundamentals of the value proposition. The main drivers of EVP are acquisition, engagement and retention. Communicating consistently and effectively about a value proposition that reinforces the employer brand becomes extremely important. When forming the EVP, it is necessary to take into account current labor market trends: increased demand for remote work, work-life balance, social benefits and profits. In addition to attracting candidates, it is important that employees enjoy doing the job and share the values of the companies, and not formally perform their job duties. One of the key tasks and at the same time one of the "pain points" is to ensure the involvement of the staff. When developing and promoting an HR brand, it is important to take into account the experience of employees, conduct an assessment of staff involvement, which will help determine the main important elements on which a competitive EVP is built.

Equally important is the retention of high-performing talent. People have become more careful when choosing an employer and easily leave the workplace if something does not suit them during the trial period. Departure of valuable employees is a pressing problem for any business. Sometimes the external market is ahead of events and offers the employee new opportunities. Having received an offer from another company, a person begins to compare it with what he has, so it is important to analyze the conditions that the company provides to the employee at the moment and try to offer the most competitive advantages and aspects of EVP.

The value proposition should also be divided into different roles and levels. The EVP for seasoned professionals will focus on things like career stability and work-life balance. Modern companies are increasingly focused on working with young professionals, preparing students at the stage of their education, so EVP for recent graduates who want to take entry-level positions emphasizes such things as career growth, a modern office environment, working conditions, positive employee experience and all kinds of benefits. Employers rely on a quick immersion in the period of practice and the introduction of a young specialist into the production environment, which allows you to get a trained employee upon graduation. Currently, the number of students combining work and study in educational institutions is increasing, as well as the interest of employers in them is growing, the guidelines are changing. Internship students are perceived not as "extra working hands", but as a full-fledged specialist who rises to the same level with the company's employees. With the help of an attractive HR brand, an analysis of important and sought-after EVP elements that graduates are guided by when choosing an employer, a company can form a loyal talent pool in areas that it needs and are in short supply on the labor market and also promote its brand among potential employees.

In order to offer young professionals the best working conditions, it is important to analyze their needs. Consider the main factors that graduates and students most often pay attention to when choosing an employer. We have conducted a survey among students of higher and secondary educational institutions who had an internship at the enterprise. The survey involved 225 students of 3-5 years of study. Students were asked to choose the criteria that are important to them when choosing employers. The results are presented in fig. 6.

Figure 6. *Main criteria for choosing an employer, %*

Thus, the most attractive criteria for choosing a potential employer are the solution of interesting project tasks (28%) - for young professionals, it is not the routine work with documents that is important, but employment in interesting projects, performing tasks that will allow them to develop their potential. The second most important is the balance of working time and personal interests (25%). When performing work tasks, it is important for a young specialist to devote time to hobbies and personal interests. 15% of respondents are interested in fast career growth, for 12% of respondents a high salary level is important, 11% chose to work in a good and friendly team with an experienced mentor. Unlike the more experienced generation X and Y, the "generation of fast " - generation Z - pays the least attention to the social package, this item was chosen by only 9% of respondents.

After analyzing the student survey data, we will highlight the main criteria that can become the basis for developing a company's EVP for young professionals. The promotion of the HR brand and the high competitiveness of the company in the job seeker market depend on the value proposition that will attract young professionals.

After analyzing the needs of potential employees, we offer a program that promotes attraction, familiarization with values through EVP and the formation of a loyal talent pool for starting positions.

The program takes into account work with students actively involved in the life of the organization, in the development of innovative projects, they must be involved in charity events, since the social component has been and remains one of the main priorities of the company. The student program itself should be oriented and adapted to the missions and values of the company, as well as aimed at professional training and selection of the best as potential employees.

The first block of the program - "*Educational Environment*" - is aimed at developing the professional competencies of future specialists and is focused on working with innovations and projects. It consists of lectures and master classes from company experts, case championships, visual demonstrations of production processes, equipment and practical exercises. This is an opportunity for students to gain specialized knowledge, take part in the modeling of hypotheses, and also contributes to rapid adaptation in employment.

The second block - *the passage of industrial practice at the enterprise* - as an opportunity for rapid career growth. Acquaintance with the culture and values of the company. Decent conditions, official work experience and high wages allow students to grow in their profession and then broadcast information among their community, thereby promoting and influencing the employer brand.

The third block is *events*. Focused on the need of young professionals in the balance of work and organization of personal time. An opportunity to immerse yourself in the corporate life and culture of the company - volunteering, participating in sports events, skating, participating in forums, evaluating engagement and much more.

Promotion of the HR brand to the target audience allows the company to form the future human resources potential and retain young professionals for as long as possible, the team is updated and becomes younger. Taking into account the fact that students study in specialized educational institutions, receive practical knowledge corresponding to the production realities from leading experts, the number of candidates in demand for starting positions is increasing.

Thus, the main task of a successful organization that sets goals for the successful development of an HR brand, increasing competitiveness in modern conditions, is to attract and retain talented employees. An important role in the training of personnel of the enterprise is played by young specialists - senior students and university graduates who enter the labor market. In order to attract the most promising and talented young professionals, companies are increasingly focusing on developing their employer brand, as well as developing an employer value proposition (EVP) that reflects the benefits that employees receive while working at the company. Students practice in the best conditions for themselves, thereby broadcasting and promoting the HR employer brand among their community. The possibility of attracting is expanding, a potential personnel reserve is being formed, which is prepared and adapted to the culture of the company.

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DOI 10.34660/INF.2022.75.35.130

俄罗斯联邦主体优先投资项目发展分析

ANALYSIS OF THE DEVELOPMENT OF PRIORITY INVESTMENT PROJECTS IN THE SUBJECTS OF THE RUSSIAN FEDERATION

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抽象的。　在当前条件下，俄罗斯联邦区域经济发展的主要任务是建立自己的基础设施和生产。　这些任务符合进口替代、创造新就业机会和提高俄罗斯联邦主体生活质量的目标，但创建新的生产、旅游和娱乐中心的项目需要大量投资。自2000年以来，俄罗斯政府批准了优先投资项目的地位，各地区可以申请补贴、税收和财政奖励。　本研究的目的是分析俄罗斯联邦各地区优先投资项目计划的实施情况

关键词：优先投资项目，区域经济，进口替代。

Abstract. *Under current conditions, the key tasks for the development of the regional economies of the Russian Federation are the creation of their own infrastructure and production. These tasks meet the goals of import substitution, creating new jobs and improving the quality of life in constituent entities of the Russian Federation, but projects to create new production, tourist and recreational centers require significant investment. Since 2000, the Russian government has approved the status of priority investment projects, for which regions can apply subsidies, tax and financial incentives. The purpose of this study is to analyze the implementation of the program of priority investment projects in various regions of the Russian Federation*

Keywords: *priority investment project, regional economy, import substitution.*

Introduction

A key factor in the development of the revenue component of regional budgets is the expansion of the tax base from local and regional taxes, in particular corporate property tax, transport tax and land tax.[1] [2] At the same time, these taxes are a tool to stimulate the development of entrepreneurial activity. In 2000, Federal Law No. 22-FZ introduced amendments to Federal Law No. 39-FZ of February 25, 1999 “On Capital Investment Activities in the Russian Federation” with respect to definition of Priority Investment Project. According to this normative legal act the Priority investment project is an investment project, the total amount of capital investments in which complies with the requirements of the legislation of the Russian Federation, which is included in the list approved by the Government of the Russian Federation. The investment project payback period is the period from the day of the investment project financing start till the day when the difference between the accumulated amount of net profit with depreciation charges and the amount of investment costs acquires a positive value.[3] Despite the formation of the primary normative-legal base, this program became more widespread after the introduction of the Russian Federation Government Decree №419 of June 30, 2007 on priority investment projects in the field of forest development, which defined specific benefits for the development of the forest industry and the Russian Government Decree №3 of January 3, 2014, which defined the possibility of state subsidies and reduced tax burden not only from regional and local taxes, but also from federal and reg.[4] [5] Thus, since 2014, the governments of the constituent entities of the Russian Federation have received a wider range of tools to stimulate the development of investment activity in their regions, and it is this period that is associated with the expansion of the number of priority investment projects. The authors aim to analyze the development of priority investment projects in the regions of the Russian Federation, identify leaders and consider measures of state support provided to investors.

Priority Investment Projects in the Constituent Entities of the Russian Federation 2000-2022.

To analyze the priority investment projects implemented in the subjects of the Russian Federation from 2000 to 2022, the author’s group studied regional invest-

[1] Tax Code of the Russian Federation, part 1, article 14 Regional taxes, URL: https://base.garant.ru/10900200/

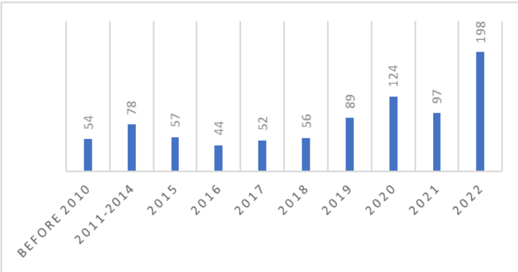
[2] Tax Code of the Russian Federation, part 1, article 15 Local taxes and fees, URL: https://base.garant.ru/10900200/36bfb7176e3e8bfebe718035887e4efc/

[3] Federal Law N 22-FZ “On Amendments and Additions to the Federal Law “On investment activities in the Russian Federation, carried out in the form of capital investment, URL: http://www.consultant.ru/document/cons_doc_LAW_25497/3d0cac60971a511280cbba229d9b6329c07731f7/

[4] Decree of the Government of the Russian Federation №3 of 03.01.2014 “On stimulating subsidies for payment of interest on loans for the implementation of new complex investment projects in priority areas of civilian industry», URL: http://government.ru/docs/9630/

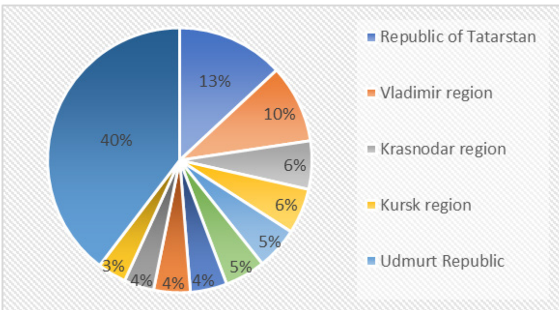
[5] Decree of the Government of the Russian Federation №419 from 30.07.2007 “On Priority Investment Projects in the Field of Forest Development», URL: https://docs.cntd.ru/document/902051628

ment portals, as well as regional normative legal acts approving the list of priority investment projects, denoting the benefits provided to investors. Information from 85 subjects of the Russian Federation was formed into a consolidated table reflecting the subject of the Russian Federation, the name of the project, the period of implementation, the investor, the sphere of economy, and the benefits provided by the regional government. Let us consider the dynamics of approval of priority investment projects in the period from 2000 to 2020. (Pic.1)



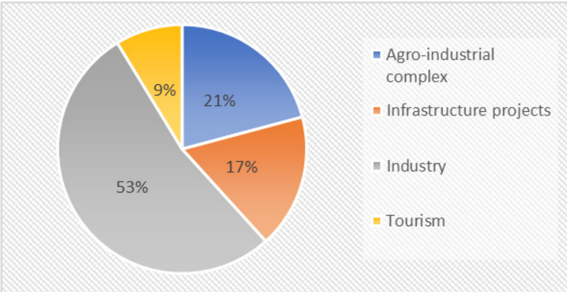
Picture 1. *Number of projects that have received the status of "Priority Investment Project" (Source: compiled by the authors)*

Statistical data confirm the fact that the increased development of priority investment projects began after the approval of an expanded base of state support, from 2016 to 2020 there is a steady growth in the number of approved projects, in 2021 there is a decrease, which can be attributed to the effects of pandemic COVID-19, however, by 2022, there is a sharp increase in the number of approved projects, indicating an increase in import substitution and development of domestic production, urban infrastructure. Let us consider which regions are developing the largest number of priority investment projects. (Pic.2)



Picture 2. *Share of priority investment projects in the Russian regions in 2000-2022.*

The analysis of the structure of implementation of priority investment projects revealed that the top 10 regions are implemented 60% of all projects. The leaders by this criterion are the Republic of Tatarstan (13%), Vladimir region (10%), as well as Krasnodar region (6%) and Kursk region (6%). Also, a relatively large number of priority investment projects have been and are being implemented in the Udmurt Republic, Trans-Baikal Territory, Kabardino-Balkarian Republic, Chechen Republic, Kaluga Region and Altai Republic. Another 75 regions have 40% of their priority investment projects. Let us consider the sectoral structure of projects. (Pic.3)



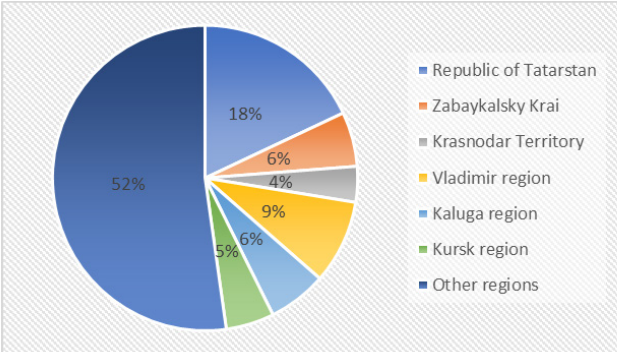
Picture 3. *Sectors of priority investment projects in the regions of the Russian Federation in 2000-2022.*

According to the analysis, more than half of the implemented projects are aimed at the development of regional industries, 21% - projects of the agro-industrial complex. 17% of the projects are aimed at the development of urban infrastructure, another 9% - the development of tourism.

It should be noted that each region makes an independent decision on the application of various support measures for investment projects, which can be applied both to all projects and to each individually and diversified, but there are the most common measures used in most regions of the Russian Federation. The most common measure is the establishment of 0% rate of corporate property tax applied to the implementation of the investment project, issued for a period of 3 to 7 years or until the payback period of the project (usually not more than 10 years). The second quite common measure is to reduce the corporate income tax rate to 13.5% (in some cases there is a reduction of up to 10.5%).

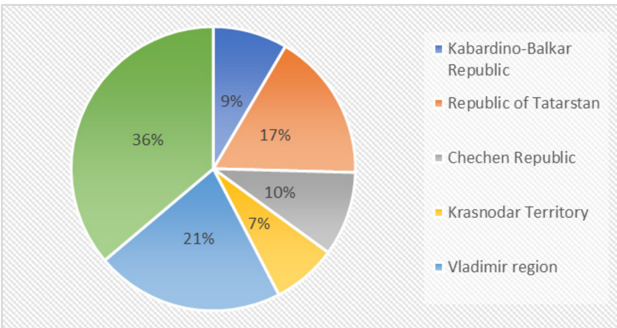
Sectoral specialization of regions as part of the implementation of priority investment projects

Undoubtedly, there is a specialization of regions, which determines the share of development projects of different industries. As part of the analysis of the obtained data, the authors have divided the projects into four areas: Industry, agro-industrial complex, tourism and infrastructure projects. Let us consider the industrial leaders within the implementation of priority investment projects. (Pic.4)



Picture 4. *Leaders in the implementation of industrial priority investment project*

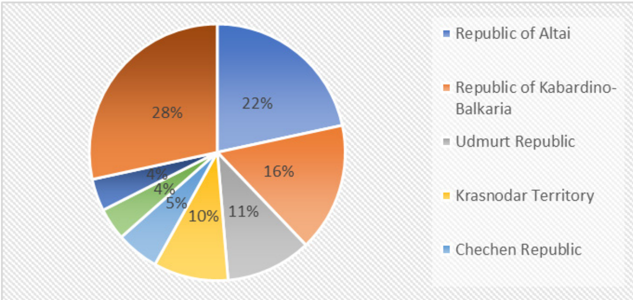
The largest number of industrial projects in the period from 2000 to 2022 was implemented in the Republic of Tatarstan, also a large number stands out Vladimir region, Transbaikal Territory, Kaluga and Kursk regions. Let's consider the agro-industrial complex (Pic.5)



Picture 5. *Leaders in the implementation of priority agro-industrial investment projects*

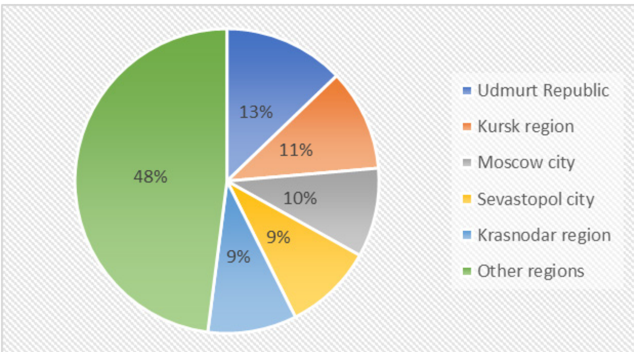
The leading region for the number of agro-industrial projects is the Vladimir region (21% of the total number), also stand out the Republic of Tatarstan and the Chechen Republic. Investments are made both in projects to build new facilities, for example: Reconstruction of a dairy farm for 100 dairy cattle PJSC "GUS-

AGRO" and reconstruction and modernization: Modernization of poultry farming equipment POVO "Vladzernoproduct".[6] Let us consider the leaders in the tourism sector. (Pic. 6.)



Picture 6. *Leaders in the implementation of priority tourism investment projects*

The leader in the sphere of tourism is the Republic of Altai, implementing 22% of the total number of tourist projects. This leadership is due to the fact that tourism is a key branch of the regional economy. Altai resorts such as Biryuzovaya Katun, Teletskoe Ozero and Belokurikha are extremely popular among domestic and foreign tourists. There is also a special economic gambling zone "Siberian Coin".[7] Let us consider infrastructure priority investment projects. (Pic.7)



Picture 7. *Leaders in the implementation of priority infrastructure investment projects*

[6] INFORMATION ABOUT INVESTMENT PROJECTS IN THE VLADIMIR REGION, URL: https://investvladimir.ru/investitsionnye-proekty/realizuemye-proekty/#map-wrapper

[7] Investment projects of the Republic of Altai, URL: https://www.altai-republic.ru/investments/investment-projects/

The leader in the sphere of infrastructure projects is the Udmurt Republic (13% of the total volume), the Kursk Region, Krasnodar Territory and cities of Federal importance: Moscow and Sevastopol are also prominent. Infrastructure projects create objects of cultural, social and recreational significance, to a greater extent according to the projects proposed by the regions. Examples are Construction of sports complex in the village of Pirogovo LLC "Zarya Sports Complex" and Creation of nephrology and dialysis department on the basis of budget health institution of the Udmurt Republic "City clinical hospital № 6 of the Ministry of Health of the Udmurt Republic". Medical Service Solutions LLC".[8]

Conclusion

Thus, the authors analyzed the priority investment projects in the subjects of the Russian Federation for the period from 2000 to 2022. It was revealed that after the increase in the possible list of measures to stimulate investors there is a significant increase in the number of priority investment projects, however, the analysis of the structure indicates a very uneven distribution of the implementation of this program. 10 leading regions implement 60% of the total volume of priority investment projects. When studying the algorithm for obtaining project status by an entrepreneur, it was found that there are 2 ways: the first is an independent justification of the potential benefits of the region in the implementation of their own project by an investor. In this case, the key role is played by the profitability of regional benefits for the investor. In the second case, the region itself proposes the project for implementation and provides appropriate benefits, calculating the business plan and roadmap of the project. In this case, the key parameter is the potential profitability of the project for the investor. When studying the ways of forming projects in the leading regions, it was revealed that the leadership simultaneously creates registers of potential priority investment projects for investors to implement, as well as gives the opportunity for independent initiative. In all leading regions a wide range of support is provided, from tax benefits to co-financing. Thus, the benefits applied by the regions and actions to independently initiate investment activities play a key role in improving the investment climate of Russia's regions.

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[8] Register of investment projects of the Ministry of Economy of the Udmurt Republic, URL: https://madeinudmurtia.ru/udm/reestr-investitsionnykh-proektov-ur/

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DOI 10.34660/INF.2022.41.92.131

无形资产对公司可持续发展的影响——以 Yandex N.V. 为例

INFLUENCE OF THE INTANGIBLE ASSETS ON THE SUSTAINABILITY OF COMPANY ON EXAMPLE OF YANDEX N.V.

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注解。 IT 行业的现代公司是新商品和服务的生产者，而这些新商品和服务往往无法反映在物质世界中，因此无形资产在其形成过程中起着关键作用。 在 COVID-19 大流行之后，与数字化加速相关的现代虚拟商品和服务市场的快速发展决定了企业数字资产和信息化份额的扩大。 在本文中，作者将以俄罗斯最大的 IT 公司之一“Yandex N.V.”为例，考虑无形资产对公司财务稳定性的影响。

关键词：无形资产，商誉，财务可持续性

Annotation. *Modern companies in the IT industry are producers of new goods and services that are often not reflected in the material world, so a key role in their formation plays intangible assets. The rapid development of the modern market of virtual goods and services associated with the acceleration of digitalization after the COVID-19 pandemic determines the expansion of the share of digital assets and informatization of companies. In this article the authors will consider the impact of intangible assets on the financial stability of the company on example of one of the largest Russian IT-Companies "Yandex N.V.".*

Key words: *intangible assets, goodwill, financial sustainability*

Introduction

Yandex N.V. is a large Russian company, the owner of one of the most popular search engines in Russia, as well as several internet services, such as: mail, music, podcasts, navigation systems and others.[1] Since 2010, the company has been actively following the path of income diversification by developing new services. So, if in 2015 the main income of the company was contextual and targeted ad-

[1] Open broker official web-site URL: https://journal.open-broker.ru/visit-card/yandeks/ (Application date: 13.11.2022)

vertising on the Internet, then in 2022 significant segments are occupied by taxi, food delivery, marketplace “Yandex Market”, as well as carsharing systems.[2] The acceleration of income diversity is also related to the COVID-19 pandemic, as there is greater demand for remote services and delivery services due to the social restrictions. In turn, Yandex was able to provide a relevant offer by developing IT solutions for new customer calls.

Launching new solutions and supporting innovative services required a significant increase in assets, including mostly intangible assets.[3] The dynamics of assets, liabilities and intangible assets are shown in Figure 1.

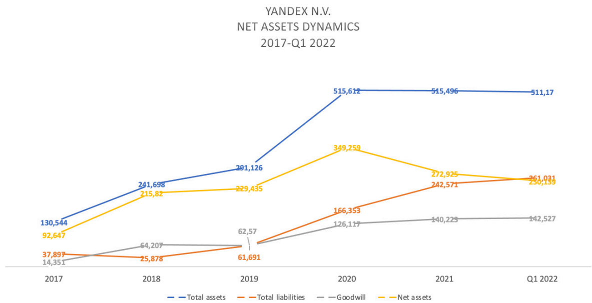

Figure 1. *Yandex N.V. Net assets dynamics, billion Rubles (calculated by authors on the base of official data[4])*

If we consider the dynamics of total assets over the past 5 years, we can identify 2 major growth points in 2018 (an increase of 85% compared to 2017) and 2020 (an increase of 77% compared to 2019). Accordingly, with the increase in assets, there was a significant expansion of liabilities, almost 4 times in the period from 2019 to 2021. At the same time, intangible assets and goodwill are characterized by higher growth rates in the asset structure. A change of almost 10 times over the period from 2017 to 2021. That is why the expansion of intangible assets, due to the entrance on new markets, need to be financed and make impact on the company’s leverage and sustainability.

Impact of expansion of intangible assets on company’s sustainability

The expansion of Yandex’s asset base undoubtedly had an impact on the expansion of the company’s total revenue. Since 2017, it has increased by an average

[2] Mail.Ru Group and Yandex topped the top 15 “intellectual” companies in Russia// Cossa Internet publication about marketing and communications in digital environment. - URL: http://www.cossa.ru/news/167061/ (Application date: 13.11.2022)

[3] Elgaitarova N.T. Sariyeva A.B. ASSESSMENT OF NON-MATERIAL ASSETS // Scientific News 2021 // URL: https://cyberleninka.ru/article/n/otsenka-nematerialnyh-aktivov-2 (Application date: 13.11.2022)

[4] Yandex Financial report URL https://ir.yandex/financial-releases?year=2022 (Application date: 13.11.2022)

of 40% annually, but the company's earnings have been extremely volatile in this period from 2017 to 2022. (figure 2)

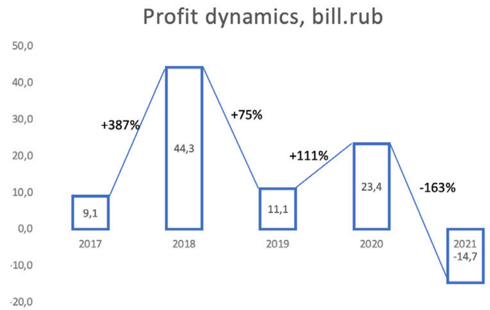

Figure 2. *Yandex N.V. Profit dynamics 2017-2021 (calculated by authors on the base of official data[3])*

When analyzing the dynamics of the company's profits, one can note a high volatility in the period under review. In 2018 and 2020, there were large increases in the active component, including intangible assets. In the following periods (2019 and 2021), there is a significant decrease in profit. This fact is since not all assets have time to be configured for profit and large extensions only create additional costs for their maintenance. The authors suggest that the expansion of costs is caused by the attraction of additional debt financing. To test this hypothesis, it is necessary to consider the dynamics of the sustainable growth indicator, reflecting the maximum possibility of expanding the company without changing the leverage coefficient. (Figure 3)

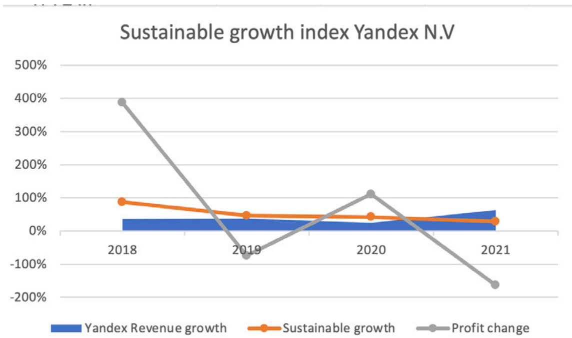

Figure 3. *Yandex N.V. Sustainable growth index dynamics 2018-2021 (calculated by authors on the base of official data [16])*

This graph illustrates a decrease in the company's sustainable growth coefficient, which indicates an increase in the company's debt burden. Moreover, in 2019, the indicator of maximum sustainable growth is almost reached, which indicates that the company should have invested almost all its own funds in expanding assets, which is almost impossible. In 2021, the indicators exceed the maximum possible sustainable growth at all.[5]

Until 2022, the value of net assets directly affected by goodwill exceeded the company's total liabilities, which is an extremely important positive indicator. At the same time, intangible assets also affect the perception of the company by investors. However, the expansion of the share of assets, including intangible assets, had not only a positive impact on the company's growth. From the point of view of revenue analysis, there is exponential growth, but the company's net profit is extremely volatile. As it was found out, the company has been making major expansions of the active component for 2 out of 5 years at the expense of borrowed funds, exceeding the indicator of sustainable growth. This fact was reflected in a sharp decline in profits in the next period. Thus, the expansion of the base of intangible assets now cannot realize a positive effect by increasing leverage. Let's analyze the structure of the investment sources. (Figure 4)

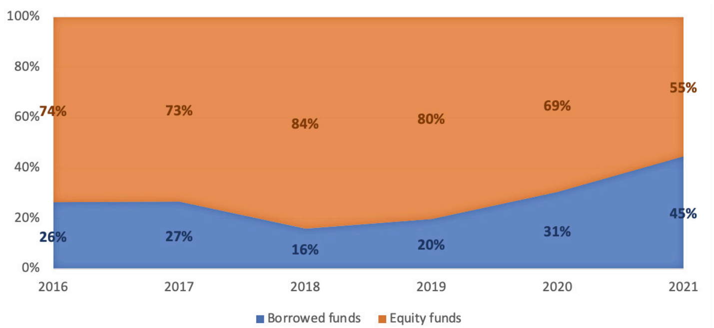

Figure 4. *Yandex N.V. Source of finance structure dynamics 2016-2021 (calculated by authors on the base of official data[3])*

Having considered the change in the structure of the company's sources of financing, we can draw some conclusions about two large increases in assets. A large increase in the share of liabilities was observed in 2017, and also began to increase significantly from 2020 (transition to an ecosystem approach). Thus, the growth of assets in 2018 was largely financed from own funds, without increasing the share of liabilities. The drop in profits in 2019 can be interpreted as a con-

[5] Indeed // Sustainable growth rate calculation // URL: https://www.indeed.com/career-advice/career-development/sustainable-growth-rate-formula (Application date: 13.11.2022)

sequence of the fact that assets could not be fully integrated into the production process, the delaying effect of repayment of obligations in 2017, as well as other exogenous factors. This fact is confirmed by the fact that the company did not go beyond the sustainable growth coefficient. At the same time, the growth of 2020, on the contrary, was financed by borrowed funds. The company, having undergone significant investments in expansion in 2018, was unable to finance growth independently with the formation of an ecosystem and increased demand. Thus, in 2020, the indicator of sustainable growth was exceeded. This fact also affected the company's income.

Conclusion

Thus, the dramatic expansion of intangible assets at Yandex N.V. affects a significant increase in liabilities and reduces the company's profits. Under such conditions, the company's variety of new services expands revenues, but not all services are able to cover the funds invested in them in the current environment. On the wave of increasing demand for new services, the company has created both demanded services and unprofitable ones. At the moment, the company's portfolio includes many software products that are not properly used, but require funding for maintenance. At the moment, the most rational solution is to optimize the structure of intangible assets and focus on the most profitable segments. An example of Yandex's application of this strategy in 2022 is the deal to divide the rights to segments of electronic services with VK Group, which resulted in Yandex gaining a monopoly on delivery by combining the Yandex Food product with Delivery club (previously a VK Group product), but depriving Yandex.Zen article service.

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DOI 10.34660/INF.2022.26.36.132
UDC 331.5(571.61)

区域经济中人力资源的创新利用（以阿穆尔州为例）

INNOVATION-ORIENTED USE OF HUMAN RESOURCES IN THE REGIONAL ECONOMY (THE EXAMPLE OF THE AMUR REGION)

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抽象的。 阿穆尔州以及俄罗斯联邦任何其他地区的发展都离不开经济潜力，尤其是劳动力潜力。 劳动力资源状况通过使用指标体系和各种直接（间接）因素进行调节，这些因素分别适用于每个特定区域。 通过对阿穆尔州地理位置、行政区划和就业结构的研究，可以预测到 2026 年该地区关键经济部门的就业增长。

关键词：劳动力资源，阿穆尔州，就业预测。

Abstract. *The development of the Amur Region, as well as any other region of the Russian Federation, is impossible without economic potential, in particular labour potential. The state of labor resources is regulated by using a system of indicators and various direct (indirect) factors, which are applied to each particular region separately. The study of geographical location, administrative-territorial division and structure of employment in the Amur region has allowed to predict the growth of employment in key sectors of the economy of the region until 2026.*

Keywords: *labour resources, Amur Region, employment forecast.*

Labour potential reflects the totality of abilities and capabilities of employees of enterprises and organizations in the region to productively implement and develop their knowledge, experience and professionalism in order to create competitive products (works, services) and meet priority needs [1].

Labour resources include:

1) persons of working age (men 16-65 years old, women 16-60 years old);

2) persons of nonworking age (adolescents and population over working age) employed in the economy (actually working pensioners and adolescents under 16).

They exclude non-working disabled people of groups I and II and pensioners who receive old age pensions on preferential terms.

The region's labour resources can be characterised by the group of parameters listed in Table 1.

Table 1

Parameters of the region's labour force.

Workforce parameter	**Parameter characteristic**
1	2
Educational level	Reflects the proportion of persons with primary, secondary, secondary vocational and higher education.
Professional qualification	Characterises the labour force by activity, profession, speciality and level of qualification.
Gender and age structure	Shows the ratio of age and gender differentiated groups.
Socio-economic heterogeneity of working people	This criterion relates to the difficulty of work in certain groups (unskilled, skilled and highly skilled).

A system of indicators is used to assess the state of the region's labour force:

1) the employment rate of the population;

2) the total number of labour resources;

3) average annual number of workers and employees in the economy;

4) the composition of workers by sex and age;

5) education and training levels;

6) sectoral structure of employment.

One of the most important tasks of regional government is to regulate the labour potential of the region. Demographic, economic and social aspects are considered when analysing this area. Regional government has to solve problems of population reproduction, creation of conditions, in which people's need for work and study is satisfied, employment of population, providing branches and spheres of national economy with labour force, which quantity and quality would correspond to real needs, rational and effective use of labour potential and separate population groups (youth, women, persons of older working age).

The system of state regulation of labour potential is based on the consideration and use of political, social, economic and legal factors. It involves the use of direct (administrative) and indirect (economic) methods. Direct methods of regulation include such influences on the labour potential of the regions that directly determine its state through the activity of special funds and the development of programmes to promote employment, the creation of appropriate regulations, tariff and qualification systems, labour payment systems, forms of contractual relations, wage indexation. Indirect (economic) methods change the motivation (interest) of economic agents in the development of the labour resources of the region and are implemented by means of taxation, credit system, and indicative planning.

However, the application of the indicator system depends primarily on the region itself. Therefore, it is necessary to briefly characterize the Amur Region by considering its economic potential.

The Amur Region is part of the Far Eastern Federal District and is located in the southeast of the Russian Federation. It has 4,300 km of border territories with Trans-Baikal Territory, Yakutia, Khabarovsk Region, the Jewish Autonomous Region and the People's Republic of China, accounting for almost 1,250 km of total length.

The competitive advantages of the Amur Region are:

1) proximity to the People's Republic of China;

2) climatic conditions for agricultural development;

3) well-developed transport infrastructure (the Baikal-Amur Mainline, Trans-Siberian Railway and Chita-Khabarovsk federal motorway);

4) mineral and raw material potential, free energy resources;

5) availability of production facilities with the necessary infrastructure.

The region is made up of 9 urban districts, 20 municipal districts, 15 urban settlements, 260 rural settlements. The population of the Amur region as of January 1, 2020 according to the Federal State Statistics Service is 790 thousand people [2].

The Amur Region has sufficient scientific potential. Thus, on 10 August 2018, the regional government published a list of innovative developments, where 10 scientific institutions were the initiators. The document published 263 developments, in particular: technologies for preparing various foods, breeding more than 15 new varieties of soybeans and their processing, developed and patented methods of treatment for humans and animals, and so on.

An innovation economy requires a sufficient workforce in the total population of the country, the quality of which will enable to realize research results in various fields of knowledge in order to ensure a dynamic transition from a commodity-based economy to an innovation-based economy.

As noted earlier, the rational use of labour resources in the region requires as mentioned above, it is necessary to assess the labour resources of the region, to define the needs of the economic complex needs of the economic complex in labour force and ways to use them most efficiently.

This analysis is made possible by data from regional statistics agencies, which collect information from enterprises and organizations on the number of employed people, migration services on labour migration within the country, and the Pension Fund of the Russian Federation on the number of non-working persons with disabilities and persons receiving pensions on preferential terms, at the working age.

According to Amurstat, on average, the total labour force in 2020 was 523,900 people, of whom 446,000 or 85.1% were people of working age; 42,700 or 8.2% were foreign labour migrants; and 35,200 or 6.7% were people over working age and teenagers employed in the economy.

The structure of employment in the Amur Region's sectors shows that most people are employed in trade and construction, 16.6% and 14.8%, respectively. Detailed data are presented in Table 2.

Table 2

Population employed, aged 15 years and over, by selected economic activities in 2020

Sector of the economy	**Number of people employed, thousand people**	**Structure, in %**
1	2	3
Agriculture, forestry, hunting; fishing and fish farming	22,7	6,0
Mining and quarrying	15,3	4,0
Manufacturing industries	21,2	5,6
Electricity, gas and steam supply, air conditioning	17,4	4,6
Water supply, wastewater disposal, waste management, pollution abatement activities	3,7	1,0
Construction	56,5	14,8
Wholesale and retail trade, repair of motor vehicles and motorbikes	63,1	16,6
Transport and storage	40,8	10,7
Activities of hotels and catering establishments	7	1,8

Continuation of table 2

Information and communication activities	5,4	1,4
Financial and insurance activities	5,6	1,5
Activities relating to real estate transactions	7,8	2,0
Professional, scientific and technical activities	11,6	3,0
Administrative activities and related ancillary services	10	2,6
Public administration and military security, social security	29,1	7,6
Education	28,5	7,5
Health and social services activities	25,7	6,8
Cultural, sporting, recreational and entertainment activities	4	1,1
Other economic activities	5,1	1,3
Total:	380,5	100,0

According to the "Navigator" of in-demand professions in the Amur Region 2020-2026 published by the Agency for Human Capital Development in the Far East and the Arctic [3], the Amur Region labour market will see a significant increase in employment in the following sectors, as shown in Table 3, given the rapid economic development of the Far East.

Table 3

Forecast of employment growth in key sectors of the economy in the Amur Region until 2026.

Sector of the economy	**Average number of employees, people**	**Employment growth, in %**
Construction and building materials production	49181	5-10
Transport and logistics	27903	1-5
Mining of coal, metal ores and diamonds	13276	20-30
Agriculture and food processing industry	12171	5-10
Forest industry	2457	100 и более

Significant demand is expected in the forestry and coal, metal ore and diamond mining sectors. In terms of qualification level, the need for personnel with secondary vocational education is 84% of the total number of employees, about 11%

of employees with higher education (bachelor, master and specialist), and 5% of employees without vocational education.

The following are in high demand on the regional labour market: open-pit mining machinery operators, forestry technologists, road and construction machinery operators, oil and gas processing specialists, and others.

In implementing innovative projects, the region needs to attract a large number of highly qualified specialists, as the Amur Region has no training in the required professions. Professions are not being trained and there is a lack of specialists with required work experience.

Thus, in order to attract workers to the Amur Region, the government approved the decree "On Approving the Amur Region's labour mobility programme for 2015-2023" (amended on 19 January 2021). The programme is aimed at assisting organisations implementing innovative projects in the Amur Region and creating conditions for housing citizens attracted from constituent entities of the Russian Federation.

Despite the provision of a large number of jobs and housing conditions, the Amur Region is experiencing a number of difficulties in addressing the shortage of human resources at workplaces. The staffing problem was exacerbated during the COVID-19 pandemic in 2020. Mass professional retraining of local residents can be a solution to the staffing problem. For example, the governor of the Amur Region, has proposed integrating the region's system of higher and secondary education into a single environment to train personnel in the most in-demand professions.

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DOI 10.34660/INF.2022.96.48.133

做出投资决策时风险最小化的方向

DIRECTIONS OF RISK MINIMIZATION WHEN MAKING INVESTMENT DECISIONS

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抽象的。 文章处理了投资决策中风险发生的问题，找出影响投资决策采纳的可能因素，将风险降至最低。 考虑了长期投资项目中可能存在的风险及其实际评估。 很明显，在任何投资项目中，不可能准确预测所有可能的情况，但在考虑投资项目有效性的主要指标时，可以确定最脆弱的地方并防止负面情况的发展。
关键词：投资项目，投资决策，货币风险，项目效率
Abstract. *The article deals with the problems of the occurrence of risks in making investment decisions, identifying possible factors influencing the adoption of investment decisions will minimize risks. Possible risks and their real assessment in long-term investment projects are considered. It is obvious that in any investment project it is impossible to accurately predict all possible situations, but when considering the main indicators of the effectiveness of an investment project, it is possible to identify the most vulnerable spots and prevent the development of negative situations.*
Keywords: *investment project, investment decisions, currency risks, project efficiency*

In the conditions of active economic development, investment activity is one of the important areas, since on the one hand, in the process of making investment decisions, the material and technical base is updated, on the other hand, investing in investment projects allows you to update the movement of cash flows, which characterizes the real possibility of effective circulation of free cash capitals. Investment is always associated with the need to mobilize additional funding, which is especially relevant for large businesses.

Any investment decisions are associated with risks. In unstable foreign policy and economic conditions, as well as in connection with the crisis macroeconomic situation, the issue of minimizing risks in investments is given particular attention, since the high efficiency of the project is achieved, as a rule, through the adoption of optimal management decisions in the evaluation of investment projects.

By investing money in a project, an investor chooses a chance to receive ultra-high returns and at the same time risks becoming bankrupt. Without taking into account the risk, even the most highly profitable project is not considered as an investment object, since due to the unreliability of profitability parameters, its implementation can lead to losses.

Investment risk is understood as the probability of financial losses in the form of loss of invested capital (in whole or in part), which is associated with the uncertainty of the situation.

Against the backdrop of the sanctions crisis in 2022, this problem has become particularly relevant, as additional risks have emerged that also need to be realistically assessed. An example is currency risk, the risk of bankruptcy. Many investors withdraw their accumulated capital from brokerage accounts in order to invest them in investment-attractive projects. The use of a variety of modern risk assessment methods can reduce the amount of errors and optimize the algorithm for making investment decisions.

Therefore, modern approaches to assessing the risks of investment projects and ways to improve them are a relevant topic for analyzing the attractiveness of an investment project, which depends on the reliability of information in the course of decisions and the following principles:

- invested funds must be fully reimbursed (principle of repayment);
- profit received as a result of this operation must be large enough to compensate for the refusal to use funds for own consumption, as well as risk and inflation (principle of profitability).

Risk management is initially formed from the identification of probable threats (internal and external). For them, methods are used that are based on forecasting and analysis. It is necessary to carry out such activities as market analysis, analysis of the current situation, plans for the development of the company, and other factors are studied.

The most frequent patterns in the light of the relationship between risk and profitability of the project being adopted are:

- increase in profitability reduces the probability of its receipt, especially in case of uncertainty of the situation;
- the higher the profitability of the project, the higher the level of risk, which obliges the investor to be prepared for the loss of part of the investment.

Currently, there are many possible risks in making investment decisions. The main ones include:

a) the risk of shortfall in income provided for by a specific project;

b) specific currency risks;

c) risks associated with the possibility of termination or an increase in the duration of negotiations (which causes depreciation of cash flows or an increase in discount rates), etc.

In general, total risks pose a real threat to all investors, but they can be objectively assessed in contrast to the specific risks that are inherent individually for each investor, as a rule, arise in connection with the irrational structure of the use of invested funds or inefficient management decision-making (subjective approach) .

The risk of shortfall in income provided by the project is due to the technical, technological and organizational solutions of the project, as well as random fluctuations in production volumes and prices for products and resources. Risk adjustment coefficients in investment projects are ranked depending on the nature of the investment. Estimated value of adjustments for the risk of shortfall in revenues provided by the projects (Table 1).

Table 1

Adjustment for project risk depending on its purpose [2]

The magnitude of the risk	The nature of the investment	Risk adjustment value, %
Short	Replacement investments (replacement of capacities - equipment, machines with more advanced ones, requiring higher qualification of workers, new approaches in production; construction of new plants to replace old ones in the same or another place).	3-5
Average	New investments (new capacities for the production and promotion of product lines closely related to existing ones). Investments in applied research and development directed to specific purposes	8-10
High	New investments (new facilities for the production and promotion of product lines not related to the original activities of the company)	13-15
Very tall	Investments in fundamental research and development, the goals of which may not yet be clearly defined, and the expected result is not exactly known	18-20

As the main indicators used to calculate the effectiveness of an investment project, the methodological recommendations indicate:

– discounted payback period;
– return on investment ratio;
– net discounted income;
– the internal rate of return;
– investment profitability index.

In a situation where the cash flow goes into a negative value, you can consider possible risks that could affect this to one degree or another:

1. Insufficient profitability of the implementation, which is not able to cover the normal need for working capital due to inflation. This is possible to identify thanks to the return on investment ratio (ARR), which will be calculated below.

2. A high share of debt capital, which causes significant interest payments and repayment of loans.

In modern practice, risk management is aimed at minimizing risk, therefore, the effectiveness of cash flows, which is based on the use of the main elements of the application of discount methods for the effectiveness of an investment project:

- Determination of the net present value of an investment project
- Calculation of the discount rate at which the net present value is set to zero;
- Financial and economic multifactorial assessment of the considered business project;
- Qualitative assessment of the investment strategy, taking into account the criteria approach;
- A variety of risk assessment methods, taking into account combined variations, etc.

In the process of implementing an investment project, it is important to constantly monitor the risk for managing and adjusting the assets and liabilities of a company that invests money in its development in the process of managing them. At the same time, risk control in the investment process is a mandatory element of the development strategy and the current management of the enterprise.

In the context of digitalization, a special place in the risk management system in the process of making investment decisions is the information system, which allows not only to accumulate information and form a database, but also to respond in a timely manner to changes in the current situation in the context of each investment project.

One of the risk components is currency risks, which in the framework of international activities determine the specifics of investments in monetary terms (for example, in US dollars or euros, yuan).

For clarity, you can demonstrate the currency basket of project financing using the example of Yamal LNG [1]

***Figure 1.** Currency basket of Yamal LNG project financing [1]*

To reduce currency risks, strict control over the ratio of own and borrowed funds was carried out. Also, the amount of the debt itself was significantly reduced in dollar terms from the planned USD 30 billion to USD 19 billion. In addition, currencies with different correlations with oil prices and the US dollar exchange rate were attracted to finance the project. In addition, a reserve fund (FXRA) was created, which will be used in the event of a default by the borrower due to the negative impact of changes in the exchange rate.

Significant government support was provided for the successful implementation of the Yamal LNG project. Thus, Yamal LNG is exposed to currency risk, since this currency basket consists of 84% in euros, as well as 12% in rubles and 4% in yuan. That is why it was necessary to take measures to reduce it. It should also be taken into account that this investment project is implemented in US dollars, which may be an obstacle to switching to another currency. This must be taken into account when concluding a contract. Also, these circumstances are a sign of the exposure of this project to currency risk.

The main risks in making investment decisions can be demonstrated using the example of a large company. To consider modern approaches to assessing risks in an investment project from a practical point of view, we turn to such investment projects as Yamal LNG, which is part of the NOVATEK PJSC group. The essence of this project (for the implementation period until 2040) is to build an Arctic energy corridor and develop the Northern Sea Route (NSR). Taking into account free cash flow, the main indicators of profitability and attractiveness of this project are presented in Table 2.

Table 2

Key performance indicators of Yamal LNG

Commercial performance indicators	Indicator value
Capital investments, mln USD	27000
Project implementation period	2016–2040
Net discounted flow (NPV), mln USD	(24164.9)
Discounted payback period (DPP), years	2 years 11 months
Return on Investment Ratio (ARR)	1,103
Internal rate of return (IRR)	14%
Profitability Index (PI)	0,105

Thus, it was revealed that this investment project is not attractive, since its profitability index (PI) < 1 (the value of the project indicator is 0.105). Also, NPV < 0. The negative value of this indicator indicates the inefficiency of the use of funds, since the rate of return is less than the required one. Capital investments were made all at once (US$27,000 million) rather than incrementally. This could affect the score.

The impact of project negotiation failure risk on the net present value (NPV) is also an important component in investment decision making. The average negotiation procedure with a large (main) investor lasts about 1 year. The main threat is a negative result, where the period of unsuccessful negotiations, equated to 1 year, is 1.25% of the capital costs for servicing the negotiation process (Table 3).

Table 3

The impact of the risk of breakdowns in negotiations on NPV on the example of the Yamal LNG project [1]

Terms	NPV, million USD	Change in NPV_{bas} to risk-adjusted NPV, %
Failed negotiations for a period of 6 months (1.23%)	(24497,00)	1,37
Failed negotiations for a period of 9 months (1.24%)	(24499,70)	1,39
Failed negotiations for a period of 12 months (1.25%)	(24502,40)	1,40
Failed negotiations for a period 15 months (1.26%)	(24505,10)	1,41

China is also a major player on the world stage interested in the implementation of the Yamal LNG project. Therefore, the Chinese government contributed to subsidizing the project from the financial institutions of the PRC. The Chinese side also pledged to ensure the purchase of at least 3 million tons of LNG per year for 15 years.

Currently, more than 90% of LNG produced at Yamal LNG has been contracted on a long-term basis.

Thus, at the moment the situation with the financing of the Yamal LNG project itself is stable. Huge amounts of project financing in various currencies were attracted to implement the project under the sanctions. The state also provided significant support in the form of tax incentives and funds provided by the NWF. Further development of the project and the region largely depends on the macroeconomic and geopolitical situation.

To speed up the investor's decision on whether to invest in a particular enterprise, it is necessary to draw up an investment project that defines the goal that the company is striving for, the business strategy, together with the timing of achieving the goal.

In project efficiency calculations, it is recommended to take into account uncertainty, i.e. incompleteness and inaccuracy of information about the conditions for the implementation of the project, and risk - the possibility of such conditions that will lead to negative consequences for all or individual project participants.

In conditions of uncertainty, the main methods for minimizing risks in investment design should include:

1. Risk mitigation, i.e. the possibility of reducing the likelihood of possible losses in the event of unforeseen situations (pandemic, sanctions crisis).
2. Risk transfer, i.e. distribution of responsibility between all management participants in the process of project implementation.
3. Risk acceptance, if it is impossible to avoid it under a negative development scenario, making a conscious decision to assess the consequences and compensate for possible damage.

Thus, risk minimization in the process of making investment decisions is determined not only by the algorithm for their assessment, but also by decision-making to improve the economic and financial security of companies and organizations. In the light of current events, this task is of particular relevance.

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DOI 10.34660/INF.2022.51.97.134

改进企业实体可持续发展的财务分析

IMPROVING FINANCIAL ANALYSIS OF SUSTAINABLE DEVELOPMENT OF A BUSINESS ENTITY

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抽象的。 建议在进行战略分析以确定经济实体环境因素的影响时，使用基于难以模仿的资源（VRIN-资源）的企业竞争力概念。 考虑了使用企业动态能力概念的相关性。 改进企业发展可持续性财务分析的建议是基于确定动态能力与所分析经济实体的市场价值之间的关系。

关键词：战略分析，企业动态能力的概念，竞争优势的来源，财务结果。

Abstract. *It is proposed, when conducting a strategic analysis to determine the influence of environmental factors of an economic entity, to use the concept of enterprise competitiveness, based on hard-to-imitate resources (VRIN-resources). The relevance of using the concept of dynamic capabilities of the enterprise is considered. Proposals for improving the financial analysis of the sustainability of the development of an enterprise are based on identifying the relationship between dynamic capabilities and the market value of the analyzed economic entity.*

Key words: *strategic analysis, the concept of the enterprise's dynamic capabilities, the source of competitive advantages, financial results.*

In modern conditions, the quality of the implementation of preventive economic, including financial analysis, has a significant impact on the development of economic entities. Moreover, such an analysis should be carried out on a strategic basis. The future market positions of the enterprise largely depend on the nature of changes in the market environment. Therefore, the rationale for effective management decisions depends on the quality of forecasting market changes, since the results of predictive analysis are necessary to justify the directions for increasing the competitiveness of business entities.

Modern concepts of enterprise competitiveness are largely based on hard-to-imitate resources (VRIN-resources) [1]. The development of the resource concept led to the emergence at the end of the 20th century of the concept of the dynamic capabilities of an enterprise. According to the hypothesis of D. Thies, dynamic abilities and a good strategy, based on hard-to-imitate resources and experience of an enterprise, are the basis for obtaining a competitive advantage [2].

Despite a significant number of works devoted to assessing the dynamic abilities of economic entities [2, 3, 4, 5, etc.], the problem of an objective financial assessment of the dynamic abilities of an enterprise has not been fully investigated, the degree of expediency of their formation and development has not been determined.

Numerous attempts are known to develop a method for assessing the dynamic abilities of an economic entity, however, in the available methods, as a rule, the dynamic abilities of an enterprise are poorly linked to the dynamics of the external environment. Substantiation of effective tools for strategic financial analysis of an enterprise based on indicators of its dynamic abilities will ensure the preventive nature of the regulation of the resource base. It seems appropriate to use the suggestion of E. D. Vaisman and N. S. Nikiforova regarding the choice of the VRIN resource configuration trajectory [6].

Modern theories of competitiveness are based not on market advantages, but on the availability of strategically important resources, or VRIN resources. The resource approach is based on the following provision: the unit of analysis is the resources and capabilities of a particular enterprise, and not a set of business units and business models. Therefore, this setting determines the possibilities for allocating financial tools for analyzing the company's product portfolio, for studying its resources and abilities.

E. Penrose ("The Theory of Firm Growth") emphasized the dependence of competitive advantages on organizational capabilities, considered the concept of the so-called "inherited resources", which have such properties as the difficulty of copying resources and abilities associated with the historical unique experience of each particular firm [3]. The concept of organizational routines (abilities) by R. Nelson and S. Winter [7] determined the direction of development of the resource approach. The concept of organizational routines introduced by these authors, interpreted as repetitive ways of doing business based on the coordinated actions of the company's employees, found that a significant process in the activity of any company is the learning process within the organization, which can be either implicit (implicit) or explicit (explicit).). Therefore, the ability to organizational learning gives the enterprise unique abilities that allow in a certain way to effectively use its resources.

Richard Rumelt presented an important argument in favor of the resource approach, citing data that only 8% of differences in firm performance can be explained by industry effects, while approximately 47% of differences are due to business unit effects. Rumelt's conclusion is the following: if intra-industry differences in profits exceed inter-industry differences, then industry factors do not fully explain the differences between the performance of organizations [8]. Further development of the resource approach was obtained in the article by Prahalad K. and Hamel G. "Key Competence of a Corporation" [9]. The article was the basis for the creation of a new strategic approach: competitive advantages should be formed not through market struggle with competing enterprises, but through the search, creation and development of their own unique hard-to-copy competencies.

Thus, the development of new approaches to strategic analysis should be formed on the basis of the resource concept (Resource Based View), since only a preventive analysis of the acceleration of changes in the market environment will reveal the source of competitive advantages in these dynamic conditions. In 1997, David Thiess [10, 11] formulated the hypothesis that the basis for obtaining a competitive advantage by an enterprise is its dynamic capabilities, and effective management is based on a complex of hard-to-imitate or VRIN-resources, on the one hand, and mechanisms that contribute in response to changes in external environment, transform these resources in order to form and develop new competencies, skills and abilities, on the other hand.

According to the definition of most researchers [2, 12, 13, etc.], it boils down to the following: it is the ability of an enterprise to recognize changes in the environment, choose from these changes the most important for it and make appropriate changes in the internal environment.

The difference between the resource concept and the concept of positioning is as follows: in the first case, unique resources are searched, in the second, barriers to entering the market are considered. The resource concept has become the basis of the rationale that the company should itself be innovative, and not imitate the changes that are already on the market.

Within the framework of the resource approach, the resources and capabilities of the firm are the main elements of strategic analysis, since they determine the sources of competitive advantages. When performing a strategic financial analysis, one should consider the ratio of resources, abilities, competencies, competitive advantages and financial results of the enterprise. In particular, it is useful to compare the relative financial performance of firms with different levels of exploitation of their unique characteristics [14] .

The VRIN model developed by J. Barney operates under two constraints: firstly, the enterprise operates in a relatively stable competitive environment, and secondly, the enterprise, due to limited information, does not have the opportunity to compare the characteristics of its resources with those of competitors. If VRIN resources operate under stable conditions, then in conditions of rapid environmental changes, these resources may lose their characteristics, or some of them, such as value, rarity, originality, irreplaceability. To maintain these characteristics, enterprises need to form and develop the ability to modernize their VRIN resources in a timely manner.

D. Tiess identified three main groups of organizational abilities that are included in the company's dynamic capabilities [2]:

- understand, define and formulate the opportunities and threats of the external environment;
- "capture" (take advantage of) the possibilities of the external environment;
- maintain competitiveness by improving, combining, protecting and, if necessary, reconfiguring the company's tangible and intangible resources.

The first group of abilities is of great importance for companies in markets with any level of dynamism of the external environment, as it is responsible for the connection of the company's strategy with the external environment. The development of this group of abilities allows you to more accurately analyze changes in the external environment, which will certainly improve the quality of the entire strategic analysis and, as a result, the quality and effectiveness of strategic decisions [13].

The second and third groups of abilities are more important for companies operating in markets with a high level of market changes and especially in sectors of the new economy. The competitiveness of these companies often depends precisely on the speed of their reaction to market changes, while companies operating in traditional markets have much more time to make decisions and reconfigure their portfolio of resources and capabilities.

The main result of the second block of the enlarged dynamic strategic analysis is the understanding of the value of the company's existing resources, abilities and competencies in terms of obtaining a sustainable competitive advantage in future markets.

The third block of the dynamic strategic analysis model is the analysis of the company's strategy for its adequacy to the expected changes in the external environment. The main tool of this stage can be a dynamic SWOT analysis (analysis of the degree of influence of specific scenario conditions on the existing strengths and weaknesses of the company, identified as a result of VRIO analysis). It is necessary to evaluate the strategic response of the company to the expected external changes (how well the company, in the light of identified threats and opportunities, will be able to strengthen its strengths or acquire new advantages, and whether it will be able to protect its vulnerabilities) due to its existing resources and capabilities, as well as the reconfiguration envisaged by the strategy portfolio of resources and abilities [15].

The final block of the dynamic strategic analysis model is to determine the gap in the resources and competencies of the organization, from the position of the company's strategic intentions and expected changes in the external environment. It is necessary not only to identify the gap between the required and existing resources and abilities, but also to compare the importance of specific resources and abilities (several different resources can be identified that underlie competitive success in the future market) with their cost and acquisibility. The importance of specific required resources and capabilities to the company can be determined using a dynamic SWOT analysis (taking into account the required and existing resources and capabilities, as well as changes in the portfolio of resources and capabilities provided by the strategy). Based on the value and cost of specific resources and capabilities, the company can determine how to change existing resources and capabilities, what changes to make to the firm's strategy in accordance with the strategic intentions of the company.

The enlarged model of dynamic strategic analysis developed by Beck N. N. and Sarychev A. E. integrates the ideas of various schools: market, resource and evolutionary, uses "dynamic modifications" of strategic analysis tools and takes into account the formulated actual requirements for strategic analysis [15]. The use of this model allows the company in the current period to take steps to acquire resources and build capabilities, as well as develop the competencies necessary for the markets of the future.

When determining the impact of the dynamic capabilities of an enterprise on the financial results of its activities, it seems appropriate to take into account the relationship between dynamic capabilities and the market value of the analyzed economic entity.

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DOI 10.34660/INF.2022.36.41.135

投资和建筑合同监管程序的系统化

SYSTEMATIZATION OF REGULATORY PROCEDURES FOR INVESTMENT AND CONSTRUCTION CONTRACTS

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摘要：形成一种方法作为投资和建设项目所有参与者实际应用的通用工具是俄罗斯联邦现代经济的一个热门话题。　投资建设项目实施的合同策略是项目参与方之间的一套契约关系，这主要取决于对项目参与方职能的正确认识，对项目任务范围的清晰认识。 以及他们在表演者中的有效分配。

关键词：投资，合同制，规划阶段；　合同效率，俄罗斯联邦合同制度的原则，建筑合同通用方法的指标。

Abstract: *the formation of a methodology as a universal tool for practical application by all participants in investment and construction projects is a topical issue of the modern economy of the Russian Federation. The contract strategy for the implementation of an investment and construction project is a set of contractual relations between the project participants, which primarily depends on the correct understanding of the functions of the project participants, on a clear understanding of the scope of tasks in the project and their effective distribution among the performers.*

Key words: *investments, contract system, planning stages; contract efficiency, principles of the contract system of the Russian Federation, indicators of the universal methodology of construction contracts.*

The logical elements of the investment and construction project contract are the following stages:

1. Planning.
2. Performance.
3. Control.

The above stages of investment and construction activities relate to the center of the subject's economy and are a necessary condition for its development, as well as an effective mechanism for diversifying finances by a participant in investment and construction activities.

The formation, if possible, of a universal methodology, as a tool for practical application by participants in investment and construction projects, conducting contracts between them without conditions for specifying them, but with reference to stages, is relevant. In this case, the following steps are subject to research:

- Pre-contract or pre-contract research;
- Design and design work;
- Construction;
- Acceptance and commissioning of the facility;
- Exploitation.

The basic principles are shown in the figure below.

Figure 1. *Principles for the formation of a universal methodology as a tool for practical application by participants in investment and construction projects*

Further, the implementation of the first principle of "Legal and regulatory framework" (hereinafter referred to as LRF) for the formation of a universal system of investment and construction contracts is presented.

According to the current provisions of the Federal Law "On the contract system in the field of procurement of goods, works, services to meet state and municipal needs" No. 44-FZ [1], they determine the basic principles of the contract system of the Russian Federation:

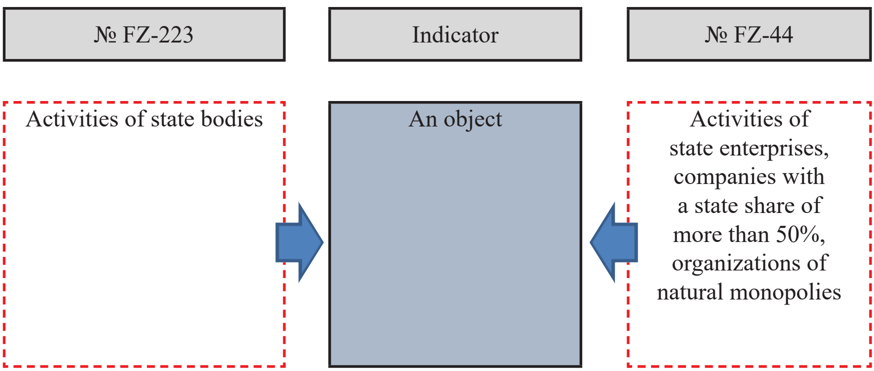
- openness and transparency;
- ensuring competition;

- professionalism of the customer;
- stimulation of innovations;
- unity of the contract system in the field of procurement;
- Responsibility for the effectiveness of meeting state and municipal needs, the efficiency of procurement.

In addition to the general ones, this No. 44-FZ (Article 110.2) also contains the principles used for the implementation of investment and construction projects. As part of which an indication of the condition on the exclusive rights of the Russian Federation, the subject of the Russian Federation, the municipality for project documentation; the right of the Government of the Russian Federation to establish the types and scope of construction works, reconstruction of capital construction projects, for which only the contractor will be assigned the obligation to perform; stage by stage, which is aimed at the procedure of acceptance, financing of fulfilled obligations, as well as the responsibility of participants in investment and construction activities and other indicators of contract performance; operation during the life cycle of the object; formation of counter investment obligations; inclusion in the list of participants in the procurement procedures of the contractor or supplier.

In addition to the provisions of No. 44-FZ, for the purposes of implementing investment and construction projects, as part of the regulatory legal provisions for the formation of a system of universal methods of construction contracts, the Federal Law “On the Procurement of Goods, Works, Services by Certain Types of Legal Entities” No. 223-FZ will be used [2] .

The following is a comparison of two Federal Laws - No. FZ-223 and No. 44-FZ for comparability of indicators for the formation of a system of a universal methodology for construction contracts.



No. FZ-223	Indicator	No. FZ-44
Applies to purchases of all government customers	Type	General Purchasing Principles for Customers
Any legal or natural person, including individual entrepreneurs and self-employed	Supplier	Any legal or natural person, including individual entrepreneurs and self-employed
Subjects of small business. Institutions and enterprises of the penitentiary system. Organizations for the disabled. Socially oriented non-profit organizations.	Participant Priority	Subjects of small business. Suppliers of «domestic» goods
Contests (various types). Auctions. Requests for proposals and price quotations. Cases where purchases are made from a single supplier are limited.	Procurement methods	In the procurement regulation, the customer prescribes all options for competitive and non-competitive procurement methods and an exhaustive list of cases of procurement from a single supplier.

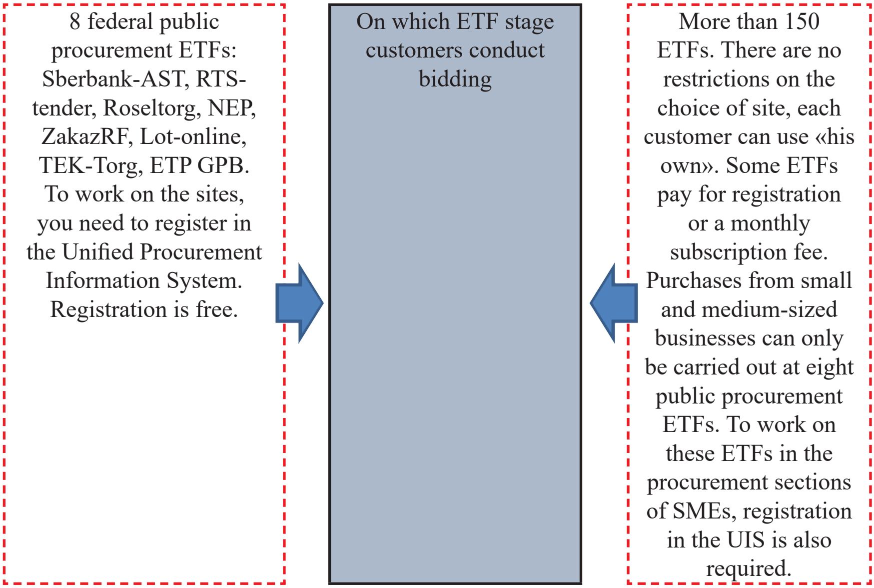


Figure 2. *Comparison of No. FZ-44 and No. FZ-223*

As can be seen from the comparison of No. FZ-44 and No. FZ-223, it can be concluded that for enterprises related to the oil industry, No. FZ-223 is the relevant regulatory procurement procedure. Thus, the effective process of purchasing material and technical resources (hereinafter referred to as MTR), which companies in this sector of the economy consume in large quantities annually, is very relevant, because affects the capitalization - the market value of the company as a whole. According to the company's data posted on the official website of PJSC "Gazprom", the consumption of materials and equipment throughout the company left more than six hundred thousand items of materials and equipment by the end of 2021 [3].

The relevance of effective procurement activities in such large, backbone, i.e. affecting entire industries and regions of enterprises, affects not only the growth of these enterprises, but also enterprises of related companies, as well as supplier companies. This economic effect is not so much a total one, formed by a simple addition of individual economic indicators, as a synergistic one, i.e. multiplicative [4]. This happens due to internal processes that have a direct impact on efficiency: modernization of production, an increase in the value of assets and fixed assets, as well as external conditions: due to an increase in the efficiency of contracting and service companies and an increase in their organizational and production structure. Also, the purposefulness of the enterprise in the field of efficiency of procurement procedures guarantees the growth of its value. What objectively shows the correlation between the cost and volume of purchases based on the statistics of Russian companies, leaders in the volume of purchases of materials and equipment.

In most guidelines [5, 6], the assessment of the effectiveness of procurement procedures is based on the relative difference between the initial price formed in the proposal and its final contract price. In this case, there is a real risk of evaluating the effectiveness, given the high initial offer price. The same risk applies to purchases of a non-competitive nature - purchases from a single supplier, in which the offer price remains unchanged until the conclusion.

Thus, the assessment of the effectiveness of procurement in the implementation of investment and construction projects must be carried out on the basis of its comprehensive analysis, which includes many factors, such as:

- contract price;
- quality assurance during the acceptance of products (work performed, services rendered);
- deadlines;
- share of competitive purchases in the overall structure;
- methods for determining the initial maximum price, etc.

The following is a system of indicators that affect the efficiency of procurement within companies in the oil refining industry:

1. Reliability of determining the initial maximum contract price (hereinafter referred to as IMCC).
2. The share of purchases from small businesses.
3. The number of applications brought to the contract as a percentage of those received.
4. The share of purchases made on time to those brought to the contract.
5. The number of changes made to the procurement documentation through no fault of the procurement service.
6. The number of changes made to the procurement documentation due to the fault of the procurement service.
7. Number of unconcluded supply contracts.
8. Real cost savings (difference between offer price and contract price).
9. Search for new potential specialized suppliers of products.

Table 1 below summarizes the main regulatory procedures for investment and construction contracts.

Table 1.
Main regulatory procedures for investment and construction contracts

№	Subject of regulation	Regulatory requirements	Objectivation
1	Form of conclusion of the contract	Implementation of contract purchases	Civil Code of the Russian Federation [7], No. 44-FZ, [1] No. 223-FZ [2]
2	Procurement method	Electronic competition	No. 44-FZ, [1] No. 223-FZ [2]
3	Method for determining IMCC	design estimate method	No. 44-FZ, [1] Order of the Ministry of Construction of the city No. 175 / pr [8]
4	The need for pre-contract preparation	Preparation of investment justification together with determination of investment justification based on technological and price audit	PP RF No. 563 [9]
5	Subject of contract	engineering survey; design (design documentation, working documentation); construction; technological equipment (delivery, installation); commissioning of RCS; Exploitation	No. 44-FZ, [1] PP RF No. 563, [9] Urban Planning Code of the Russian Federation [10]
6	Conditions on the price of the contract	Fixed price	No. 44-FZ [1]
7	Price Detail	Formation of estimates based on stages and enlarged complexes (types) of work	No. 44-FZ, [1] Order of the Ministry of Construction No. 841/ pr [11]
8	Terms and stages of the contract	Work Schedule	Order of the Ministry of Construction No. 336/ pr [12]

Thus, all of the above indicates the importance of complying with the provisions of the Civil and Urban Planning Codes, as well as new provisions of legal documentation on procurement and work contracts. The regulation of very complex, dependent on many factors, complex legal relations in the areas of investment and construction activities will make it possible to secure all participants in investment projects, minimizing risks, and also creating more comfortable, from the point of view of legal relationships, conditions that affect the main regulatory procedures investment and construction contracts [10].

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DOI 10.34660/INF.2022.46.55.136

改进合同阶段的成本管理
IMPROVING COST MANAGEMENT AT THE CONTRACT STAGE

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摘要：投资建设项目实施的合同策略是项目参与方之间的一套契约关系，它主要取决于对项目参与方职能的正确认识，对项目任务范围的清晰认识。　项目及其在表演者之间的有效分配。
关键词：投资，合同制度，生命周期合同，合同执行阶段，反向投资义务，EPC 合同。
Abstract: *The contract strategy for the implementation of an investment and construction project is a set of contractual relations between the project participants, which primarily depends on the correct understanding of the functions of the project participants, on a clear understanding of the scope of tasks in the project and their effective distribution among the performers.*
Key words: *investments, contract system, life cycle contract, stage of contract execution, counter investment obligations, EPC-contract.*

The realities of 2022 served as a bright catalyst for changes related to investment and construction activities in the Russian Federation. First of all, the improvement of the cost management system at the contract stage touched upon the implementation of the contract under the Federal Law "On the contract system in the field of procurement of goods, works, services to meet state and municipal needs" [1] established at the legislative level. The most important novelties in this Federal Law are (see the figure below):

• stage by stage, which is aimed at the procedure of acceptance, financing of fulfilled obligations, as well as the responsibility of participants in investment and construction activities and other indicators of contract performance;

• operation during the life cycle of the object;

• formation of counter investment obligations;

• inclusion in the list of participants in the procurement procedures of the contractor-executor or supplier.

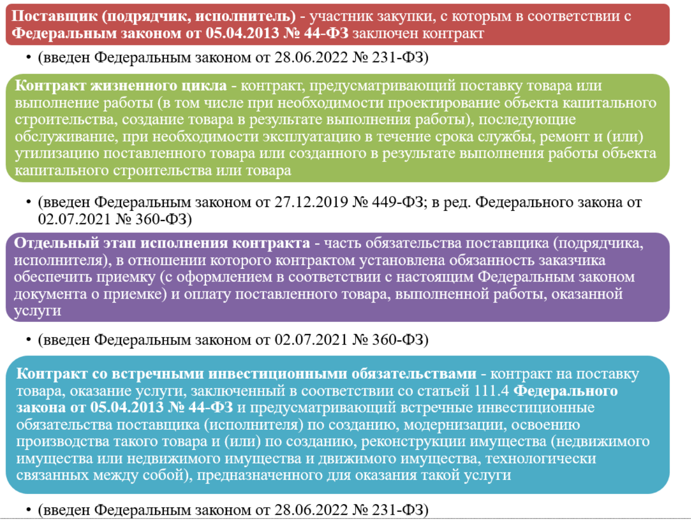

Figure 1. *Novelties in the Federal Law "On the contract system in the field of procurement of goods, works, services to meet state and municipal needs"*

Below, three of them, directly related to the system of investment and construction contracts, will be considered in more detail:

- Life cycle contract;
- Separate stage of contract execution;
- Contract with counter investment obligations.

The life cycle contract (hereinafter referred to as the LCC) according to No. 44-FZ is a form of contract that includes complex work of the entire life cycle of investment and construction activities, starting with design and survey work and construction, as well as subsequent commissioning and maintenance, including the stage of disposal including land clearing. The legislator has established the basic principles that allow signing such contracts.

The conclusion of the LCC agreement is covered by Decree of the Government of the Russian Federation dated November 28, 2013 No. 1087 [2]. The resolution specifies in which cases the customer has the right to conclude a life cycle contract according to No. 44-FZ. The following are cases related to investment and construction activities, structured by type (see figure below).

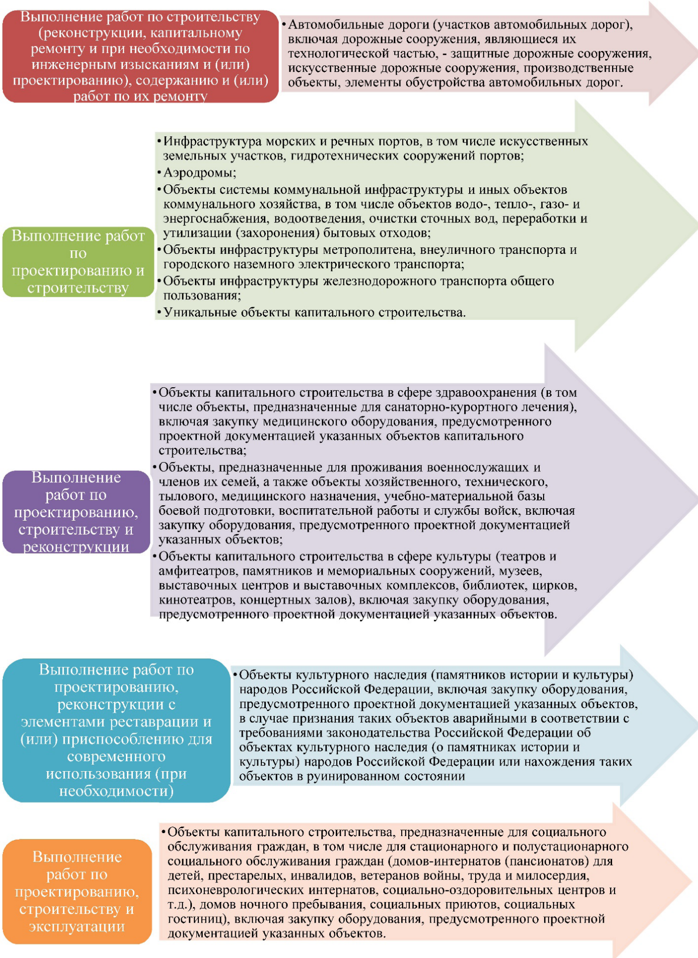

Figure 2. *Types of forms of investment and construction contracts in accordance with Decree of the Government of the Russian Federation of November 28, 2013 No. 1087 [3]*

From 01.01.2022, the project LCC will include the cost indicator for the goods and (or) work, as well as a detailed breakdown and costs associated with subsequent maintenance.

In addition, from the beginning of 2022, an updated procedure for agreeing on the modification of LCC is in effect (see the figure below).

Figure 3. *The procedure for agreeing on the modification of the LCC from 2022*

Legislation also provides the option to authorize a one-time extension of the LCC under the following conditions:

• If the total amount of the contract is less than one hundred million rubles;

• If there were unforeseen circumstances;

• If its non-fulfillment is recorded due to the fault of the contractor, provided that the contractor fully repays the penalty.

In addition to the general rules No. 44-FZ governing the contract system in the Russian Federation, in order to conclude a LCC, it is necessary to adhere to the provisions of PP No. 563 dated May 12, 2017. [3], i.e. will additionally need:

• Obtain a positive decision from the government or a positive decision from the chief manager of budgetary funds [4] (provided that the object belongs to federal property), or a decision from the head of the region (municipality) in relation to state-owned objects of a constituent entity of the Russian Federation (municipal property);

• Obtain an opinion on conducting a public technological and price audit of an investment project [5] in accordance with its form, which provides a rationale for investments in the construction of a capital construction facility;

• Include in the contract the special conditions prescribed in Part 4 of PP No. 563 [3].

Also, from the beginning of 2022, special conditions for changing the LCC regarding a change in the contract price within thirty percent for construction work, overhaul, reconstruction, demolition of objects and preservation of cultural heritage objects, as well as work on their design, became relevant, subject to the following provisions:

• the term of the agreement is more than one year;

• the amount of the agreement is more than one hundred million rubles;

• there were unforeseen (there is an indication of them in the contract) circumstances;

• justification of changes is agreed and substantiated by the customer.

Special conditions for changing the LCC can be applied provided that a positive decision is received after passing the procedure for the reliability of determining the estimated cost.

A separate stage of contract execution (hereinafter referred to as OEIC) according to No. 44-FZ is a component of obligations in the current contract system of the Russian Federation, which forms the procedure for acceptance work and payment for them without reference to the commissioning of the entire facility.

OEIC confirms the fulfillment of obligations in part - this part is agreed with the customer and is tied to the types of work based on the project. The customer prescribes the deadlines for the execution of each individual stage of the contract already at the stage of its project and a notice is necessarily broadcast (according to clauses 8, 9, part 1 of article 42 No. 44-FZ, as well as in accordance with the letter of the Ministry of Finance No. 24-06-06 / 86152 dated October 25 .2021 [6]). The terms that are indicated are formed according to a calendar reference or reference to the end of a period of time, as well as the occurrence of a certain event in accordance with Art. 190 of the Civil Code of the Russian Federation [7].

A contract with counter investment obligations (hereinafter CCIO) according to No. 44-FZ - (the applicable term “offset contract” is also used hereinafter OC) is concluded for the supply of goods, the provision of services and provides for counter investment obligations of the supplier (executor) for the creation, modernization, development of production such goods and (or) for the creation, reconstruction of property (capital construction facilities, in addition, real and movable property connected by technological functions (enterprise)), intended for the provision of such a service. The figure below shows the main functions of the CCIO.

Закупки на заключение КВИО осуществляются электронным конкурсом на основании акта высшего исполнительного органа государственной власти субъекта РФ

с 1 млрд до 100 миллионов рублей снижен минимальный объем инвестиций по КВИО

если КВИО будут заключать для нескольких субъектов РФ, то объем инвестиций будет составлять не менее 400 миллионов рублей

с 2024 года также добавят условие о максимальном количестве товара (объеме услуги) (не более 30%), которое участник закупки в течение 1 календарного года вправе предоставить иным заказчикам субъекта РФ напрямую по заключенному по п. 48 ч. 1 ст. 93 Закона № 44-ФЗ контракту. Данное положение не применяется к таким контрактам с объемом свыше 1 миллиарда рублей

после заключения КВИО информация подлежит включению в реестр единственных поставщиков товара, производство которого создается, модернизируется, осваивается, единственных исполнителей услуги, оказываемой с использованием имущества, которое создается, реконструируется

Figure 4. *Main functions of a contract with counter investment obligations*

The novelties of regulatory regulation of the investment and construction industry presented within the framework of this review article are aimed at managing the cost of public procurement in accordance with No. 44-FZ at the contract stage.

The analytics of the current version of No. 44-FZ, in relation to investment and construction contracts, is getting closer to the provisions that are formulated for EPC contracts.

An EPC contract is:

«engineering» + «procurement» + «construction»

или

«инжиниринг» + «поставки» + «строительство»).

An EPC contract can be characterized as a “full cycle contract” in which the contractor performs design and survey work, construction, and timely commissioning of the facility. Most often in practice, the contractor under the contract performs the functions of control (functions of the technical customer in accordance with the definition of article 1 of the Town Planning Code of the Russian Federation [8]) of the full cycle of work on design and survey work, construction, timely commissioning of the facility and he is also responsible for timing and quality.

An EPC contract is used when the customer does not have the competencies of a technical customer, i.e. does not have a structure for managing the investment and construction process [9].

Thus, all of the above indicates the importance of complying with the provisions of the Civil and Urban Planning Codes, as well as new provisions of legal documentation on procurement and work contracts. The regulation of very complex, dependent on many factors, complex legal relations in the areas of investment and construction activities will make it possible to secure all participants in investment projects, minimizing risks, and also creating more comfortable conditions in terms of legal relationships [10].

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DOI 10.34660/INF.2022.48.41.137

1–3岁儿童脑部学习关键类别定义现状

DEFINITIONAL STATUS OF KEY CATEGORIES OF BRAIN-BASED LEARNING FOR CHILDREN 1-3 YEARS OLD

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抽象的。 这篇向一般教学社区提出的文章揭示了针对 1–3 岁儿童的基于大脑的学习研究的关键类别：神经教育学、神经教学法、教学法和幼儿期。 对 1–3 岁儿童的神经心理特征进行了分析。 描述了 1、2、3 岁时大脑半球的功能，以及这些功能介导的语言、情感和运动发育。 神经教学法在其中的主导作用得到证实。这种说法源于这样一个事实，即这个年龄段的孩子的心理是由外部环境刺激决定的。 它们影响突触活动的启动，大脑质量的增加速度。

关键词：基于大脑的学习，1–3 岁儿童，神经教育学，神经教学法，教学法，幼儿期，神经心理学特征，大脑半球，言语，情绪，运动发育。

Abstract. *The article proposed to the general pedagogical community reveals the key categories of research into brain-based learning for children aged 1–3: neuropedagogy, neurodidactics, didactics, and early childhood. The neuropsychological characteristics of children aged 1–3 years were performed. The function of the cerebral hemispheres at the age of 1, 2, 3 years is described, as well as the speech, emotional, and motor development mediated by these functions. The leading role of neurodidactics in it is substantiated. This statement proceeds from the fact that the psyche of a child at this age is determined by external environmental stimuli. They affect the launch of synaptic activity, the rate of increase in brain mass.*

Keywords: *brain-based learning, children aged 1–3 years, neuropedagogy, neurodidactics, didactics, early childhood, neuropsychological characteristics, cerebral hemispheres, speech, emotional, motor development.*

The relevance of the study of brain-based learning for children aged 1–3 years is determined by the latest scientific data on the possibilities of early learning of a child based on the resources of his/her mental activity. This problem is in the focus of the study of neuropedagogy (*Eng. Neuropedagogy, Educational neuroscience*). It is defined by V.A. Moskvin and N.V. Moskvina as the science of using neuropsychological knowledge in teaching, data on the brain organization of the processes of mastering different types of knowledge, taking into account and mutual influence of the individual lateral profile of students and teachers [1]. Neuropedagogy uses the knowledge of differential psychophysiology, cognitive neurology, neurosurgery, genetics, sociology, cultural studies, linguistics, cybernetics, pedagogical branches of knowledge about higher mental functions and their localization, about interhemispheric asymmetry of the brain and interhemispheric interaction, emotional intelligence, etc.

According to V. Livshits, the goal of neuropedagogy is a creative, optimal solution of pedagogical problems based on the use of knowledge about the specifics of the brain organization of higher mental functions [2].

Neuropedagogy made itself known in Russia in the 1990s. Its formation was prepared by fundamental studies of domestic neuropsychologists (A.R. Luria, Yu.M. Mikadze, L.Yu. Moskovichyute, E.D. Khomskaya, L.S. Tsvetkova, etc.), physiologists (P.K. Anokhin, N.A. Bernstein, V.M. Bekhterev, A.P. Pavlov, I.M. Sechenov and others), psychophysiologists (E.A. Golubeva, V.D. Nebylitsin, B.M. Teplov, N. N. Traugott and others). The formation of domestic neuropedagogy was marked by the scientific works of T.V. Akhutina, V.V. Lezina, V.A. Moskvina, N.V. Moskvina, V.D. Eremeeva, T.P. L. Sirotyuk and others.

Today in Russia and other countries of the world (USA, Finland, France, Great Britain, etc.) research organizations (institutes, centers) on neuropedagogy have been established. Thirty countries as part of their organizations came together to develop and implement the international project “Brain and Learning”. This project is led by the Center for Educational Research and Innovation (CTRI), which is a structural unit of the Organization for Economic Cooperation and Development (OECD). The project includes representatives of pedagogy, psychology, neuroscience, sociology, medicine. Institute of Cognitive Neuroscience (ICN) at the Modern Academy for the Humanities (MAH) has become a research center in Russia, where scientists from the Lomonosov Moscow State University, the Institute of Psychology of the Russian Academy of Sciences, the Institute of the Human Brain at the Russian Academy of Sciences, and the Russian Academy of Education, Research Institute of Neurocybernetics of RSU, etc.

Neuropedagogy is a diversified science and includes neurodiagnostics, neuropedagogy of education, the development of correctional and developmental support for the student, neuropedagogical organization (of the educational process), and neurodidactics. The latter branch is of particular interest to us. The term “neurodidactics” (German: neurodidaktik) was introduced in 1988 by G. Price to designate a scientific field that exists at the intersection of neurosciences, pedagogy and psychology. Neurodidactics is based on cognitive, emotional-personal, motor processes of human learning.

A question thus arises: how do didactics and neurosciences relate in the same scientific plane? A significant layer of neurodidactic knowledge and categories belongs to didactics (from the Greek didaktikos - instructive, related to learning). Its ancestor J.-A. Komensky: in the work “Great didactics” defined this branch as “the universal art of teaching everything to everyone” [3].

The compilers of the Pedagogical Encyclopedic Dictionary interpret didactics as a theory of education and training, a branch of pedagogy [4]. The purpose of didactics is the empirical knowledge of the learning process and the theoretical substantiation of its laws and patterns, facts, principles, methods, means, trends, prospects. Thus, the normative-applied and constructive-technical functions of didactics are realized. The integrative unity of these functions ensures the disclosure of the phenomenology of the learning process. The basic categories of didactics include *learning, teaching, education*.

Based on this, the object of didactics as a science can be defined as learning in all its diversity of relationships, and the subject as a system of relations “teacher - student”, “student - educational material”, “student - other students”. The leading didactic principles, developed by J.-A. Komensky, are consciousness, visibility, gradualness, consistency, strength and feasibility. The activity-procedural structure and orientation of training includes the transfer of knowledge by the teacher to students, their educational and productive practice, control and verification of the formed competencies.

A completed educational and cognitive act is not a closed system, but each time an ascending and more complex stage in the interaction of the subjects of the learning process. As a result, students master one or another element of the knowledge communicated to them. In turn, the teacher receives a concrete idea of the cognitive activity of the student, the knowledge he/she has formed. In accordance with this, the structure of training includes: setting an educational and cognitive task, transferring knowledge to students, pedagogical control and testing their competencies.

In the framework of our study, children aged 1–3 years act as students. This period in neuropsychology of childhood is called early childhood [5], in preschool pedagogy - pre-preschool, or babyhood [6]. J. Piaget interpreted this age as a period of sensorimotor intelligence, during which means are formed to create schemes for coordinating perception and movement. In addition, the child masters locomotor acts in the environment: running, jumping, walking.

D.B. Elkonin attributed object, manipulative activity to early childhood [7]. Its essence lies in the assimilation of socially developed methods of action with objects. The child is guided by the constant meaning of objects fixed in human activity. The appearance of the first goal-setting and actually instrumental actions acquires the most important significance in objective activity. At this age, speech is acquired. By the end of the second year, the child uses about 300 words, by the end of the third year - about 1500 words. From 2 to 3 years, speech becomes coherent and has the character of communication. Adults initiate situations of communication by showing objective actions together with verbal instructions.

The mental development of a child depends on the maturation of brain structures. Preverbal development is determined by the depth of the brain, subcortical structures, activation of the right hemisphere. It is saturated with non-speech sounds (natural, objective), from which phonemes are distinguished. Thus, the child acts as a researcher who analyzes whistles, blows, ringing, hissing, creaking, sounds made by animals. When the first words such as "on", "give", "mother", "dad", etc. appear, the work of the left hemisphere comes to the fore. The right hemisphere transfers the non-speech experience it has accumulated to the left and gives way to the leading place in speech development. The speech period begins with the child's mastery of 10 words.

At 2 years old, children tend to actively interact with adults. A different motor activity is formed: take a spoon, act with both hands, give a toy, take things from a shelf, etc. The child becomes more independent: he/she learns the sequential actions with toys he/she observes, tries to do everything himself/herself. Thinking and memory are formed from numerous repetitions of independent actions. In order to deeply realize and understand, the child examines, listens, touches, tastes, smells. As part of these actions, neural pathways are laid between different areas of the brain, they connect meaning, color, time, shape. These skills are accompanied by the emergence of new words: by the end of the second year, their number reaches 300 lexemes. The situational thinking of young children determines the construction of simple patterns in observing phenomena and processes, communicating with adults. Children develop in the game, the simple forms of which turn into complex ones.

At the end of the second year, a certain life experience is formed in the child based on what he has seen, heard, broken, disassembled. Own judgments are projected on relationships with other adults, children. Children become more resilient, excitable, emotional, reactive, imitate adults. Hemispheric interaction allows the child to simultaneously stomp and clap, play ball, get up and down from a stool, ride a tricycle, wash themselves, dress and undress, draw with a pencil, start a spinning top, fasten buttons, tie shoelaces, etc. Imitating adults and animals, children make characteristic sounds, make faces, run, jump, etc. However, the attention of children is still unstable, they quickly switch to other activities.

At the age of 3, the child has already developed a memory, and bright events associated with emotions leave a deep mark on it. At the same time, negative events are preserved by the brain more firmly than positive ones. The child's vocabulary is approximately 1500 words; he/she communicates in sentences. The phonetic series of children is basically formed, with the exception of hissing, whistling, [r], [l]. However, the final correct pronunciation is formed gradually on the basis of phonemic and speech hearing, articulatory motility of the tongue, cheeks, lips. The appearance of grammatical phonemes (temporary forms of the verb, cases) help children in orientation to objects and space. Phrases become long and polysyllabic, sentences are enriched with a subordinate row. All components of speech are best developed in the game. By the end of the third year, connecting conjunctions and pronouns appear. The child is active, trying to imitate the speech and behavior of adults. He/she still cannot regulate his/her emotions; the dominant motive is "I want." He/she willingly interacts with other children, experiences different feelings (joy, grief, satisfaction, embarrassment, fear, affection, resentment). The child focuses on the beautiful, with pleasure is engaged in creativity in modeling, drawing, building houses from cubes...

Neuropsychologists conclude that the structure of the child's brain practically does not differ from the brain of an adult [8]. However, the brain turns on the same zones and blocks gradually, when receiving stimuli from the external environment. Thus, the psyche of a child at this age is determined by environmental stimuli that affect the launch of synaptic activity and the rate of increase in brain mass. Most parts of the brain turn on and function only in childhood.

Let's summarize what has been said. The key categories of the study of the brain - oriented education of children 1-3 years old are "neuropedagogy", "neurodidactics", "child 1-3 years old". The article reveals the content of these branches of pedagogical knowledge, age-related neuropsychological features of early childhood. A conclusion is made regarding the mediation of the child's psyche at this age by environmental stimuli, which determines the priority role of neurodidactics in this process.

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DOI 10.34660/INF.2022.59.87.138

俄罗斯的艺术博客：创新媒体实践的细节
ART BLOGGING OF RUSSIA: SPECIFICS OF INNOVATIVE CREATIVE MEDIA PRACTICES

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抽象的。这篇文章的作者根据创新的媒体实践将艺术博客视为一种交流形式，其中最受欢迎的类型是关于电影的视频博客——电影视频博客。影视博客的特点是在寻找新的创作模式和审美准则的基础上，以及专业人士对非专业视频博主的修辞和美学的借鉴，具有鲜明的实验性。这种现象被定义为现代专业艺术博客圈发展的趋势。博主活动的新形式的创意和美学内容深受广受欢迎的非专业影评人博客的影响，他们是电影制作与大众观众/用户之间的意见领袖和中介。这个因素是由于电影博客的以下特点：以言论自由为导向； b.通讯互动性高； C。娱乐性、简单演示、游戏风格、幽默； d.以口语词汇为主的讲话风格减少； e.负面批评的流行是对观众期望的反应。

关键词：艺术博客，影视博客，视频博客，网络创意，媒体创意。

Abstract. *The authors of the article consider art blogging in the light of innovative media practices as a communicative format, the most popular type of which is a video blog about films - a movie-video blog. The movie-video blog is characterized by a bright experimental character based on the search for new creative models and aesthetic guidelines, as well as the borrowing of the rhetoric and aesthetics of non-professional video bloggers by professionals. This phenomenon is defined as a trend in the development of the modern professional art blogosphere. The content of new forms of creativity and aesthetics of bloggers' activities is greatly influenced by the blogs of sought-after non-professional film critics, as opinion leaders and intermediaries between film production and the mass audience/users. This factor is due to the following features of film blogs: a. orientation to freedom of opinion; b. high degree of interactivity of communication; c. entertaining, easy presentation, game style, humor; d. reduced style of speech with a predominance of colloquial vocabulary; e. prevalence of negative criticism as a reaction to audience expectations.*

Keywords: *art blog, movie-video blog, video bloggers, network creativity, media creativity.*

The advent of digital technology and new media has strongly influenced all spheres of culture and art, the perception and thinking of modern man. A new communicative space has appeared, it affects both the mass media and the media. Moreover, in the era of the Internet and wireless communication, the boundaries between the mass media and all other forms of communication are blurred, and we are witnessing the appearance of interactive communication tools, as the Spanish sociologist M. Castells called them [1], which are neither the mass media nor the media in the traditional sense. Following R. Neuman, new media can be considered new forms of interactive communication tools that are permanently available on digital devices and imply active participation of users in the creation and rapid dissemination of the content [2]. One of the new forms of interactive communication is blog-communication or blogging. Its wide distribution among traditional and innovative media is due to the fact that the Internet platform itself and its technological and technical capabilities allow any user to participate in creating his/her own content, as well as broadcasting it through Internet communication channels.

Over the past decade Russian researchers have shown considerable interest in new media, network communication, and blogging. They explore the problems of the network society influence on the nature of social communications [3; 4], the forms and models of new media [5; 6], the social functions of the Internet [7], the specifics of classical art forms in the network space [8], blogs in the network communication system [9], art blogging of professional journalists and film critics in social networks [10; 11], etc.

Still, art blogging of unprofessional community representatives (the most popular type of which is video blogs about films) remains poorly studied, despite the fact that it is the type of blogging that clearly manifests experimental essence, the search for new creative models and new aesthetic orientations. In this regard, it is quite natural to borrow rhetoric and aesthetics of unprofessional video bloggers by professionals, which has become one of the trends in the development of the modern professional blogosphere. It has determined the relevance of the study, the purpose of which is to identify the properties and main innovative features of art blogging as one of the popular new forms of creativity in the digital format, and, also, on the basis of video bloggers' content analysis, to identify original features of the network environment impact on the emergence of new communication forms and creative self-expression.

The blog is traditionally viewed by researchers as an online diary; S.C. Herring emphasizes the aspect of dated entries arrangement in the reverse chronological order in the definition of a blog as frequently updated web pages [12], which allows us to identify its characteristic features: development on the time axis, interpretative nature, high innovative potential, high degree of publicity, polemic character and interactivity suggesting an active position of the readership.

Researchers emphasize the synthetic nature of the modern blog; this phenomenon, as S.N. Velitchenko says, is on the verge of literature, media, everyday life, visual and musical codes [13]. Therefore, to define the features of blogging and the blog as a creative work it is important to use interdisciplinary methods of analysis, which is one of the characteristic features of such studies. In many respects, the art blog functions as a formation predictor of the entire Russian communication field of media-film-journalism and film-media-creativity.

It's important to note that the problem of media creation, which is undeniably relevant at the present time, is only at the very beginning of its conceptualization. These issues were addressed by F.A. Kittler (philosophy of media) [14], L. Manovich (software theory and information aesthetics) [15], G. Ulmer (theory of transition from written to electronic literacy) [16]. Theoretical works analysis of these authors has revealed prerequisites for the emergence of film blogging. It is connected with the current situation with new media forming an environment that can displace traditional forms of film criticism and film journalism by user generated content aimed at independent satisfaction of users' informational, analytical and entertaining needs without the services of professionals.

We define the art blog as a type of blog created on art themes that presents art in its most diverse forms and genres. At the present stage, art blogs implement the functions of social networks, as they are becoming the main channel for disseminating information about art. The scope of art blogs is wide, it includes art criticism, art news, personal content of artists, materials on art marketing, etc. The art blog also represents various communication formats: from media art projects to forums for general public. This is largely due to the fact that the Internet and digital technology have provided a large part of population with wide access to various fields of art (from museums and theater performances to various musical events and world cinematography) and special knowledge. Elitist art has become mass art. As a result of such changes in the modern media space, we are witnessing new actors eager to express their opinion about art and cinema. Their community develops its own hierarchy, its own system of values; it serves as an active source of the evaluative consensus that used to be the prerogative of an exclusively professional environment [17].

Film-art-blogs are specialized blogs about the art of cinema which feature film recordings and materials, collections, podcasts, video reviews and full-length films about films. The most popular forms of film-art-blogs in the Russian media are YouTube channels, as well as public pages on Russian social networks "VKontakte" and "Odnoklassniki", on the platform Telegram.

The Russian film-art-blogs analysis made it possible to distinguish between three types of blogs according to their belonging to a certain media platform: 1) blogs on film portals with an option for the users to create their own page, comment openly and publish reviews, for example, portal services Kinopoisk.ru, Film.ru; 2) authorial blogs on personal pages on social networks and in messengers including blogs of professional critics and blogs of Internet users, moviegoers and amateur critics (YouTube and Telegram); 3) autonomous film blogs, for example, Alex Exler's personal project Exler.ru, Stanislav Nikulin's "Redrum" blog about films, etc.

One of the trends in the development of film-art-blogging is an increase in the creative activity and influence of unprofessional critical community representatives who, as noted by R. Korneev, managed to outgrow the boundaries of their "blog of interests" or their community on social networks, and created authorial Internet resources where the name, as always on the Web, is identical to the audience [17]. The same trend is traced in the foreign blogosphere, which is emphasized by M. Leccese and J. Lanson [18]. The actualization of user film blogs is connected with their wide representation on YouTube and Telegram which occupy leading positions among all network platforms and are in the stage of active growth. The development of Russian video blogging is connected with YouTube video hosting. When analyzing video blogs about films, we ran into a most important problem: the definition of the substance of new forms of bloggers' creativity and aesthetics. The blogs of unprofessional film critics have a big impact on this process: Evgeny Bazhenov's "BadComedian" (together with the "#BadTrip" show), "MovieScience" (an anonymous author under the nickname "Joker Corleone" posts videos based on editing of movie fragments, trailers, interviews with filmmakers; and all this video material is aimed at justification of his personal declarations concerning the topic he covers); "The Chuck_review" by Daniil Lazarenko (together with "The Trash-Review"), Krzysztowski's channel (together with "The Legendary Podcast" in the format of one or two-hour live video discussions in which several bloggers discuss the most high-profile movie premieres and share their own recommendations and opinions regarding the released films), etc.

The analysis of Russian art blogs about films shows that while researchers write about the crisis of critical mind in general in the modern world, blogging film criticism is in demand, and new intermediaries between film production and a mass audience appear in the face of bloggers. A blogger rather than a professional critic becomes an opinion leader. They are the real competitors of academic film critics, given the number of views on YouTube channels.

Our study has showed that the demand for user-generated video content is due to the following characteristics and functional features: a. orientation towards freedom of opinion and honesty; b. interactive nature of communication that provides various forms of feedback; c. entertaining, easy serve, gameplay style, humor; d. low style of speaking, colloquial non-literary language; e. prevalence of negative criticism as a response to audience expectations.

For a user audience, the main things on YouTube are freedom of speech and a desire to know the opinion and reaction to films not of a professional critic, but of a blogger, i.e. a person who shares common values and interests with you. An authoritative blogger rather than a professional becomes an opinion leader. Along with that, audience's reaction, the opportunity for everyone to express an opinion in the comments and participate in an open discussion are very important in blog communication.

Bloggers set themselves the task of telling the truth to their audience, in its language and on its platform. The main principle of the blogger is to talk simply about complex things, to offer detailed arguments complemented by visualization, competent opinions and answers to users' questions. Moreover, criticism may be caused not only by a newsworthy event, but by the desire to talk about a particular film and express an opinion. However, according to the researchers, for most bloggers popular on Runet critical opinions about films are merely a response to the audience's request, not an expression of the expert opinion [11].

Tellingly, bloggers on YouTube prefer to create comprehensive reviews contributing to negative assessment of domestic cinematography. The sphere of human interest has always been in the mainstream of scandals, conflicts and criticism in its negative manifestation; therefore, bloggers depending on the need to collect the number of views and to monetize the content turn to ever-popular areas. However, other content even more professional and expensive in terms of production is also posted on the network-documentaries, serious film material designed to educate users and help them understand cinema at a new qualitative level.

The language of communication plays an important role in blog communication: speaking accessible language to the viewer, the blogger often deviates from generally accepted literary norms in his conversational style.

Video blogs perform the following functions: the communicative (plus phatic - "contact-setting") - it provides feedback and creates an environment; informational (exchange and reaction to content); self-actualizing (self-expression); entertaining; educational (explanation of "what is good and what is bad") - it went on to "enlightenment through entertainment".

Following M. Kazyuchits, we tend to define video blogging in the field of cinematography as a user form of unprofessional creativity and communication [10]. The process of communication in the blogosphere is based on constant interaction of a blogger with his audience. Therefore, being a blogger means creating communication. Such communication implies responsibility, responsiveness, interactivity and "sensitivity" to the requests of the audience, since the blogger's most important goal is to create the environment.

The study of Russian film-art-blogs allowed us to draw the following conclusions:

1. The development of film-art-blogs in the Russian media space is connected with intensification of the activities of unprofessional bloggers who simultaneously perform different functions: a communicator, an author, a critic, partly a journalist, an artist, a showman. Thus, the Internet network space works for the emergence effect; it provides a new field for the development of creativity which is multifunctional and multidimensional in nature.

2. In blog communication, the possibility of free creative self-expression contributes to continuous experimentation with technology and form. Experimental models of information exchange predominantly represent play communication - the blogger “acts out” rather than tells a story. Therefore, emotional reactions come to the fore. In addition, communication and interaction through individual creativity in blog communication are focused not on displaying information, but on managing it, which includes combining, repackaging, etc.

3. The analysis of the content showed that each blogger tries to adapt his own product to the already existing formats popular among viewers and easy to understand, the range of creative strategies is quite wide. So, the widespread use of video reviews, documentary stories and collections (TOPs) blurs the boundaries between them, and the video overviews bear the features of a video review, video essay, game sketch, etc.

4. The specifics of blogging content free of editorial policy and censorship (with the exception of self-censorship) include a choice of topics, orientation to freedom of opinion and particular presentation of the material - always subjective and lightweight, predominantly in the style of gameplay; it is designed for mass youth audience. Today, film blogs for most young users are a quick access to fresh, exciting and trustworthy information in the field of cinema. The Internet has ample opportunities for feedback, instant response from subscribers, which affects the number of views, subscriptions, the number of likes and other indicators including open statistics. For this reason, every popular blogger monitors the quality and reliability of his/her own content.

5. In the network culture, we observe the formation of the experimental model of information exchange, unpredictable, mobile in its instability; it prompts a search for new knowledge through action and implies active participation of users on the basis of a combination of individual and collective actions. It absorbs all forms of activity, develops creativity and forms a new law of creative thinking: sincerity, truthfulness, activity, and interaction. The specific YouTube environment with its own bloggers, audiences, rules, rhetoric and aesthetics contributes to the invention of the new through a constant experiment, which allows bloggers who create original content on cinema topics to win the attention of an audience, sometimes larger than that of large Internet media.

6. The basic principles of blogging creativity include the principle of freedom (openness, truthfulness, freedom of opinion and behavior); the principle of subjective delivery and a personalized character of material presentation; the principle of simplicity including informal atmosphere, communication style and external simplicity (interior, clothing, lighting, etc.); the principle of game models to entertain an audience; the principle of colloquial style with deviations from generally accepted literary norms; the principle of progression (focus on the process in information delivery, not on the result).

In conclusion, the study of the work of video bloggers is just at the very beginning. It certainly must be studied in all its manifestations. At the present stage of development, the attempts to determine the type of creativity on the network face a lack of linguistic means or, more precisely, methodology. The reason is that the network is a new tool of mind, much more plastic than a pen, paper, book. Art blogging needs this tool.

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DOI 10.34660/INF.2022.68.50.139

远程学习在外语教学中的实践
DISTANCE LEARNING IN THE PRACTICE OF FOREIGN LANGUAGE TEACHING

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注解。 本文讨论了使用在线教育技术组织外语教学过程的特点。 揭示了此类培训的优缺点，考虑了教学的实际问题和在线学习的前景。
关键字。 远程学习、可达性、交互性、动机、差异化、技术支持、培训的个体心理状况。
Annotation. *The article discusses the features of the organization of the educational process of teaching a foreign language using online-education technologies. The advantages and disadvantages of this type of training are revealed, practical issues of teaching and prospects of online learning are considered.*
Keywords. *Distance learning, accessibility, interactivity, motivation, differentiation, technical support, individual psychological conditions of training.*

The 2020 pandemic was a major impetus for expanding the functions of distance learning as a tool for the educational process. By distance learning, in this case, we mean the technology of purposeful and methodologically organized management of educational and cognitive activity of students living at a distance from the educational center [1]. In this case, online learning, in our opinion, becomes an improved form of distance learning, including: the use of programming tools and development of electronic courses on different platforms within a single integrative model. Such learning has a huge number of advantages over traditional learning.

1. Firstly, we would like to note that distance learning is the most accessible means of spreading innovative ideas of education all over the world. In this case we mean the access of students and teachers to most of the leading libraries in the world. Whereas previously students could only use information from sources located in university libraries and nearby libraries, now they can use unique books, rare documents and ancient scrolls from libraries around the world. Students can also use world famous online dictionaries such as Macmillan Dictionary, Collins Online Dictionary, Longman Dictionary of Contemporary English, Oxford Learner's Dictionary or ABBYY Lingvo.

2. The next important point is the fact that such learning saves a lot of time for getting new information. This is especially true for students (and sometimes teachers) who live in remote areas. When the time to get to the educational institution takes almost as much time as the learning process itself. By saving time on the way, a teacher has an opportunity to devote this time to developing new assignments or self-improvement.

3. Next, we should mention the interactivity of this type of learning, which is especially important for teaching a foreign language. In this case, we mean a huge number of sites, services and platforms that provide many opportunities for interactive work. An example is the platform Youtube (https:www.youtube.com), where the material is presented using examples, tables and videos. The Skymart platform (http:edu.skymart.ru) provides numerous interactive tasks to consolidate students' knowledge. Interactive games that can interest students of different levels are presented on the site Teach-this (http:www.teach-this.com). The site English-study-cafe (https://english-study-cafe.ru) plays a huge role in listening and reading in a distance format, where the usual reading turns into an interactive game with listening and independent work of the learner. Also useful for intensive learning of English vocabulary and grammar can be the platform Praktikum.yandex.ru, where there is an opportunity to hold simulated conversations on everyday topics with foreign teachers (who have unusual accents and have the necessary pedagogical experience), which helps the rapid acquisition of spoken vocabulary. No less interesting for students can be the materials on the site of the online school "Inglex": phrasebooks, explanations of grammar rules with tests, analysis of popular TV shows and songs in English. A useful site for those studying modern spoken English can be Bistroenglish.com, where you can learn a modern foreign language from movies and songs. A huge role in interactive online learning is also given to game sites, where foreign language learning at the initial stage takes place in the form of a game. The most famous in this format are Lingualeo.com (where learners can play with a lion cub, listening to songs, reading articles and watching videos) and Duolingo.com (where in game form with an owl you can learn words in context, where a native speaker voices each phrase. No less wide range of sites

where you can logically and consistently learn, practice and consolidate grammar skills in English. Such sites as: Learn English today (Learn-english-today.com), English Learner (Englishlearner.com), Engblog (engblog.ru) and Correctenglish (correctenglish.com). Within these sites, you can find accessible theoretical explanations, practical assignments, and tests for practicing the studied material.

4. In addition, this type of learning is the most developing of all modern types. After all, it is no secret that technology is improving and modernizing at an enormous rate, thus being the most advanced means of learning. This is due to the fact that online learning becomes possible to conduct all components of the educational process: from obtaining information and conducting practical exercises, to controlling educational achievements, which occurs through a variety of modern and ultramodern means, which are interesting and attractive to young people. At the same time, it should not be forgotten that the existing means of distance learning are constantly being improved, thereby maintaining a constant interest in self-development among students.

5. Also, most scholars agree that distance learning is an extremely motivational type of learning. Speaking about the impact of new online forms of learning on students' motivation, it is undoubtedly noteworthy that most of them have become more intensive and responsible learners after instructors started to use platforms such as: Zoom, Skype, Discord, Stepic, Yandex and VKontakte, as well as messengers such as Whatsapp, Telegram and Viber. This is largely because most students have long been familiar with these messengers (due to the fact that most of the communication of today's youth occurs through the Internet). In addition, the technical characteristics of the above-mentioned platforms are quite simple and understandable both for students and teachers. In this regard, messengers, in our opinion, are the most convenient to use for live chat classes, classes with video and audio recordings, as well as for recording voicemails of teachers and students. In its turn, Zoom platform is one of the most acceptable ways of conducting video conferences and webinars with two-way interactive video, as well as classes with the possibility of practicing and consolidating individual, pair and group forms of work.

6. Another important advantage of online learning is differentiation and possibility of individual approach. This approach is most important for students with disabilities. This type of training can become a real salvation for students when a long presence at classes is impossible due to health conditions of their back or other organs. Or cases when constant high temperature makes it absolutely impossible for a student to attend classes (this happened, for example, with one of our students, as daily thermometry was an integral part of modern work of our university in 2020, she could not be admitted to classes full-time, in connection with this we had to transfer her to a full online course for the duration of the pandemic).

Trainees also have the opportunity to choose the most convenient place and time to study a topic. In addition, even the place of presence in the classroom: instead of a stuffy classroom they can attend an online class from the blooming greenhouse of their garden or a balcony with fresh air, for example.

In addition, the differentiated approach of such training implies working with advanced students, when the instructor records the lectures and makes them available to such students so that they can prepare additional material for the online class in advance.

But along with a huge number of advantages of distance learning over traditional types of learning, during the first years of work a number of drawbacks and shortcomings were revealed, which I would also like to mention in the framework of this article.

One of the main problems of online education is, of course, technical failures. Unstable work of the Internet in small cities causes great difficulties for distance learning, which is especially inconvenient during online dictations or oral examinations, when the interruption of the interaction between teacher and students even for a split second can significantly spoil the results of the work.

Also to the disadvantages of this type of training is the problem of lack of appropriate technical support. For example, not all students are equipped with personal computers and uninterrupted Internet access. Many students during the pandemic had to study online using their phones, because they were “hostages” of their dormitories and had no opportunity to go home or buy the necessary equipment. Sometimes students, even in our digital age, unfortunately do not have enough digital literacy to conduct distance-learning classes. However, fortunately, such cases are extremely rare.

3. In addition, it is worth noting that some students were not ready for distance learning due to the lack of a number of individual-psychological conditions. Online learning requires strict discipline, as the result directly depends on the learner’s independence and conscientiousness. Moreover, some students can afford to oversleep or start connecting to the online class after a few minutes, which makes the teacher’s work extremely difficult, because he or she has to be distracted by the students who are connecting to the class again. There are also situations where students regularly forget about upcoming online classes, in such cases it makes sense for the teacher to use notifications and attach them to the group chat, which will serve as a daily reminder to each student about the time of the upcoming online class.

4. The problem of social interaction becomes no less important for foreign language teachers, as the opportunity to develop spoken language becomes insufficient. The lack of face-to-face communication between students and teachers is a significant disadvantage in the learning process due to the absence of simple

"live" communication and the atmosphere of an academic environment, extremely necessary for some students of different emotional groups.

Summing up the consideration of advantages and disadvantages of distance learning over the past 2 years, we can say that it is a reality, without which it is unthinkable to have a modern education of the 21st century, because online learning comprehensively complements and expands the opportunities of classical education. Nevertheless, it is important to note that such education invariably requires high-quality retraining of the teaching staff, equipping educational institutions with modern means for distance learning, as well as adjusting the training programs.

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DOI 10.34660/INF.2022.36.50.140

作为当前社会文化语境反映的词汇复合体的外围集群（关于网络传播的材料）

THE PERIPHERAL CLUSTER OF THE LEXICAL COMPLEX AS A REFLECTION OF THE CURRENT SOCIO-CULTURAL CONTEXT (ON THE MATERIAL OF INTERNET COMMUNICATION)[1]

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抽象的。本文介绍了对词汇复合体 "liberal" 的外围集群 "wrong liberal" 的研究结果，其成分根据其含义的语用成分指代敌对词汇。在具体学习的材料上，展示了信息系统"Semograph"和Brand Analytics系统的Eureka Engine模块的能力。词汇复合体的社会文化理论的认知潜力在新词位分析中得到了证明。说明了社会文化现实的变化与词汇复合体的转变及其外围的扩展之间的关系。所研究的词汇复合体出现的社会文化背景、更新的概念内容水平（基本结构、基本方案、使用背景、成分的功能语义特异性）和解释水平被描述。词汇复合体外围簇成分的功能是在互联网交流的基础上进行的，揭示了互联网用户使用簇单元的具体情况。

关键词：自由主义，敌意词典，semograph，文本语气的自动评估，neolexemes。

Abstract. *The article presents the results of a study of the peripheral cluster "wrong liberal" of the lexical complex "liberal", the constituents of which refer to the vocabulary of enmity according to the pragmatic components of their meaning. On the material of a specific study, the capabilities of the information system "Semograph" and the Eureka Engine module of the Brand Analytics system are demonstrated. The cognitive potential of the sociocultural theory of lexical complexes is demonstrated in the analysis of neolexemes. The relationship between changes in socio-cultural reality and the transformation of the lexical complex, the expansion of its periphery is illustrated. The socio-cultural context of the appearance of the cluster of the lexical complex under study, the level of updated conceptual content (basic constructions, basic scheme, contexts of use, functional-semantic specificity of constituents) and the level of interpretations are described. The functioning of the constituents of the peripheral cluster of the*

[1] The work was supported by the Russian Science Foundation (project no. 20-68-46003 "Semantics of Unity and Enmity in Russian Vocabulary and Phraseology: Language System and Discourse").

lexical complex is carried out on the basis of Internet communication, the specifics of the use of cluster units by Internet users are revealed.

Keywords: *liberal, lexicon of enmity, semograph, automatic assessment of the tone of the text, neolexemes.*

The development of the modern Russian hate speech is characterized by the vectors of "four I" (see the "three I" [1]): integration, internationalization and intellectualization, which, in our opinion, should be supplemented by the fourth "I" - intensification, which correlates with the transgressiveness of modern media i.e. their focus on maximizing the purposeful "strength of the text" and the "communicative will" of the addresser in a certain chronotopic segment of the communicative space (including the setting for the emotional construction of social reality) [2]. Integration is manifested in the transition of special word-formative means into the common language, softening of stylistic boundaries, focus on the pragmatic axis of the norm; internationalization in the active use of foreign affixes and affixoids; intellectualization in the frequency of the language game, metaphorization, appeal to associations, the effect of puzzles; intensification in the expression of designations. Modern neologization in Internet communication is distinguished by a high activity of nomination by analogy and word-building components expressing a negative assessment. The object of our study is the peripheral (including neolexemes functioning in Internet communications in 2000–2020) cluster “wrong liberal” of the lexical complex (LC) “liberal”. The analyzed lexical units (LU) refer to the enmity vocabulary according to the pragmatic components of their lexical meaning and the expressive component of their stylistic meaning. For the study of neolexemes, the sociocultural theory of LC has a certain heuristic potential (see [3]). A significant theoretical prerequisite is the understanding of the picture of the world as a result of the interaction between the subject and the environment, and the language as a means and form of storing this representation, which has linguistic (internal system organization) and conceptual (stored content) modules [3: 207–208]. Referring to the specified material to the concept of LC allows us to explore the LU in conjunction with the expressed concepts; "packaged information" (conceptual content) in relation to the internal organization of the language system used to store information. LC form a lexical nest (LN) and its conceptual content. At the same time, the boundaries of the LC are blurred, and its structure is evolving. Under LN, we mean a group of single-rooted LUs united by common semantic features and components, as well as non-single-rooted LUs, whose conceptual content fully corresponds to the conceptual content of the single-rooted component of the LN; at the same time, lexico-semantic variants of one LU can belong to different LNs [3: 212; 220]. Thus, it is not the morphological connections of LU that dominate, but their semantic characteristics - the ability to express the corresponding conceptual content. Different LU nests express and accentuate different fragments of the conceptual area. Fragments of socio-cultural reality are subject to quantitative and qualitative changes (with different speed and volume), its individual fragments may remain unnamed by the language for a certain time. Together with reality, LCs are also transformed, most often, while maintaining structural stability.

Within the framework of the LC, the following are distinguished: 1) Level A0 - the sociocultural context of the appearance of the LC / cluster of the LC (CLC): a description of the sociocultural transformations that led to the emergence of the LC / CLC). 2) Level A - the level of conceptual content, which is realized as something common, invariant in the everyday (not reflective, not conscious) use of LUs belonging to LN (as a cultural and linguistic norm); the level includes the core, reflecting the historically primary or most common conceptual constituents, and the periphery, illustrating actual transformations. The expansion of the periphery indicates the interest and needs of representatives of the sociocultural community, which determine the expansion of the LC into areas adjacent in certain characteristics; this level combines the conceptual content corresponding to the direct meanings and metaphorical uses of LU. Of particular importance is the description of the LC periphery as a reaction to new sociocultural demands (through the study of appeals to current sociocultural experience and circumstances associated with the corresponding conceptual content, and communicative situations of using LU that actualize the LC periphery). 3) The level of interpretations (level B) with the conscious, reflective use of LUs (metalinguistic contexts, motivational contexts) [3: 214–218]. The described levels 2 and 3 are connected by the relationship of mutual influence. We proceed from the possibility of extrapolating the sociocultural theory of LC to different sociolects (within which subnorms operate), the implementation of different functional styles. The description of the structure of the LC can be built by highlighting in its conceptual structure the CLC, constituted by structurally similar situations [3: 236]. In the course of the study, the following algorithm for describing the CLC is implemented (at levels A and B): 1) basic structures (LU and their combinations with LU partners); 2) basic scheme (a model that organizes the material belonging to a given CLC, a prototypical, generalized situation / abstract structure that combines a number of situations, revealing the principle of organizing conceptual content); 3) contexts of use (to be analyzed in the "Comment" paragraph) and commentary (if necessary: historical, socio-cultural information about the conceptual content of the CLC; about the areas / conditions for the functioning of the LU of the corresponding LN expressing the conceptual content, about the difference in their meaning, i.e. specialization in the expression of individual fragments of conceptual content) [3: 236-237].

Against the backdrop of growing volumes of data involved in the analysis, automation of solving individual research problems becomes a necessity. The information system "Semograph" (https://semograph.com) provides a whole range of technological support for the full cycle of research (collection, processing, statistical analysis of the material, modeling; import and export of data) [4]. This system is aimed at extracting knowledge about subject areas from arrays, including text fragments, metadata, semantic components and semantic fields, frequency, language and thesaurus dictionaries. The frame of the project created in the "Semograph" system, in addition to the array of contexts, their selected components, the system of metafields and fields, as a result may include frequency tables, tables illustrating the relationship of different metafields and fields, semantic maps and graphs. Attributing metafields to contexts (the researcher himself determines the structure and composition of metafields) allows subsequent meta-analysis according to various parameters. IS "Semograph" includes personal, research, organizational (organization of a network group and distribution of access rights to the project and its results), search (implementation through the Scrapy framework and a library of content search scripts on the Internet; extracted structured data can be imported from the Solr server through a special interface built into the IS "Semograph"; on the Solr platform, it is possible to search by keywords, compile statistics by keywords, cluster analysis based on statistical data and visualize its results, transfer data of the results to the project in the IS "Semograph") modules, import and export modules. Thus, a significant advantage of this multifunctional tool, thanks to the multi-user mode, the organizational module of project management, is the possibility of implementing group projects with a network distribution of participants.

Sentiment analysis is based on the fact that in the message the sender evaluates fragments of the surrounding reality according to different parameters with unequal emotional load (speed, size, tactile, taste and other sensations, impact, etc.), but correlated with different halves of the evaluation scale (positive / negative). The classification of message elements (through the use of statistical, lexicographic methods or a combination of them) into neutral, positive, negative is the initial task of sentiment analysis. Subsequent tasks ¬ refinement of the assessment with respect to the object and subject of tonality; establishing the negativity / positivity of the attributes (definitions) of the sentiment object (feature-based / aspect-based sentiment analysis). When determining object sentiment, sophisticated statistical algorithms are often used (CRF, semantic proximity algorithms, for example, latent semantic analysis - LSA, latent Dirichlet Allocation - LDA); when analyzing the sentiment of attributes, good results are shown by the use of thematic thesauri and neural networks (Recurrent Neural Networks). The Brand Analytics system uses the Eureka Engine module (eurekaengine.ru), which allows you to set the neutral, negative, positive average sentiment of the text, the sentiment of its individual sentences; provides a sufficiently high accuracy in determining the tone of a work (at the level of 85-87%%) for different types of texts, including publications in social media, takes into account the possibility of different assessments in one statement both for different and for one object; provides for the possibility of "measuring" the tonality of a given or automatically selected arbitrary object; represents the ratio of positive and negative attitudes towards a given object. The Eureka Engine module is mainly used to work with object sentiment, a mixed (object-objectless) mode is used when analyzing comments and reviews on sites. This module uses a statistical method based on the algorithm of Markov random fields (Markov random field - undirected graph model), using the available tonal dictionaries and rules (lexicographic method), characterized by high processing speed (more than 100 kB per second).

The object of the study is the peripheral cluster (CLC) of the lexical complex (LC) “liberal”, which includes neolexemes. The active functioning of the studied constituents of the LC periphery within the designated period (2000–2020) testifies to the continuing sociocultural significance of the indicated fragment of reality and the corresponding conceptual content. The performed analysis confirms: the frequency of metaphorical usages and the volume of metaphorical extensions are inversely proportional to the relevance of the corresponding socio-cultural fragment; metaphor increases when a fragment becomes history, loses relevance, a fragment included in everyday life is rarely subjected to conscious attention, reflection, leading to the generation of conceptual metaphors (for the emergence of the latter, the presence of distance is a favorable factor). The described CLC does not reveal metaphorical extensions. Level B including metalinguistic, motivational contexts virtually does not reveal interpretations that deviate from level A. To illustrate the performed analysis, let us present a description of the level of conceptual content (A) of the peripheral cluster "wrong liberal" LC "liberal" (the most frequent components). Analysis of the results of search queries in the Yandex search engine and these corpora indicates different frequencies of analyzed LUs. The most frequent in the collected array of contexts are: *liberoid* - 38.23%; *liberoidny* - 22.47%. When describing the lexemes of the peripheral cluster "bad liberal" of the lexical complex "liberal", the capabilities of the IS "Semograph" were used, the parameters of comparative analysis that determined the composition of the metafields are the source of the context of word usage LU and the semantic categories of words of partners of neoloxemes (nouns for LU-adjectives; adjectives for LU-nouns). Using the Eureka Engine module, for each constituent of the described cluster, an analysis was made of the average tonality of different genres of texts containing the analyzed LU, the tonality relative to the object (denoted by the LU is a fragment of reality) and the attributes of the object.

<u>Description of peripheral CLC:</u>

I. Basic constructions: l*iber (Russian, modern, pro-Western, cunning, deceitful, etc.); liberoid (Russian, local, stupid, typical, seasoned, ideological, stubborn, corrupt, etc.); liberakha / liberashka (domestic, brainless, stupid, classic, hellish, hypocritical); liberal (economist, patriot, clan, government, nonsense, etc.); liberovsky (voices, hamsters, newspeak, etc.); liberoidny (thief, liar, Russophobe, herd, dumbass, hamsters, screamers, mafia, deputy, channel, power, etc.); liberakhnuty (Banderite, troll, media, individualism).*

II. Basic scheme: one that does not correspond to true liberalism and is condemned for it; for example, a bad, wrong, fake, unworthy liberal, his/her actions and the results of these actions (because they contradict liberal principles, ideas of decency).

III. Comment. The semantics of the LU liberoid includes the sign "like a liberal, unfinished / defective". LU is combined mainly with the adjectives SG "chronotypical characteristics", "position among like-minded people", "degree of activity/aggression and commitment to one's group", "dishonest", the most frequent phrases with definitions are Russian, typical, local, pro-Western, ideological; LU is the most frequent in LiveJournal posts – 56.25% of uses; in publications on forums - 15.62% (at the same time, in LiveJournal posts and comments in electronic media, it is mostly used to characterize the intellectual ability and orientations of subjects; in LiveJournal posts and forums - when characterizing the degree of activity / aggressiveness of the subject and his commitment to the group); the combination of LU liberoid with definitions of the chronotopic characteristics of the subject is distinguished by the widest scope of functioning - 9/10 of all types of sources; combinations of LU with definitions-characteristics of the subject's intellectual abilities - the narrowest (2/10). LU liberoidny is combined mainly with the nouns SG "derogatory designation of the subject", "characterized mental objects and actions", "organization / organ", "neutral designation of the subject", "negative assessment of speech actions"; the most frequent LU partners are hamsters, the media, television, power, lies, theft, thinking, consciousness, worldview. LU is used most often in LiveJournal, blogs of communities / clubs, forums, less often - in publications on information sites (to determine a negatively assessed subject - most often in LiveJournal, community blogs and forums; negatively assessed speech actions - in LiveJournal; organizations / bodies - in LiveJournal posts and blogs of communities / clubs; with neutral designations of the subject, mental objects and actions - in LiveJournal posts; in publications of information sites and electronic media, the functioning is limited (low frequency; limited syntagmatics).

The analysis of the texts of the functioning of the lexemes of the peripheral cluster "bad liberal" using the Eureka Engine module and the comparison of the results for each lexeme and different sources of contexts of word usage allows us to draw the following conclusions: a) the lexemes of the peripheral cluster function most often in texts characterized by the prevalence of the average negative tonality positive and negative tonality, depending on the lexeme and the type of text, ranges from 1:2 to 1:7); The highest level of negative sentiment is demonstrated by posts and comments on LiveJournal posts, comments on social networks, and comments on forums; b) the analysis of tonality in relation to the object (fragments of reality denoted by the lexemes of the cluster) indicates a clear negative object tonality (LUs do not function in statements with a predominance of positive tonality, they are used to characterize the signified in a negative way). The highest level of negative tonality relative to the designated object in the totality of texts of different types is demonstrated by LU *liberoid* and *liberakh* (frequent ratio of positive and negative tonality from 0:4 and above); c) analysis of sentiment regarding attributes indicates that negative sentiment is most often determined by the assessment of bad liberals denoted by units of the cluster and their actions in terms of such parameters as “moral qualities” and “aggressiveness” (negative assessment of subjects denoted by the liberal LU is most often determined by "intellectual abilities", "aggressiveness"). The use of the sociocultural theory of the lexical complex, the capabilities of the information system "Semograph" and the module for automatically determining the tone of the text Eureka Engine made it possible to draw the following conclusions. The studied neolexemes constituting the peripheral cluster "wrong liberal" of the lexical complex "liberal" reflect changes in the socio-cultural reality and new needs of native speakers, the transformation of the lexical complex "liberal" due to these factors. The described cluster corresponds to the basic scheme "wrong, such that does not correspond to true liberalism and is condemned for it." The most frequent constituents of the cluster in Internet communication: *liberoid, liberoidny*. They function in texts with a predominantly average negative tone, they are used to negatively characterize the designated objects; negative object tonality is determined mainly by the evaluation of objects according to the parameters "moral qualities", "perseverance, aggressiveness", less often - "intellectual qualities". LUs of this cluster are most often found in LJ publications and comments, which are distinguished by a high level of negative tonality. The studied LUs demonstrate conceptual, syntagmatic, and functional specificity. For example, most of the LU-nouns are most actively combined with definitions denoting the chronotypical affiliation of the subject, his role in the group, activity, hostility, dishonesty. The described peripheral cluster of LC "liberal" does not reveal metaphorical extensions; metalinguistic, motivational contexts do not demonstrate interpretations that deviate from the level of conceptual content. Cluster LUs implement the opposition in terms of conceptual content to the nuclear cluster of LC "liberal".

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DOI 10.34660/INF.2022.18.58.141

英语和德语大众媒体中短语单位的特点

THE PECULIARITIES OF PHRASEOLOGICAL UNITS IN ENGLISH AND GERMAN MASS MEDIA

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抽象的。 这篇文章致力于检查现代英语和德语新闻中的短语单位。 这项调查的目的是追踪大众媒体新闻出版物中用语单位的特点。 报告的作者改变了用语单元的结构或组成部分，因此创建了评估政治事件的附加信息。 新闻中转换的词组具有更强的表达和情感影响，因为词组构成和文本意义在词组中相互作用。 研究方法：描述性分析、比较分析、成分分析和情境分析。

关键词：报刊语言，用语单位，用语单位转换，用语单位转换类型。

Abstract. *The article is devoted to the examination of phraseological units in modern English and German press. The goal of this investigation is to trace the peculiarities of phraseological units in news publications in mass media. The authors of reports change either a structure or a component composition of a phraseological unit, thus, additional information in the evaluation of political events is created. Transformed phraseological units in press have a stronger expressive and emotional impact since a component constitution and a text meaning interplay in phraseological units. Research methods: descriptive, comparative, component and contextual analyses.*

Keywords: *the language of press, phraseological unit, transformation of phraseological units, the types of transformation of phraseological units.*

Any national language is an open and dynamically developing system. To renovate language resources the authors of media reports activate various transformations of traditional phraseological units. To trace the tendencies in the transformation of phraseological units in the English and German languages an attempt was made to analyse the modifications of phraseological units that were found in online editions of newspapers and magazines The Sunday Times, The Times, Spiegel, as well as in newsfeeds gmx, waz.

Phraseological units are stable word combinations, or according to N.M. Shansky, “reproducible linguistic units” [3, P. 124] that possess semantic and structural peculiarities such as idiomaticity, structural invariability.

A.B. Kunin distinguishes nominative, nominative communicative (or verbal), interjective, modal and communicative phraseological units. [2] In the articles taken from online newspapers The Sunday Times, The Times there are a lot of phraseological units of two kinds: nominative and verbal.

The nominative phraseological units are: “…the bottom of the table”; “hard line”; “dirty money”[5]; “a sacrificial lamb”; “nuts and bolts of” [5]; “small beer” [5]– something unimportant; “Cash in hand”; “a front row seat”; “a shot across the bows” [5]; “busybodies” [5] – those who like to interfere in somebody’s business; “the Scooby gang – a small united group of people who aim at investigating mysterious riddles; “a white-collar union” – a person who does not deal with a physical labour; “Joes” – usually, an ordinary man; little man – an unimportant person; “rough sleeping” – a sleep in the open air (if you are homeless), etc.

Verbal phraseological units are: “is bending over backwards to”[5] – to work very hard to do something for someone; “turned a blind eye to” – to ignore something deliberately; “would be stripped of their royal patronage” – to take something away from someone; “lost the plot”[6] – to act in a chaotic manner; “to get a grip on” – to start to control something [5]; “felt the pinch” – to have a lack of money; “took a hit” – to suffer heavy losses; “to strike a balance”[5] – to find a compromise; “to stage a comeback” – to return to the previous safe condition; “will be left out in the cold” – to be ignored or excluded from group; “to play Russian roulette with” – to run risks; “set tongues wagging across the policing world” – to become the source of gossip; “was lukewarm at best about the home secretary” - to be between two opinions, etc.

Communicative phraseological units are less widespread: “eyes still mist over” – to fill with tears (about eyes); “…it has lured … like bees to a honeypot” [5] – to attract people; “everything went like clockwork” – to proceed in accordance with a plan.

However, a stable image which reflects peoples’ mentality, culture obtains a new expression and quality due to the transformation of phraseological units.

Taking into consideration the classifications made by N.M. Shansky [3], V.N. Vankurov, T.S. Guseinova [1], one may distinguish semantic, lexical, syntactic, morphological transformations that are represented in the media. Newspaper style is marked by a thorough selection of words to serve a dual purpose – to inform and to affect. On the one hand, the speech of news publications is concise, full of economic and political terms, abstract notions. On the other hand, it is rich in expressive means, among which phraseological units play an important role giving the text emotionality, evaluation, figurativeness and effectiveness.

Semantic transformation is represented by the largest number of examples: “The vaccination campaign is, so far, the one unambiguous success story of the government’s handling of the crisis” [5]. The phrase “success story”, fixed in the 20th century, means a story about a poor man who has made his way and succeeded. With regard to the vaccination campaign, the author uses this phraseological unit to show that the process of containing the crisis will not be easy but it leaves hope for a successful completion.

“…the Alhambra palace complex a little shaken but not too badly stirred” – the phrase “shaken, not stirred” was used for the first time by Ian Fleming’s personage, James Bond, who described his preferences in a cocktail making. In the example there is a combination of semantic and syntactic transformation for the description of the condition in which the building of the palace complex is situated.

“Giving nationalists more powers is as effective as giving a bully your lunch money” [5]. The phraseologism “give your lunch money” is used by school bullies who rob pupils’ lunch money. “Be half in and half out” is transformed from “be half-and-half”. Speaking about the behavior of the Dukes of Sussex, the author of the article uses the phraseological unit in a new way focusing on their desire to belong to a Royal family but to do what they want.

Lexical transformation is represented by a fewer number of examples: along with a well-known phrases “white-collar” or “blue-collar” the author uses “a guy in a grey T-shirt” where “a grey T-shirt” indicates a vast majority of common people who often wear such articles of clothes.

Syntactic transformation is represented in the following example: “A dog may be a man’s best friend – but he can also be useful to his enemies.” [5] The prolongation of communicative phraseological unit leads to the broadening of meaning: the dog may be also very helpful for antagonists.

Besides, the prolongation of a phraseological unit alters its meaning and destroys its indecomposability: “Tried to wash Facebook’s hands clean.” [5] “Wash one’s hands” means to become free from one’s responsibilities. Thus, the expression conveys ironic shade and refers to the fact that Facebook made serious attempts to avoid responsibility.

The occasional syntactic transformation “…as part of a bitter № 10 power battle” makes the phraseological unit “bitter battle”- a violent struggle more concrete, filled with facts about the place of the described events.

“Vaccination guinea pig” is a phrase that was formed from “guinea pig” but in connection with the coronavirus it got a new interpretation.

The contamination of two phraseological units is observed in the following example: “Facebook, which has been tortoise-like at shutting down fake news, was positively hare-like at switching off a real staff.” [5] The well-known proverbs “as slow as a tortoise” and “run like a hare” are transformed into the author’s phraseological unit.

The contamination of two phraseological units “pry open” and “a closed door” conceives a new meaning: “Pry open closed doors” – to reveal problems.

Morphological transformation is noticed in the examples below: “Institutions are accused of laying a welcome mat for criminals” where the phraseologism “lay out a welcome mat” is transformed on the level of grammar.

“Raise hell” is transformed and used in the function of an attribute: “Another hell-raising pair, were known to slake their thirst at Joe Allen’s”. [5]

Phraseological units in press publications are subjected to the formation of variants and different modifications. According to many linguists, a variability of phraseological units only demonstrates their formal change without loss of phraseological meaning. [4, P. 62].

Phraseological units are embedded in a text entity and are mainly affected to grammatical changes of components.

Apart from such reasons of the use of phraseology in press as enhancing an effect from speech, compression of information, achievement of expressiveness and word play, a creative change of a phraseological unit may be the result of the fact that any expressive means is possible to become trite which contributes to a constant change of phraseological units.

The transformation of phraseological units is sometimes due to the author’s intentions as secondary meanings are added to a changed form.

Diejenigen in der Regierung, die gegen den Krieg gewesen seien wie Ministerpräsident Mischustin oder die Chefin der Zentralbank Elvira Nabiullina, hätten keine politische Hausmacht hinter sich [7]. In electronic dictionary Duden there is a construction «politische Macht haben». The example shows that the component composition of lexical units in this set-phrase is expanded, which helps to adapt it to a context. In addition to concretization and specialization in a context of publication, the author expresses irony about politicians who do not weild power at home using a compound noun “Hausmacht“.

In the next example there is a phraseological unit “den Teufel an die Wand malen“ - “to beshrew, to portray a devil on the wall“, where one component (den Teufel) is replaced to another, due to this, the enrichment with new elements that make the context more concrete is achieved. “Für ihn gibt es nur noch eine Möglichkeit, die öffentliche Meinung und das Bewusstsein der Entscheidungsträger im Westen zu seinen Gunsten zu beeinflussen: die Gefahr eines Atomkrieges an die Wand zu malen” [8]. – “He has the only possibility to influece the public opinion and the mind of decision-makers in the West which is to depict a danger of nuclear war on the wall.”

In spite of the fact that a phraseological unit increases figurativeness and expressiveness which is achieved by its transformation, it may carry important information that is realised purposely through a vivid name: Offiziell buhlt die Kampagne des Ex-Präsidenten um politische Spenden. Tatsächlich <u>steuert</u> Donald Trump <u>enorme Summen in die eigene Tasche</u> [9]. – "Officially ex-president's campaign obtains political donations. Actually, Donald Trump replenished his pocket with huge sums of money." In the construction "in eigene Tasche stecken" there is a replacement of the verb "stecken" на "steuern" which emphasises again that Donald Trump sent a considerable amount of money through the raising fund for election campaign to his pocket". By replacing the verb the author of the article criticises D. Trump's actions. Transformed phraseological units encourage in reading the publications that is one of the main tasks for mass media.

Modified phraseological units appear in the headlines of press reports attracting readers' attention and offering an incentive to read the basic text: Hass-Fälle im Netz werden wieder aufgerollt [10]. – "The cases of hate statements on the Internet are under investigation again." The phraseological unit "Fall aufrollen"which means "investigate, open the case" was concretized by the noun "Hass." In addition to inducement and interest to the reading, the use of transformed phraseological units in headlines fulfils the function of such a transmission of the main content of the article that it is summarized and evaluated.

Owing to the replacement of one or several components of a phraseological unit, lexical variations appear. The replacements of verbs and nouns are the most frequent examples: mit einem linken / falschen Fuss / Bein aufgestanden sein.

There is a phraseological unit "gut stehen" in the electronic dictionary Duden. In a newsfeed gmx there is the following example: Mit der Beziehung zwischen Donald Trump und Mike Pence steht es nicht zum Besten. Nun distanziert sich Pence klarer denn je von seinem früheren Vorgesetzten [11]. – "The relations between Donald Trump and Mike Pence leave much to be desired". Such ironic attitude towards the hostile relations between D. Trump and M. Pence was expressed by the author of the article.

Phraseological units are widely represented in mass media where they fulfill informative and impacting functions. Transformed phraseological units, namely those units which are different from traditional forms serve as the means of creation of publicistic expressivity. Phraseological transformations are motivated by the desire to create a fresh image for attracting attention to the content of news reporting. Semantic and lexical transformations are frequently found. Transformations increase expressive and evaluative capability of phraseological units, which contributes to its adaptation to the theme of a report. Besides, they serve to express the author's attitude to the described event. At the same time occasional transformation and contamination of phraseological units allow to convey such shades of meaning which are impossible to express with words or set-expressions in their usual usage.

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DOI 10.34660/INF.2022.26.59.142

连环杀手乳头状手指纹环型特征

FEATURES OF LOOP TYPES OF PAPILLARY FINGER PATTERNS OF SERIAL KILLERS

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抽象的。 本文致力于研究连环杀手手指乳头状纹环状结构与梳状计数值相关的特征。 建立了8个尺环图案的信息值（其中5个位于拇指和食指），可用于基于指纹研究方法的犯罪风险评估系统。 获得的数据旨在帮助犯罪学和法医学领域的调查员和专家提名和验证有关罪犯身份的初步调查版本。

关键词：指纹识别、皮纹学、梳状计数、疯子、乳头状图案、连环杀手、尺骨袢。

Abstract. *The article is devoted to the study of the features of the loop types of papillary patterns of the fingers of serial killers depending on the value of the comb count. 8 informative values of ulnar loop patterns have been established (5 of them are located on the thumbs and index fingers), which can be used in the delinquency risk assessment system based on the fingerprint research method. The data obtained are intended to help the investigator and specialists in the field of criminology and forensic medicine in the nomination and verification of initial investigative versions about the identity of the criminal.*

Keywords: *fingerprinting, dermatoglyphics, comb count, maniac, papillary pattern, serial killer, ulnar loop.*

Relevance. Forensic support for the investigation of serious crimes against human health and life is an urgent task for law enforcement agencies, criminologists and forensic doctors [1-4]. Of particular relevance is the investigation of serial murders [1, 5, 6]. Previously, we presented information about the features of combinatorics of the types of papillary patterns of the fingers of serial killers [2]. Attention was drawn to the higher diagnostic information content of arc and curl types of patterns, as well as their combinations, against the background of which the information content of loop patterns (the most common) turned out to be low.

The purpose of this study – search for informative values of loop types of patterns, taking into account their variability in terms of the ridge count.

Material and research methods. The research material was fingerprinted cards of 100 serial killers and 100 law-abiding citizens. The types of papillary patterns were recognized. In ulnar loop patterns ("legs" of the loop are directed towards the little finger), the ridge count was determined - the number of papillary ridges (lines in prints) between the center and delta of the papillary pattern.

Research results.1) Big fingers. It was established that on the fingers of the right hand of serial killers there were no loop patterns with a ridge count of up to 9, on the thumbs of the left hand such patterns were found in 4 observations; at the same time, in the control, loop patterns with a ridge count of up to 9 were found on the fingers of the right hand in 5 observations, and on the fingers of the left hand, in 2; for the fingers of the right hand, the difference is statistically significant at the level of $p<0.05$, and the diagnostic coefficient (DC) is +6. Loop patterns with ridge counts from 10 to 13 in serial killers were found in 9 observations on the fingers of the right hand and in 14 on the fingers of the left hand; in control – in 5 and 8 observations, respectively; the differences are not significant. Loop patterns with ridge count from 14 to 16 in serial killers were found in 4 observations on the fingers of the right hand and in 13 on the fingers of the left hand; in control – in 10 and 13 observations, respectively; differences are significant at $p<0.32$ only on the fingers of the right hand (DC=+2.5). Loop patterns with a ridge count of 17 or more in serial killers were found in 25 observations on the fingers of the right hand and in 15 on the fingers of the left hand; in control – in 30 and 34 observations, respectively; the differences are significant at $p<0.01$ on the fingers of the left hand (DC=+2.3).

2) Index fingers. On the fingers of the right hand of serial killers, loop patterns with a comb count of up to 9 met 15 times, on the thumbs of the left hand - 16; in the control, loop patterns with a ridge count of up to 9 occurred 10 times on the fingers of the right hand, and 8 times on the fingers of the left hand; for the left hand, the difference is statistically significant at $p<0.32$ (DC=+2). Loop patterns with ridge count from 10 to 13 in serial killers were found in 7 observations on the fingers of the right hand and in 11 on the fingers of the left hand; in control – in 3 and 6 observations, respectively; the differences are not significant. Loop patterns with ridge counts from 14 to 16 in serial killers were found in 4 observations on the fingers of the right hand and in 8 on the fingers of the left hand; in control – in 6 and 12 observations, respectively; the differences are not significant. Loop patterns with a ridge count of 17 or more in serial killers were not found on the fingers of the right hand and occurred in only 1 observation - on the fingers of the left hand; in control – in 6 and 2 observations, respectively; the differences are significant at $p<0.01$ on the fingers of the right hand (DC=+7).

3) Middle fingers. On the fingers of the right hand of serial killers, loop patterns with a comb count of up to 9 occurred 13 times, on the thumbs of the left hand - 16; in the control, loop patterns with a ridge count of up to 9 occurred 16 times on the fingers of the right hand, and 11 times on the fingers of the left hand; the differences are not significant. Loop patterns with ridge counts from 10 to 13 in serial killers were found in 29 observations on the fingers of the right hand and in 20 on the fingers of the left hand; in control – in 16 and 17 observations, respectively; differences are significant at $p<0.05$ for the right hand (DC=-1.8). Loop patterns with ridge counts from 14 to 16 in serial killers were found in 11 observations on the fingers of the right hand and in 20 on the fingers of the left hand; in control – in 20 and 18 observations, respectively; differences are significant at $p<0.05$ for the right hand (DC=+1.8). Loop patterns with a ridge count of 17 or more in serial killers were found in 9 observations on the fingers of the right hand and in 10 on the fingers of the left hand; in control – in 7 and 15 observations, respectively; the differences are not significant.

4) Ring fingers. On the fingers of the right hand of serial killers, loop patterns with a comb count of up to 9 met 2 times, on the thumbs of the left hand - 11; in the control, loop patterns with a ridge count of up to 9 occurred 8 times on the fingers of the right hand, and 8 times on the fingers of the left hand; differences are significant at $p<0.05$ for the right hand (DC=+4). Loop patterns with ridge counts from 10 to 13 in serial killers were found in 10 observations on the fingers of the right hand and in 12 on the fingers of the left hand; in control – in 5 and 6 observations, respectively; the differences are not significant. Loop patterns with ridge counts from 14 to 16 in serial killers were found in 9 observations on the fingers of the right hand and in 9 cases on the fingers of the left hand; in control – in 9 and 11 observations, respectively; the differences are not significant. Loop patterns with a ridge count of 17 or more in serial killers were found in 12 observations on the fingers of the right hand and in 18 on the fingers of the left hand; in control – in 18 and 16 observations, respectively; the differences are not significant.

5) Little fingers. On the fingers of the right hand of serial killers, loop patterns with a comb count of up to 9 occurred 23 times, on the thumbs of the left hand - 13 times; in the control, loop patterns with a ridge count of up to 9 were encountered 16 times on the fingers of the right hand, and 14 times on the fingers of the left hand; the differences are not significant. Loop patterns with ridge counts from 10 to 13 in serial killers were found in 24 observations on the fingers of the right hand and in 26 on the fingers of the left hand; in control, in 20 and 19 cases, respectively; the differences are not significant. Loop patterns with a ridge count of 14 to 16 in serial killers were found in 14 observations on the fingers of the right hand and in 25 on the fingers of the left hand; in control, in 17 and 24 cases, respectively; the differences are not significant. Loop patterns with a ridge count of 17 or more in serial killers were found in 9 observations on the fingers of the right hand and in 12

on the fingers of the left hand; in control – in 15 and 16 observations, respectively; the differences are not significant.

Conclusion. The results obtained demonstrate the relatively low diagnostic informativeness of ulnar loops in solving the problem of diagnosing the risk of delinquency (on the example of serial killers) based on fingerprinting. Of the 40 features studied (4 variants of ulnar loop patterns on 10 fingers), only 8 turned out to be informative, which accounted for 20% of the total number of features studied: a) on the thumbs - patterns with a comb count of up to 9 on the fingers of the right hand (DC = 6), from 14 to 16 on the fingers of the right hand (DC=+2.5) and from 17 on the fingers of the left hand (DC=+2.3); b) on the index fingers - patterns with a ridge count up to 9 on the fingers of the left hand (DC=+2) and from 17 on the fingers of the left hand (DC=+7); c) on the middle fingers - patterns with ridge count from 10 to 13 on the fingers of the right hand (DC=-1.8) and from 14 to 16 on the fingers of the right hand (DC=+1.8); d) on the ring fingers - patterns with a ridge count of up to 9 on the fingers of the right hand (DC=+4). Most of the informative values of the ridge count in the ulnar loops are up to 9. In general, the fingers of the right hand are more informative, while the thumbs are the most informative, and the only finger on which there were no diagnostically significant signs is the little finger. Most of the diagnostically significant signs (7 out of 8) can be characterized as not characteristic of serial killers (diagnostic coefficients have a positive sign).

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DOI 10.34660/INF.2022.75.49.143

冥想作为一种减轻慢性自身免疫病患者压力的方法

MEDITATION AS A METHOD OF STRESS REDUCTION IN A PATIENT WITH CHRONIC AUTOIMMUNE PATHOLOGY

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抽象的。 压力和焦虑是慢性疾病恶化的危险因素，尤其是自身免疫性疾病。这篇文章回顾了证明冥想方法作为减少焦虑和压力的工具的有效性的研究，并提供了一种综合方法来为慢性自身免疫性疾病提供优质医疗服务。

关键词：冥想，心身医学，自身免疫性疾病，整合方法

Abstract. *Stress and anxiety are risk factors for exacerbation of chronic diseases, in particular autoimmune pathology. The article reviews studies that prove the effectiveness of the meditation method as a tool for reducing anxiety and stress, as well as providing an integrated approach to providing quality medical care for chronic autoimmune diseases.*

Keywords: *meditation, psychosomatics, autoimmune diseases, integrated approach*

Introduction

Stress becomes an integral part of life. The development of social networks, the growth of personal activity, stressful stimuli at work, a high level of psycho-emotional experiences against the backdrop of ongoing events in the world and other factors provoke an increase in the burden on a modern person. Along with psycho-emotional experiences, even a healthy person has an increased level of anxiety, there is disquiet, internal tension, which directly affects the state of the body. Sleep is disturbed, an imbalance in the work of the sympathetic and parasympathetic nervous systems gradually increases, neurohumoral regulation of the functioning of organs and systems suffers.

Prolonged exposure to stress factors provokes the exacerbation of chronic diseases, the growth of chronic inflammation [1] and, in particular, disruption of the immune system. This provokes an increase in the painful symptoms of an already existing chronic disease and the appearance of new signs due to the stereotype of the development of the disease.

Meditation is used as an additional element of a comprehensive approach aimed at reducing levels of anxiety and stress. Regular application of the method shows a positive trend in psychosomatic spectrum diseases, as well as autoimmune chronic pathology. The 2018 Mindfulness Based Therapies for Autoimmune Diseases and Related study [2] singled out the practice of meditation as a new method of psychotherapeutic intervention that improves the mental, and subsequently physical health of a person suffering from an autoimmune disease.

Meditation and Mindfulness

Today, meditation is a method of psychological assistance for working with a patient of a psychological and psychosomatic profile [3]. The main objective of the method is to teach a person the skills of auto-observation, auto-regulation and auto-programming, which allow, with regular repetition, to master the principles of managing emotional intelligence.

The development of emotional intelligence when working in meditation contributes to the introspection of one's own activity, that is, it develops the skill of awareness. This is a state in which a person focuses on the psycho-emotional experiences of the current moment, abstracting from experiences about the past and future, observing their own sensations, including bodily ones. Neurophysiologists argue that the development of the skill of mindfulness occurs in parallel with positive changes in the neurons of the cerebral cortex [4].

Systematic self-observation contributes to the development of mindfulness, and also helps a person gain stress resistance by relaxing the body and mastering the skill of autoregulation. An increase in resistance to stress leads to a decrease in the level of anxiety and disquiet, the restoration of the psycho-emotional state, which has a positive effect on the quality of life.

Meditation and stress

Meditation in the MMCC method (Mindfulness Meditation of Conscious Concentration - meditation of open attention and conscious concentration) has a direct positive effect on the psycho-emotional state of a person, increasing his/her resistance to stress and restoring balances in the work of the nervous system [5]. At first, mental processes stabilize, the level of calm attention increases, a person learns to regulate mental activity in such a way as to switch from negative experiences to positive ones.

The duration of maintaining calm attention increases after 10-15 days of regular meditative practice, as a rule, at this moment the night rest mode is restored, the process of falling asleep improves. There comes a period of reduction of anxiety and disquiet, the nervous system becomes more resistant to stress factors, the balance between the sympathetic and parasympathetic nervous systems is restored.

A decrease in a long-term level of anxiety is accompanied by adaptive changes in the body [6]. Irritation of the sympathoadrenal centers decreases, the normal function of the pituitary-hypothalamic tract is restored, the level of cortisol in the blood decreases and the level of melatonin increases in parallel. In addition to improving the mental state and stabilizing the emotional background, a person begins to notice the first qualitative changes in physical well-being [7,8].

Stress, early childhood experiences and autoimmune pathology

Studies of 2012-2015 on the effect of stress on the course of chronic pathology [9,10] revealed direct relationships between the development of symptoms of depression, multiple sclerosis, autoimmune joint damage and other autoimmune pathologies and stress experienced in early childhood.

Negative childhood experience child gained at an early age has a direct impact on the development of chronic diseases in adulthood. Activation of the hypothalamic-pituitary-adrenal axis in response to exposure to a superstrong stress stimulus provokes the release of chemically active substances. This is a normal reaction to short-term unpredictable stress, but if the child is constantly surrounded by adverse environmental factors, the stress becomes chronic.

In this case, activation occurs immediately in two endocrine axes: hypothalamus-pituitary-adrenals and hypothalamus-pituitary-thyroid gland, there is a change in internal regulation, a shift in homeostasis within the body. The child goes through physical and mental changes, and if neurohormonal and neurohumoral changes are physical, then mental processes include a permanent increase in the level of anxiety and fixation of attention on the factors of external aggression.

The study “Cumulative childhood stress and autoimmune diseases in adults” of 2009 [11] revealed a direct relationship between negative early childhood experiences and acquired autoimmune diseases in adulthood. According to the results of this study, 80% of the surveyed participants suffering from various autoimmune pathologies (systemic lupus erythematosus, autoimmune thyroiditis, multiple sclerosis, rheumatoid arthritis, etc.) grew up in dysfunctional families, faced the loss of a close relative, or were subjected to physical or mental abuse in childhood [12].

Mental and physical changes continue to persist even after the stress factor has been eliminated. The manifestation and exacerbation of a particular chronic disease and the debut of an autoimmune pathology occur at a time when the stress of adolescence and adulthood is superimposed on children’s negative experience. In addition to treating the underlying disease, an integrated approach is required to provide comprehensive care to the patient.

Meditations as part of a comprehensive approach

Reducing the level of anxiety and increasing stress resistance is a key link in an integrated approach for any chronic pathology. Stress as a psychogenic factor contributes to the development of exacerbations, in particular in autoimmune diseases. Meditations show a consistently high level of effectiveness [15] in reducing increased anxiety, eliminating excitement and increasing stress resistance with regular listening in patients with chronic and autoimmune pathologies.

Autoimmune diseases often have a negative impact on a person's mental health, provoking the development of depression, apathy, and other disorders [14]. Meditation is a method of preventing the development of complications from the psycho-emotional sphere of a person through the management of emotional intelligence.

An integrated approach should also be supplemented by individual work with a specialist (psychologist, psychosomatologist or psychotherapist) for the psychocorrection of high levels of emotional, psychological and physical stress resulting from a traumatic event in the past to restore the ability of normal mental and physical functioning in everyday life.

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DOI 10.34660/INF.2022.43.87.144
UDC 159.9-053.5

烧伤患者的恢复能力
RESILIENCE OF PERSONS WITH BURN INJURY

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抽象的。对不同性别和年龄的烧伤患者挫折情境下的情绪状态和行为进行临床和心理观察及心理诊断。烧伤患者在挫折情境下的情绪状态和行为影响其在疾病中的活力状态和心理适应。数学聚类分析确定了影响复原力的重要心理因素。已经确定，在烧伤的情况下，活力水平在很大程度上取决于皮肤损伤的百分比。确定了烧伤患者的心理适应因素：高水平的情境焦虑、"疏远"和"回避"的非适应性应对策略、低挫折容忍度、高外向攻击行为率以及低水平的坚韧和社会心理适应。

关键字。烧伤、情绪反应、挫折容忍度、韧性、应对策略、心理社会适应。

Abstract. *Clinical and psychological observation and psychological diagnostics of the emotional state and behavior in a situation of frustration in persons with burn disease, depending on gender and age, were carried out. In persons with a burn injury, the emotional state and behavior in a situation of frustration affect the state of their vitality and psychological adaptation in the disease. Mathematical cluster analysis identified significant psychological factors that affect resilience. It has been established that the level of vitality in case of a burn injury significantly significantly depends on the percentage of skin lesions. The factors of psychological adaptation in persons with burn injury were determined: a high level of situational anxiety, non-adaptive coping strategies "distancing" and "avoidance", low frustration tolerance, high rates of outwardly aggressive behavior and a low level of hardiness and socio-psychological adaptation.*

Keywords. *Burn injury, emotional response, frustration tolerance, resilience, coping strategies, psycho-social adaptation.*

Burn injury is one of the most common types of injuries in peacetime. Mortality from burns in general ranges from 2.3% to 3.6%. At the same time, 85-90% are people of working age. Of the surviving patients, a significant proportion are in need of long-term medical, social, labor and psychological rehabilitation.

The relevance is determined by the high frequency of injuries of the population during fires. In Russia, more than 400 thousand victims with thermal burns are registered annually, 30% of them require hospitalization. In developed countries, 290-300 burns per 100 thousand of the population are recorded every year. According to the severity of the injury, mortality and disability, as well as the financial costs of treatment and rehabilitation, thermal injury ranks first among other injuries [1,2,3,4].

Burn injury is a significant social and medical problem of our time.

At present, the study of the phenomenon of personality resilience is becoming very relevant: the content of this phenomenon, its relationship with other personal qualities, the features of its severity in different groups are being studied, practical tasks are set for the formation of resilience, and the resilience phenomenon is compared in individuals who have suffered burns of varying severity. [5].

Hardiness is an integrative personal quality that allows you to successfully endure stressful situations while maintaining mental and somatic health. The main components of resilience are the conviction of the individual in the readiness to cope with the situation, and openness to everything new. Hardiness includes three components: involvement, which is responsible for getting a person joy from the activity performed; control, which allows a person to maintain an active life position and independently choose his life path; risk acceptance that encourages justified risk and helps to use the experience gained.

Hardiness is closely related to overall self-efficacy, psychological well-being, successful adaptation, and also positively correlates with coping strategies aimed at active problem solving [6,7].

Purpose of the study: to identify the indicator of hardiness depending on the type of emotional response in persons with burn injuries of varying severity.

Sample. The study was conducted on the basis of the burn department No. 11 - SBHI SSCH No. 1 named after. N.I. Pirogov. The preliminary stage of the study included the study of medical records, according to the analysis of which a sample of 102 people was formed with a diagnosis - “Consequences of thermal burns”. The diagnosis was verified in a hospital, ICD-10 code - Diagnosis code - T95.3. Persons who underwent inpatient treatment in the burn department: the main group - 102 people who received burns of varying severity (40 men and 62 women): 1 subgroup at the age of 35.5±2.38 years, 2nd subgroup -50.13± 5.85 years old, 3rd subgroup - 68.36±6.20 years old.

At the 1st clinical and diagnostic stage, an assessment of the clinical and psychological state was carried out to determine the emotional reaction and behavior in a situation of frustration in patients with varying degrees of burns.

Research methods. In the process of work, a complex of research methods was used: clinical conversation and observation; the method of pictorial frustration by S. Rosenzweig (1949) modified by N. V. Tarabrina (1973) integrative anxiety test (IAT) (L. I. Wasserman, V. Bizyuk, 2005); Zung Anxiety Rating Scale - ZARS 1971; hardiness test in adaptation by D.A. Leontiev and E.I. Rasskazova, 2006; questionnaire "Methods of coping behavior" Lazarus (adapted by T.L. Kryukova, E.V. Kuftyak, M.S. Zamyshlyaeva, 2004).

The obtained data were analyzed using the methods of parametric (Student's t-test for conjugated and independent samples) and nonparametric statistics (Manh-Whitney) using the statistical package Statistica for Windows v.16.0 (StatSoft, USA).

For the first time, a dynamic observation was carried out, a study of the specifics of the experience of a burn injury in patients, depending on the type and direction of emotional response in the disease.

For the first time, violations of the psycho-emotional state and frustration tolerance were revealed in various periods of burn disease, traumatic stress, depending on the severity, % of damage, age and gender of the patient. A complex of psycho-emotional disorders, resilience and coping strategies that cause psychological maladaptation in patients with burn injury is subjected to mathematical regression analysis.

At the initial stage, patients avoided talking about their emotional state; complaints were mainly of a somatic nature. Later, when contact was established, patients complained of a decrease in the emotional background, sleep disturbance due to pain, anxiety, and fatigue.

Based on the data of the "Integrative Anxiety Test" methodology, statistically significant differences were found between the subgroups of the experimental group. Patients with burn injury in the acute period are diagnosed with high level of "situational" anxiety (average score 7.5) in the form of "emotional discomfort" (mean score 8), "alarming perspective assessment" (mean score 7.2) and "asthenic component" (mean score 6.8).

Emotional response to frustration is different from the standard: the proportion of ego-defensive reactions is increased (ED>N-P>OD=13.04>6.08>4.88), that is, in a situation of frustration, there is a tendency to ego-defensive reactions in the form of aggression directed at others and censure of partners according to the situation (E>M>I=10.04>7.8>6.16); there are high values of the "aggression orientation index" ($\Sigma E/\Sigma I=1.6$);there is a decrease in the "aggression transformation index" (E / e = 2.6) - poorly controlled behavior to stress, only due to the direction of aggression outside, showing non-adaptive behavior compared to the standard; The "problem solving index" (i/e=0.95) was reduced, a significantly high "external aggression" ($\Sigma E/\Sigma M=1.3$) and low group adaptation (GCR=29.4) were revealed.

Patients are dominated by maladaptive coping strategies - confrontation, distancing and flight-avoidance.

Correlation analysis showed that the age of patients with burn injury has a direct significant correlation with the level of general personal anxiety ($rs=0.531$, at $p<0.05$) and the index of anxious assessment of prospects ($rs=0.547$, at $p<0.05$), t .e. the higher the age of the subjects, the higher the level of anxiety and the more negatively they assess their future.

The results of the study on the test of resilience indicate that all indicators of resilience are within the average values (70 - 75), so a study of resilience was conducted depending on the type of emotional response in 3 comparison subgroups. At the stage of multivariate analysis, cluster analysis was used according to the Ward method, which, with a high degree of reliability ($p < 0.001$), made it possible to divide persons with burn injuries into 3 subgroups (according to the type of predominant reaction in a situation of frustration): “with fixation on an obstacle” (OD); “with fixation on self-defense” (ED); with a predominance of reactions to satisfaction of needs” (NP).

At the 2nd stage - discriminant analysis, at the 3rd - factor analysis, describing the model of factor analysis in the form: $X=(bF)+cU+e$, $k>m$, where X are the initial variables; F - general factors; U-specific factors; e- random errors.

For the first time, a regression mathematical model of the formation of hardiness in patients with burn injury was determined depending on the type and direction of emotional response in the disease. A mathematical regression model has been obtained as a way to assess significant psychological diagnostic criteria that affect the formation - prognosis of hardiness (F) in patients with burn injury with various types of emotional response: ED>OD) for frustration - burn injury: $W = 35.1 + 1.10X1 + 7.15X2 + 2.13X3 + 1.84X4 + 2.95X5$, where

R - indicator of integrative resilience;

X1 - percentage of lesions in burn injury;

X2 - indicator of general personal anxiety;

X3 - indicator of general situational anxiety;

X4 - coping strategy - “confrontation”;

X5 - coping strategy - “distancing”.

Vitality in persons with intrapunitive necessary-persistent type of response (I>M>E,NP>ED>OD) in case of burn injury with 95% reliability depends on the percentage of thermal damage in case of burn, the level of general personal and situational anxiety and non-adaptive coping strategies - confrontation and distancing.

Resilience in individuals with self-protective necessary-persistent (NP) type of emotional response (E>M>I, ED>NP>OD in case of burn injury has higher values in women and with a 95% certainty depends on the level of general personal anxiety, non-adaptive coping - strategies - confrontation and avoidance, as well as the type of emotional response (e, M).

L=122+17.2(L)-2.03(PA)+0.2K-0.7(I)-2.2(e)-3.3(M), where

F is an indicator of integrative resilience, +17.2 for women;

X1 - an indicator of general personal anxiety;

X2 - coping strategy - “confrontation”;

X3 - coping strategy - “avoidance”;

X4 - “e” - emotional reactions in resolving the problem;

X5 - “M” - emotional reactions in solving the problem.

It has been proved that the appearance in the structure of psycho-emotional disorders during the period of burn disease of the complex of “low integrative resilience” (uncertainty in one’s abilities, tension, high personal anxiety, low psychological parameters of resilience, non-adaptive coping strategies - avoidance or distancing) indicates a decrease in psychological adaptation and possible formation of psychosomatic disorders.

Thus, the features of psychological adaptation in burn disease were established: a high level of situational anxiety, maladaptive coping strategies of distancing and avoidance, low frustration tolerance, high rates of outwardly aggressive behavior and a low level of social adaptation. In the process of cognitive-behavioral psycho-correction of a patient with burn disease, adaptive coping strategies are formed that can be used by the patient as a mental resource at the stage of recovery: high self-control, high level of social support. Significant psychological diagnostic criteria that affect the formation of resilience (R) can serve as significant “targets” of psychological correction with a 95% reliability, affecting the improvement of the psychological state of people with burn injury.

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DOI 10.34660/INF.2022.42.67.145

学生网络危险行为：心理预测因素分析

RISKY BEHAVIOR OF STUDENTS IN INTERNET: ANALYSIS OF PSYCHOLOGICAL PREDICTORS [1]

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抽象的。作者进行了一项旨在研究学生信息行为风险策略的心理预测因子的研究。文章揭示了这项研究的相关性，分析了与互联网空间中的异常行为相关的研究。给出了风险信息行为的概念，描述了作者方法论"信息行为策略"中提出的风险信息行为策略。

在研究的实证部分，研究了学生信息行为风险策略的严重程度。确定了学生在互联网环境中最流行的风险行为策略："互联网用于在社交网络中监视他人"和"互联网作为获取替代信息的途径"。研究和分析了他们的心理预测因素。

关键词：信息行为，风险信息行为，心理预测因子，不确定性容忍度，心理智力，敌意。

Abstract. *The authors conducted a study aimed at studying the psychological predictors of risky strategies of students' informational behavior. The article reveals the relevance of the study, analyzes studies related to deviant behavior in the Internet space. The concept of risky informational behavior is given, the strategies of risky informational behavior presented in the author's methodology "Information Behavior Strategies" are characterized.*

In the empirical part of the study, the severity of risky strategies of information behavior among students was studied. The most popular among students strategies of risky behavior in the Internet environment were identified: "Internet for spying

[1] *The research was supported by the Russian Science Foundation (Project No. 22-78-10107) (2022) «Transformation of constructive and destructive strategies of informational behavior of youth in the context of of geopolitical risks growth: psychological, psychophysiological and psychogenetic predictors».*

on others in social networks" and "Internet as access to alternative information". Their psychological predictors are studied and analyzed.

Keywords: *informational behavior, risky informational behavior, psychological predictors, uncertainty tolerance, psychological intelligence, hostility.*

The study of the informational behavior of a person in the context of problematic and even deviant behavior is extremely relevant for modern psychological science. The main trend of the last decade in the analysis of external factors of Internet behavior is the transition from the analysis of Internet activity of users as the main characteristic of Internet addiction to the analysis of content consumed by a person and taking into account both the characteristics of activity and the content of the content [Lee et al., 2018; Mihajlov and Vejmelka, 2017; Nadhirah et al., 2018]. Particular attention is paid to identifying risks associated with Internet content.

Informational risks increase significantly in a situation of uncertainty and growing social tension. Under such conditions, the riskiness of informational behavior increases significantly: in order to cope with uncertainty, users behave on the Internet more aggressively, hostilely, do not hesitate to express radical points of view and enter into conflicts with other users, seek access to alternative information, often without checking it. authenticity.

An analysis of foreign studies has shown that there are significant relationships between the level of problematic Internet use (Internet Use Disorder, IUD) and smartphones (Smartphone Use Disorder, SUD) and following psychological predictors:

1) with a low level of life satisfaction and weak empathy [Lachmann, Sindermann, Sariyska et al., 2018];

2) high levels of social anxiety and impulsivity [Peterka-Bonetta et al., 2019];

3) low indicators of self-identity. Perhaps the core of digital addictions is the lack of willpower, which is typical for people with low self-identity scores [Lachmann et al., 2019];

4) a special personality structure of users within the five-factor personality model "Big Five" (Big Five, NEO FFI version: neuroticism, extraversion, openness to experience, consent / goodwill, conscientiousness).

In order to study the severity of risky strategies of informational behavior among students, we conducted a study. The empirical base of the study was 1-2 year students of the Faculty of Humanities (18-29 years old), in the amount of 217 people.

When choosing the object of research, we proceeded from the fact that students, for the most part, are active users of Internet content and various models of informational behavior can be traced on their example. The modern Internet environment provides the user with a large number of pro-social resources, but this environment is also risky, carrying unverified, sometimes offensive and provocative information, calls for illegal and destructive activities. Given this situation, in the author's methodology aimed at studying information behavior models, we took into account the vectors of behavior based on normativity (prosociality) and riskness (deviance).

Let's take a closer look at our understanding of informational behavior and our approach to identifying user behavioral strategies on the Internet. Informational behavior is manifested in the ability to navigate in the information space, in the skills of mastering informational technologies, in the ability to adequately evaluate and productively use the information received. The ability to create, distribute and be responsible for the dissemination of new informational products also lies within the competence of informational behavior. According to our author's approach to the study of the meaning-forming motivation of informational behavior, we have identified two groups of strategies for informational behavior of a person: normative and risky.

We have included the following normative strategies to our model:

Internet for telling others about yourself. The main motive of this strategy is to present yourself in the digital space, share the events of your life, your opinion on a different range of issues, and thus leave your digital mark.

Internet for shopping. The main motive of this strategy is the use of the Internet space as a means to meet their urgent needs. The Internet in this context is becoming a convenient means for quickly achieving pragmatic goals.

Internet for information search. The main motive of this strategy is the use of the Internet as a source of information for solving educational and business problems, for personal and professional development.

Internet for killing time. The main motive of this strategy is the ability to spend time without immersing in information, but in watching the fast change of the image, the background use of the Internet.

Internet as a motivating force. The main motive of this strategy is focusing on others as a model of success, triggering the desire to move in the same direction, showing an example of achieving one's goal.

We have classified the following as risky strategies:

Internet as access to alternative information. The main motive for this strategy is to use the Internet to obtain information on various issues that reflect alternative points of view, including those that do not coincide with officially recognized ones.

Internet for participation in communities. The main motive is a sense of belonging to a community of like-minded people, to those who share the same interests and experience the same problems.

Internet for spying on others in social networks. The main motive of this strategy is to join the lives of other people by viewing some intimate information that is present on the Internet, which creates the illusion of exclusivity.

Internet for realization of sexual needs. The main motive: the satisfaction of sexual needs without entering into real contact, including with random, unfamiliar partners, without consequences and obligations.

Internet for expressing religious ideas. The main motive: to share religious ideas of varying degrees of radicalism.

The scales identified in this way formed the basis of the developed and validated by us author's methodology for studying information behavior strategies - "Informational Behavior Strategies" (Abakumova I.V., Romek V.G., Kolenova A.S., Grishina A.V., Zvezdina G.P.).

The following research methods were also used:

- Questionnaire of involvement in the Internet environment (Grishchina A.V., Zvezdina G.P.).

- D. McLane Uncertainty Tolerance Scale.

- The scale of "Psychological intelligence" (Psychological mindedness).

-Scale of hostility.

At the initial stage of the empirical study, the representation of risky strategies of informational behavior in the students' environment was studied.

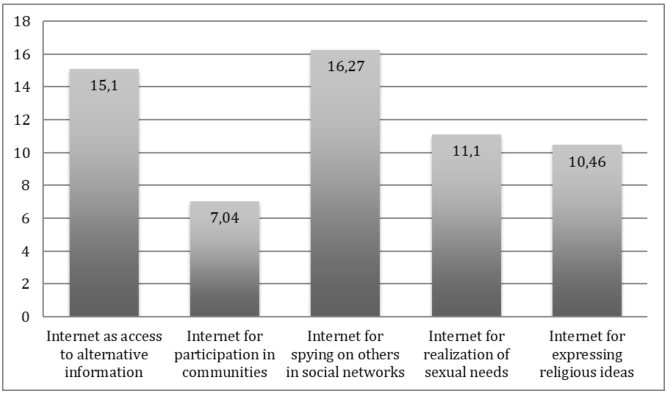

Figure 1. *Severity of risky strategies of informational behavior among students*

The strategies "Internet as access to alternative information" and "Internet for spying on others in social networks" are most common among students. Virtual participation in the life of another makes it possible to satisfy the need of the individual to belong to another, to be involved in his life.

At the next stage of the study, we studied the relationship between personal characteristics and identified leading motivational strategies for students' risky informational behavior.

The greatest number of connections were found between the risky strategy "Internet as access to alternative information" and indicators of tolerance for uncertainty, scales of psychological intelligence and scales of hostility, as well as between the strategy "Internet for spying on others in social networks" and scales of hostility and psychological intelligence.

Table 1

Results of the correlation analysis between the leading risky motivational strategies of information behavior and personal characteristics

Variables	**Quantity of persons**	**Correlation coefficient (Rs)**	**Significance (p-value)**
Internet as access to alternative information & tolerance for uncertainty	217	-0,34	0,01
Internet as access to alternative information & interest in the sphere of experiences	217	0,32	0,01
Internet as access to alternative information & hostility	217	0,37	0,01
Internet for spying on others in social networks & interest in the sphere of experiences	217	0,35	0,01
Internet for spying on others in social networks & cynicism	217	0,33	0,01
Internet for spying on others in social networks & hostility	217	0,34	0,01

The revealed negative relationship between the strategy "the Internet as access to alternative information" and tolerance for uncertainty ($r=-0.34$, $p < .01$) suggests that these respondents prefer clarity and predictability, and, probably, precisely to clarify the situation prefer to look for information in different sources, rather than trust one or remain in the dark.

This trend is also confirmed by the presence of a relationship between the strategy "Internet as access to alternative information" and interest in the sphere of experiences ($r=0.32$, at $p < .01$), which may indicate that for the respondents the alternative information is important for discussion and understanding, causes interest and positive experiences. The presence of alternative information enables the user of Internet content to compare, analyze, discuss information with other participants, which contributes to a better understanding of oneself.

The correlation between the "Internet as access to alternative information" strategy and hostility may indicate that interaction on the Internet with people who have an alternative opinion makes it possible for such respondents to express negative emotions in relation to others with a different opinion, to express negative assessments and hostility towards their opponents.

When analyzing correlations between the motivational strategy "Internet for spying on others in social networks" and personal characteristics, positive moderate relationships were revealed with the scale of psychological intelligence - "interest in the sphere of experiences" (r=0.35, p < .01). Respondents focused on spying on others show interest not only in the lives of others, they also care about their own inner world and experiences related to the construction of their self-image. Spying on the lives of others helps to enrich their role repertoire and serves as a means of self-acceptance, they are interested in discussing their experiences and feelings with others and see this as a benefit.

Positive correlations were also found between the strategy "Internet for spying on others in social networks" and scales of hostility. On the one hand, respondents with a pronounced strategy of spying on others in the Internet space show an increased interest in their inner world and their experiences, and on the other hand, they build powerful psychological defenses in relation to others in the form of manifestating cynicism (r=0.33, at p < . 01) and hostility (r=0.34, p < .01). This can show itself in negative comments, attacks, cyberbullying towards others. Such inconsistency can be explained both by the lack of confidence in one's own worth, and by the desire to gain it at the expense of humiliation and a cynical attitude towards another.

Thus, on the basis of the study, the following conclusion can be drawn: risky motivational strategies of informational behavior have positive and negative relationships with personal characteristics (tolerance to uncertainty, psychological intelligence, hostility scales), which indicates that for students the Internet environment is space for the manifestation of greater variability of risky and deviant forms of behavior. The results obtained serve as a basis for further research into the psychological predictors of normative and risky informational behavior.

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DOI 10.34660/INF.2022.70.56.146

铁路交通在保护俄罗斯亚洲部分经济空间中的作用：地缘政治方面

THE ROLE OF RAILWAY COMMUNICATIONS IN PROTECTING THE ECONOMIC SPACE OF THE ASIAN PART OF RUSSIA: GEOPOLITICAL ASPECTS

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摘要：正在研究铁路通信在保护经济空间方面的作用。研究的方法论基础是地缘政治知识体系。该研究的主题是西伯利亚大铁路和 BAM 在确保国家安全方面的重要性。人们低估了交通运输的作用，并且缺乏综合方法来解决对该国亚洲部分经济空间的控制问题。俄罗斯经济的重点是向国外出口资源。东向直通货流是东向西向货流的两倍半以上。 "出口导向型铁路线"的概念无助于西伯利亚和远东内陆地区的发展、人口潜力的积累以及东部铁路向西伯利亚过境交通的转变欧亚空间。最重要的战略项目的实施仍然转移到私营企业。公路穿越荒地，气候恶劣，人口密度低，不具备地方自主发展的条件。因此，忽视后苏联时期明显的做法、有意义的历史经验和实践，将直接影响俄罗斯太空的安全。

关键词：铁路线、经济空间、国家安全、西伯利亚、远东。

Abstract: *The role of railway communications in the protection of the economic space is being studied. The methodological basis of the study is the geopolitical system of knowledge. The subject of the study is the importance of the Trans-Siberian Railway and BAM in ensuring national security. There is an underestimation of the role of transport communications and the lack of an integrated approach to the problem of control over the economic space of the Asian part of the country. The Russian economy is focused on the export of resources abroad. The flow of through cargo in the east direction is more than two and a half times the flow of cargo from the east to the west. The concept of an "export-oriented railway line" does not contribute to the development of the interior regions of Siberia and the Far East, the build-up of demographic potential, and the transformation of the railways of the eastern range into transit communications in the Eurasian space. The implementation of the most important strategic projects is still shifted to* *private business. Highways pass through undeveloped lands, with a very difficult climate and low population density, so there are no conditions for the initiative self-development of the regions. As a result, ignoring obvious approaches in the post-Soviet period, meaningful historical experience and practice, has a direct impact on the security of the Russian space.*

Keywords: *railway lines, economic space, national security, Siberia, Far East.*

The protection of the economic space is the most important aspect of the country's national security. The loss of control inevitably leads to the limitation of state sovereignty. The solution to this problem depends on the ability of the state to effectively resist the interests of transnational corporations seeking to take economic entities out of the control of national states and reorient them to their own interests. If TNCs with foreign registration make strategic decisions in the field of the country's economic development, then this entails the most serious consequences for the national security of the state. Therefore, talk about the inevitable consequences of globalization, the internationalization of world economic relations, the international division of labor should not close the main issue: the issue of economic sovereignty.

In ensuring control over the economic space of the Asian part of Russia, a decisive role belongs to railway communications. It is the transport infrastructure of Siberia and the Far East represented by railways that is the basis and condition for successful economic development, ensuring the mobility of labor resources and the armed forces. Developed communications stitch the space together and ensure its maneuverability. Outside of this, the internal market is impossible, the space is frozen, and its territories are taken in by the surrounding dynamically developing states.

The development of transport infrastructure in the form of railways is of another great importance for Russia. Due to its geographical position, the presence of a developed network of railways can turn the country into an important communication hub connecting the countries of the Far East, Southeast Asia with the western outskirts of Greater Eurasia. However, these potential competitive advantages are not automatically realized. The subject of the implementation of plans for the development of the country's transport infrastructure is always and everywhere the state. The communication fabric has never been built by the "invisible hand of the market". Private capital does not show interest in investing in the development of transport infrastructure, since it is impossible to make a profit in the short term. Business structures also consider the costs associated with the maintenance of social infrastructure in the area of transport highways to be costly for themselves. If there is no political will to implement this strategy, political and economic control over the space is reduced to a dangerous level.

For the effective spatial development of the territories of Siberia and the Far East, it is necessary to form a network of modern transport hubs and international transport corridors that take into account natural, climatic and demographic aspects. In addition, international competition for promising transport projects is constantly growing, which, given the low efficiency of the deployment of productive forces and the untapped spatial potential of the Russian economy, becomes a significant geo-economic threat. Researchers note that unemployment in the eastern parts of the country is of a protracted nature and is mainly associated with low migration mobility of the population and poor transport accessibility [6, p. 131].

The historical and geopolitical excursion into our past is a convincing evidence of the role and importance of transport communications in ensuring the country's security [8].

In the post-Soviet period, the total operational length of public railways in the Russian Federation did not grow and amounted to 87 thousand kilometers. Loading of many railway lines was close to the limits of efficient use of capacity. But this problem was especially acute at the Eastern range, where the current throughput and carrying capacity of the Baikal-Amur and Trans-Siberian railways did not allow to fully ensure the transportation of goods of industrial companies along these railways.

The Russian economy, focused on the export of raw materials, increased its supplies, especially coal, abroad. The growth in export volumes made new demands on the capacity of railways in the east of the country. There was still no orientation towards internal processing and industrial development of the region, just as there was no strategy aimed at turning the roads of the eastern polygon into a communication hub connecting the regions of Siberia and the Far East, as well as into transit communication in the Eurasian space.

However, the forced need of the state to respond to the needs of mining companies exporting raw materials has intensified the strategic design of communications at the Eastern test site. Initially, like the vast majority of such documents, the developed strategies were of a declarative nature, did not correspond to real possibilities and were not supported by appropriate funding. The state did not object to the radical reconstruction of railway communications, but the main investor should have been the companies themselves interested in this. Therefore, they cannot be called strategic planning documents; rather, they were proposals for potential outside investors. The state was outwardly aware of the role of communications in constricting the economic space, but did not seek to become the coordinator and main subject of such activities.

The only infrastructure project in the BAM zone implemented by private business was the railway line laid by "Mechel" to the Elga coal deposit, the largest in Russia, discovered by Soviet geologists in the southeastern part of Yakutia in

1981. The length of the Ulak - Elga route was 321 km, and traffic on it opened in 2012 [1]. Increasing the volume of coking coal required not only the expansion of the capacity of the constructed branch, but also the modernization of the BAM, at least from the tie-in of the branch into the Bam line to the port of Vanino.

To solve these problems, key projects for the development of railway transport were initiated - the modernization of the railway infrastructure of the Baikal-Amur and Trans-Siberian railways with the development of throughput and carrying capacity. This program for the development of the BAM and the Trans-Siberian Railway was largely determined by the needs of the development of the coal industry, as well as the beginning of the development of the Olekminsky iron ore deposit in Transbaikalia.

Coal shippers were primarily interested in the reconstruction of the highway. Coal production grew at a steady pace and in 2019 exceeded the level of production in 2011 by more than 30 percent. The head of state called for an increase in coal supplies to Asian countries over the next three years by the same 30%. After that, in November 2019, a plan for the accelerated modernization of the Eastern test site was adopted, according to which by 2023 the BAM and the Trans-Siberian Railway should increase the throughput from 124.9 million to 180 million tons. The total investment of Russian Railways in the second stage of the project was estimated at 696.6 billion rubles [2].

Thus, the priority goal of modernizing the railway network of the Eastern Range was proclaimed to increase the export of raw materials from the country to the markets of the countries of the Asia-Pacific region. The scenario for the development of transportation in this direction was prescribed in the general scheme for the development of railway transport by “Russian Railways” PJSC, in accordance with which the total volume of transportation by 2020 was to be 51.5 million tons. It was impossible to carry out such volumes of work only by the efforts of Russian Railways. But adopted in February 2019 by the Russian Government “Strategy for the spatial development of the Russian Federation for the period up to 2025” [5], and in November 2021. “Transport strategy of the Russian Federation for the period up to 2030 with a forecast for the period up to 2035” [7] focused even more fantastic plans for the development of “export-oriented railway infrastructure”. According to the results of 2035, the carrying capacity of the Eastern polygon should be 240-305 million tons, and transit through the Russian Federation in the Asia-Europe cargo flow should increase six times, the share of Russia’s market share in container traffic should increase from 4 to 15 percent. Investments in railway infrastructure should amount to at least 3.5 trillion rubles by 2035.

The seriousness of such strategies is highly questionable. Where the construction capacities, personnel and investments for such large-scale projects will come from, the approved Strategy does not explain. At the same time, the manipulation of indicators is alarming. The throughput capacity of the BAM, as well as the Trans-Siberian Railway, has practically not grown and amounts to just over 80 million tons, while 80% of the cargo falls on domestic transportation. The flow of through cargo in the east direction is more than two and a half times the flow of cargo from the east to the west. That is, the volume of goods exported from the country, far exceeds the import. So it is obvious that the “export-oriented railway line” should work, but to what extent does such an orientation contribute to the development of the interior regions of Siberia and the Far East, does it meet the national interests of the country? The remaining cargoes only partially pass through the railway communications of the Eastern range. The scatter in the indicators here is so large that it requires a separate study.

The implementation of these projects did not become a new milestone in the socio-economic development of the BAM development areas. The BAM modernization project is focused on the rotational method of work with the involvement of labor resources from other regions, which does not stimulate the creation of jobs in the surrounding area. Consequently, the new industrial scenario for the development of the BAM is fundamentally different from the Soviet one and does not solve the problem of maintaining permanent workers’ settlements here, increasing labor resources. Without this, it is impossible to maintain and develop the highway, to start really economic development of the BAM, to organize processing and supply of value-added products for export. The shift method currently being demonstrated optimizes the costs of business structures for the maintenance of social infrastructure, but these are tactical benefits that cannot be a strategy for compacting space and developing it.

The situation in which for 30 years nothing has been done to solve the most important problems of the development of the railway network, the laying of new transport communications, including high-speed ones, is more than strange. Obviously, only the development of transport infrastructure can breathe new life into the economy of Siberia and the Far East, ensure the influx of labor resources, and shrink the economic space. Without this, the functioning of the domestic market of the country is impossible. Point “breakthroughs on the periphery of the country, implemented by private companies, are focused not on the development of the domestic market, but exclusively on the large-scale export of resources from Russia. Therefore, “strategies”, in which the volumes of resources in monetary terms taken out of Russia, and not the products of deep processing inside the country, are taken as an “economic breakthrough”, cannot breathe life into the economy of a vast region. This situation creates new difficulties and problems in the field of ensuring national security. The regions and Siberia are beginning to be drawn into the economic space controlled by other states, and interregional ties are not developing.

To this should be added the lack of reasonable calculations for increasing freight traffic until 2030, both on the part of shippers and on the part of the state. Modernization of the highway is carried out taking into account the interests of coal miners. The products of the coal industry account for more than half of the transported goods. At the same time, coal is transported at a rate of 0.18 rubles per ton-kilometer at a cost of 0.37 rubles per ton-kilometer. That is, profits from the supply of coal for export are received by private companies, and the losses are borne by the state company "Russian Railways". For such low tariffs, Russian Railways was promised money for the reconstruction of the BAM and the Trans-Siberian Railway from the National Welfare Fund. But the problem is that the Fund's money is intended to pay future pensions and they need to be returned. Russian Railways will not be able to return with such a loss-making scheme. At the same time, the situation in the coal industry may change in accordance with the promoted "green agenda". And this again gives rise to old problems: the highway can be reconstructed, but there is nothing to load it with. Partly the problem can be solved by the export of grain, however, this can only partially contribute to the loading, primarily of the BAM. The absence of a comprehensive strategy for the economic development of BAM does not allow the implementation of plans for the creation of territorial production complexes in this zone. Of the nine TPKs planned in the Soviet period, one South Yakutsk one is partly implemented, associated with the development of coal deposits in the Neryungri region. Only in the case of the development of territorial-production complexes, the highway will play the role of an artery, pulling together the economic space of Siberia, adjacent regions and local communications into one whole. Only such an approach, under which the highway was originally created, will accelerate the development of the regions.

The transformation of the BAM into an international transit hub linking the countries of Asia with Europe places very high demands on the reconstruction of the railway in order to meet its international standards. Only by simplifying the process of cargo clearance and speeding up their transportation can we successfully compete with other international transport corridors.

Thus, without a strictly substantiated national strategy for the development of transport communications, the Russian space is doomed. Unfortunately, the National Security Strategy of the Russian Federation, approved by the Decree of the President on July 2, 2021, practically does not pay attention to this most important basis of security and sovereignty. In the section devoted to economic security, the need to "ensure the development of an efficient transport infrastructure and transport connectivity of the country" is only declaratively formulated [4]. On the one hand, the decisions made in this area are evidence of the awareness of the problem. However, the implementation of the most important strategic projects is still shifted to private business, which makes them unrealizable. Highways pass through undeveloped lands, with a very difficult climate and low population density, so there are no conditions for the initiative self-development of the regions. The stubborn disregard in the post-Soviet period of obvious approaches, comprehended by historical experience and practice, has a direct impact on the security of the Russian space.

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DOI 10.34660/INF.2022.51.81.147

A.K. 的作品 音乐学家研究中的格拉祖诺夫

THE WORK OF A.K. GLAZUNOV IN THE STUDIES OF MUSICOLOGISTS

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抽象的。 本文分析了现有关于 A.K. 创意遗产的研究。 Glazunov，强调了这些作品的主要论点。 注意到中国研究人员对格拉祖诺夫工作的兴趣有所增加。该论文强调了这位作曲家对萨克斯管音乐发展的贡献，指出缺乏足以形成关于格拉祖诺夫作品的科学思想空间的全面研究。

关键词：格拉祖诺夫，格拉祖诺夫研究，创造力，音乐学，萨克斯管

Abstract. *The paper analyzes the existing studies of the creative heritage of A.K. Glazunov, highlighting the main theses of these works. An increase in interest in Glazunov's work on the part of Chinese researchers was noted. Highlighting the composer's contribution to the development of saxophone music, the paper notes the lack of comprehensive studies sufficient to form a space for scientific ideas about Glazunov's work.*

Keywords: *Glazunov, Glazunov studies, creativity, musicology, saxophone.*

Alexander Konstantinovich Glazunov (1856-1936) - an outstanding Russian composer of the late XIX - early XX centuries. His life and work has always aroused the interest of contemporaries and later researchers of the musical culture of Russia. Due to the fact that A.K. Glazunov did not return to Soviet Russia from a business trip in 1928, the official Soviet musical authorities were wary of his work, as a result, Glazunov was not as popularized as other great composers of the 19th century: M.I. Glinka or P.I. Tchaikovsky, although he was not completely forgotten in his homeland, as evidenced by the numerous works and memoirs published in the USSR after the death of the composer.

Today, one of the important research tasks is a comprehensive rethinking of the creative path of A.K. Glazunov, a high-precision definition of the specifics of the manifestation of academicism and innovation in it, including on the basis of an analysis of iconic works, visual means and musical meanings, the context of preparation and lifetime stage performances. Among such works by Glazunov, on the example of which aspects of academicism and innovation can be deeply analyzed, is the music for the play “Salome” (1908). The symbolism in Glazunov’s work could not be reflected in Soviet music analytics, and in the West it found understanding only recently due to the fact that the Quartet and Concerto for Saxophone were published in 1932 and 1934. (respectively) despite the fact that the attitude towards the saxophone in the academic musical world of the period under study was often dismissive, and Glazunov himself actively fought against this negative legacy.

The most important research problem today is a comprehensive proof of the independence and progressiveness of Glazunov’s work, which determined the author’s interest in this topic.

In recent years, for a deeper understanding of Glazunov’s work, textual studies of archival materials have become increasingly important. After the return of the composer’s archive to his homeland, the previously existing, very extensive amount of archival data acquires the necessary completeness. In December 2002, the last will of Glazunov’s adopted daughter, Elena Glazunova-Günther, was realized - Glazunov’s foreign archives, which had previously been stored in Munich, were delivered to the St. Petersburg Museum of Theater and Musical Art (SPbGMTMA).

Today, archival materials are located in a variety of scientific institutions, including the State Museum. A.N. Scriabin (Moscow), Department of Manuscripts of the St. Petersburg State Conservatory. H.A. Rimsky-Korsakov, P.I. Tchaikovsky (Klin), Department of Manuscripts of the Russian National Library (St. Petersburg), State Museum. A.A. Bakhrushina (Moscow) and others.

The most famous researcher of creativity Glazunova E.A. Fatykhova noted that “the exposition of the Sheremetev Palace fills a huge gap in the history of Russian glazunov studies,” since “the years spent by the composer abroad are the most unexplored in his creative biography. Manuscripts and letters of the composer, among other things, are undoubtedly the most valuable exhibits, allowing you to get closer to his personality and understand the meaning of the late period of his life and work” [1, 12-14]. The collection contains invaluable documents for understanding how work was carried out on the works of the foreign period.

Creativity Glazunov, as a prominent Russian musician, an outstanding figure of the era, aroused and continues to arouse interest abroad.

Abroad, the processes of growth and loss of interest in Glazunov’s work were similar to those that took place in the composer’s homeland. In the works of F. Nike, X. Parry, C.V. Stanford showed undisguised curiosity and respect for Glazunov’s work [2].

After the death of the composer in foreign literature, there were often accusations of lack of independence, secondary nature of his works [3]. Even undoubted advantages, such as virtuoso technique or symphony, were the subject of superficial consideration. J.-M. Londeix noted that "for the Western public, Glazunov is perceived only as an echo of the great Russian romantic symphonists. His music is typical of the generation of composers who combined the Western tradition in the spirit of Tchaikovsky with the national flavor of the Kuchkists" [4].

In Western musicology, there were not many works devoted to the work of A.K. Glazunov, including the monograph by D. Venturini [5], articles about Glazunov by J. Abraham, M. Calvocoressi. R. Leonard.

Restoration of interest in the work of A.K. Glazunov abroad, as well as in Russia, dates back to the last decades, one can even argue about the appearance of a certain "fashion" for Glazunov [6]. In the East, including in the homeland of the author of this article in China, Glazunov is known as an outstanding composer, but a superficial belief is widespread that Glazunov's fame is a reflection of the glory of the Mighty Group.

A small number of scientific papers devoted to Glazunov have been published in China. These are mostly small articles in journals, but it should be especially noted that dissertational studies by Chinese scientists have also appeared. It is worth noting the articles that deal with various theoretical, performance and biographical problems of the composer's work: Wang Qizhan "Glazunov, the first director of the Leningrad Conservatory" (1986); Xu Chuchu "Glazunov's Polyphony" (1987); Guo Qiang "On the Musical Style and Peculiarities of Glazunov's Concerto in E Flat Major" (2008); Sun Peng "Glazunov's Classical Saxophone Concerto" (2008); Gao Wenlong and Chen Qiang "Analysis of the artistic features of Glazunov's E-flat major concerto for saxophone (2019) and others. Several works by Chinese researchers are directly devoted to the methods of performing the Concerto for saxophone. We should also note deeper dissertation research: Dong Ruin "Analysis of the artistic features of Glazunov's E-flat major concerto for saxophone" (2014); Yan Vanin "Study of the Structural Thinking of Glazunov's Piano Sonatas".

Of particular note is the work of Huang Jiang, Ph.D. from the School of Music, Shaanxi Normal University, who studied in the West (in Italy and the UK). In his work, the title of which can be translated as "Swan Lamentations at Sunset: A Study on the Keys of Glazunov's Saxophone Concerto in E Flat Major", he examines the composer's life, his creative path and analyzes the Saxophone Concerto in detail.

Surprisingly, the fact of such an active interest in Glazunov's work in China is undoubtedly associated with his appeal to the saxophone, an instrument that sounded much earlier than in Europe in the musical art of this country, and composers of the 19th and 20th centuries only in the second half of the twentieth century appreciated its extraordinary timbre and technical capabilities. And today we can state that interest in the work of A.K. Glazunov in China is steadily growing.

However, at the moment, the growing interest in the work of A.K. Glazunov abroad did not lead to the appearance of comprehensive scientific works on his work in the composer's homeland. According to Yu.G. Kon, "the creative heritage of the composer, unfortunately, has not yet received a worthy assessment and proper recognition by right" [7,5].

It should be emphasized that the current research literature practically ignores Glazunov's "Salome" (analysis requires the involvement of a wide range of sources on the original production and the specifics of the symbolism of the period under consideration). Nevertheless, there are contemporary works, one way or another related to Glazunov's contribution to the development of saxophone music (the saxophone as an instrument of the classical repertoire has only relatively recently attracted the attention of Russian musicological science). The work of V.G. Aktisov "Works for saxophone in the work of A.K. Glazunov: the experience of textological and performance analysis" [8] is very important for comprehending the innovative principle in Glazunov's work. In this work, the author notes: "The composer was one of the first in world musical practice to turn to the creation of original compositions in a large cyclic form for this instrument, both ensemble (three-part Quartet for four B-dur saxophones) and solo concert (Concerto for saxophone- viola and string orchestra Es-dur)" [8]. Conducting a textual analysis of autographs of concertos for saxophone of the late period of Glazunov's work, Aktisov shows the originality of the composer's thinking. The appeal to such a rare instrument proves the originality, the "open-mindedness" of the composer's creative approach.

It should be noted that, starting from 2010, dissertations devoted to the saxophone and its place in the classical musical language appear. So, A.M. Ponkin [9] describes in detail the change and strengthening of the role of the saxophone in the scores of classical composers. S.V. Kirillov brought an understanding of the specifics of the saxophone in his dissertation "Technique of playing the saxophone and problems of interpretation of original works" [10], and M.A. Begovatova in her work "Modern performance on the saxophone in terms of expanding the sound capabilities of the instrument" [11] gave new meanings to the technique of performance and the capabilities of the instrument.

Today, musicologists quite often began to turn to Glazunov's work, having heard in him a remarkable ratio of academicism and innovation. And, nevertheless, we emphasize that these works still do not form the necessary space of scientific ideas, sufficient for a comprehensive understanding of innovation in Glazunov's work.

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DOI 10.34660/INF.2022.52.36.148

媒体术语基础研究，澄清和比较“数字媒体”和“新媒体”的概念

RESEARCH OF THE TERMINOLOGICAL FOUNDATIONS OF MEDIA, WITH CLARIFICATION AND COMPARISON OF THE CONCEPTS OF “DIGITAL MEDIA” AND “NEW MEDIA”

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抽象的。 该研究致力于通过超越虚拟空间的交流方式反映在新环境的形成中所反映的大规模社会文化变化。 由于变化的速度需要对某些现象（尤其是数字媒体）的适当理解以及对各种理论中提出的理论基础的分析，该研究得到了更新。 这项工作的目的是对媒体术语基础进行跨学科研究，并阐明“数字媒体”的概念。 使用一般的科学方法，将“数字媒体”和“新媒体”这两个术语与主要限定特征的识别进行比较，并提出作者对“数字媒体”一词的概念并证明该方法的合理性。

关键词：媒体、数字媒体、新媒体、传播、文化

Abstract. *The study is devoted to large-scale socio-cultural changes reflected in the formation of a new environment by means of communication with going beyond the virtual space. The study is updated by the fact that the speed of change requires an appropriate understanding of some phenomena, in particular digital media, and an analysis of their theoretical foundations set forth in various theories. The aim of the work is an interdisciplinary study of the terminological foundations of media, with a clarification of the concept of “digital media”. Using general scientific methods, the terms “digital media” and “new media” were compared with the identification of the main qualification feature, and the author’s concept of the term “digital media” was formulated with the justification of the approach.*

Keywords*: media, digital media, new media, communication, culture*

The technical revolution of the 20th century led to the development of communication technologies, natural changes in most areas of social life, with a corresponding transformation of the information space and its globalization. In this unified information and communication space, through IT technologies, the rapid implementation of socio-cultural models, value priorities of the metamorphosis of creative practice into a corresponding product with general access is carried out. In fact, innovative means of communication have formed a new human environment, including going beyond the virtual space, becoming a component of large-scale sociocultural changes.

The change and expansion of the forms of communication channels, based on the development of information technologies, penetrating into all spheres of society, has an impact on culture, creating a global culture space. A globalizing culture on a global scale is exposed both to external influences in the synthesis with other cultures, and under the influence of new digital technologies, it is enriched with new means of expression, more and more subject to the elements of multimedia. Both mentioned factors of influence on culture are reflected in the expansion of digital technologies, and at the moment, research on this topic no longer just has its own history, but has passed the stage from the study of "cyberspace" to the creation of new humanities Digital Humanities and media philosophy.

Since innovative technologies contribute to the creation of a single media space with the corresponding requirement for the format of cultural objects, there is a need for a detailed analysis of the term "digital media" in the context of the cultural paradigm, as well as its comparison with the accompanying term "new media".

The logic of the study points to the need to define the term "media" from an etymological point of view. This word has Latin roots with a reference to the word "medium" (middle, medium, mean), which means "middle, middle, mediator, medium" [1,514].

At the same time, dictionaries of philosophical terms give the same interpretation with a reference to the use in the meaning of "mediator" in the works of Thomas Aquinas and Blessed Augustine, where they use the words "mean" and "medium" when interpreting the role of Jesus as a conductor of divine truths [2].

The English-Russian Dictionary of Communicativistics defines "media" as a means of communication and information transmission, interpreting the concept as a "means, method" and defining these means in a variety of forms from ancient knot letters to modern global information content, singling out mass media as a special category [3,200].

The study of the phenomenon of "media" led to the emergence of a new philosophy - media philosophy, which began to develop in the late 90s, XX century. In the paradigm of this science, media is perceived as an environment, with the emergence of the terms "media environment" and similar in meaning "media sphere", and the spatial field is also defined as "media space".

Cultural theory, based on the conventionality of social knowledge of the individual and the community, interprets the term "media" as: the technological basis of individual industries and the economy as a whole; as a component of a person's awareness as a participant in social communication ("I" - "We" - "They"); as a resource for the reproduction of an individual as a social subject [4,53].

Thus, the concept of “media” in its most general form is defined in many humanities as an intermediary in the transmission of a message from a communicator to a recipient. From the settings of this concept, it follows that media can be any element of the human world, both a social institution (for example, the media) and an ancient artifact (for example, rock paintings). Media “convey” information, both to a specific individual and to many people, and ultimately affect human society and its entire social history.

At the turn of the 19th-20th century, the growth of analog audio and visual technologies (photography, film, telephone, gramophone, etc.) caused an increase in discussions. Attributing the above innovations to new communication channels, the philosophers of the Frankfurt School were the first to pay special attention to them. In the works of T. Adorno, V. Benjamin, M. Horkheimer, J. Habermas, G. Marcuse, analog media were considered as destroying the uniqueness of works of art and leading to a crisis of culture, the transition to the “cultural industry”, since they are primarily the bearer of the sign “ mass character”.

In subsequent concepts of communication, the concept of media was mainly perceived as a channel and communication. This is reflected in the social anthropology of W. Perry and E. Havelock, in the mathematical and cybernetic theories of C. Shannon, G. Lasswell, N. Wiener, in the socio-psychological theories of P. Lazarsfeld and R. Merton.

The theory of M. McLuhan, reflected in the works Understanding the Means of Communication: The Continuation of Man (1964) and Gutenberg Galaxies: The Creation of Man of Printed Culture (1962), can be called a “breakthrough” study. A new understanding of the term “media” has emerged, which until then was associated only with “mass culture”, which allowed researchers to reconsider the history and theory of culture through the prism of the new doctrine.

The theory of M. McLuhan is based on the fact that human history changes along with the media, since its qualitative changes are associated with the emergence of new means of communication. Thus, thanks to writing, it became possible to overcome the isolation of human communities by linking the disparate into a single organism. Typography became the next step, then humanity moved from the book to the screen. Television gave mass and supranational messages, which, according to McLuhan, became a new era in human history. Thus, the media is defined as a key element in the transformation of the social substance - society: “... the means of communication determines and controls the scale and form of human association and human action” [5,11]. The authorship of M. McLuhan belongs to the phrase “medium is the message” (“the medium is the message”), in which, according to Ch.A. Baldwin, the whole theory of media is concluded [6]. Another researcher, M. Federman, noted that this phrase has a different meaning: “A new means of communication carries a new type of information” [7].

The humanitarian media paradigm focuses not on communication channels, but on contacts, where the media is responsible for understanding, meanings. The founder and theorist of mediology, R. Debre, introduces the concept of "media sphere", which, in his opinion, "provides shelter" for autonomous cultural ecosystems. The transition from one media sphere to another occurs through a "revolution in machines", while not only technical, but also social aspects are affected. One of the conditions for the technical revolution is a favorable cultural environment [8,82-83].

The allocation of the concepts of "media sphere" and "media environment" is studied in a special way in the noospheric paradigm (V.I. Vernadsky, E. Leroy), in which the media sphere is considered as part of the noosphere, where information entities await the subject who will interpret and decode, i.e. expect human activity in relation to it.

The linguistic tradition is based on the developments of F. de Saussure, who defined language (not identical to speech) as a special sign system, a code. Based on this, the study of language structures allows us to identify semantic algorithms that are common to individuals in a particular community.

Exploring signs and sign systems, L. Barth created a theory about the generation of "myth" as a secondary sign system that generates new meanings. Coming closer in this part to the representatives of the Frankfurt School, he interprets the functions of myth (replacing the concept of media with it) as a way of influencing modern society through the media.

The development of linguistic theory by Ch. Pierce and Y. Lotman from the point of view of the semiotics of culture has changed the understanding of communication as a straightforward one ("sender-receiver"). Since the "sender" encodes the message within the framework of his/her experience, traditions, judgments and tasks, and the "receiver" decodes it also based on his own cultural code, then there is no mismatch or it falls within the margin of error only in the case of unity of cultures, otherwise the communication process is violated and leads to misinterpretation of the message. This leads to certain conclusions that culture is directly related to the functioning of the media, otherwise there is a violation of the process of reproduction of meaning-forming concepts.

Researchers define the following classification of media, recognizing that it is difficult to "fix clear boundaries" of phenomena, and in this regard, one should not overestimate the importance of ranking: "…primary media, handwritten media, print media, electronic media, digital media, integrated media" [9,173].

Let's pay attention to the fact that each new species in the historical perspective differs from the previous one in innovativeness, characteristic of its time of occurrence. Given that for M. McLuhan, media are the quintessence of the technological core of culture, the most elementary and not contradictory explanation of "digital media" should be recognized as the presence of a technological component of this term.

Thus, in our opinion, digital media should be understood as cultural objects and technological tools, the first of which are generated, replicated or created using the second, based on the use of a digital format.

It is obvious that digital media is currently associated with the concept of "new media" for quite understandable reasons. In the concept of "new media", the main qualification feature is the innovativeness of the technical means that provides communication. The most progressive (innovative) technical method of creation (generation, copying, replication) is the digital method, which means that digital technologies become the main qualification in the concept of "digital media". Therefore, "new media" at this point in time is similar to "digital media", but further technological evolution will change this.

Based on this, it is possible to formulate the concept of "new media" similar to the concept of "digital media": cultural objects and technological tools, the first of which are generated, replicated or created using the second, based on the use of the most innovative of the existing formats.

Summing up some results, it should be determined that the concept of media combines specific scientific, philosophical, social and technological phenomena aimed at ensuring the effectiveness of communication in society and self-realization of a person.

In modern realities, similar phenomena have arisen and are successfully functioning, reflected in the concepts of "digital media" and "new media", where the criterion for their differentiation is one or another degree of innovation. At the same time, "digital" should be understood as media that act as socio-cultural objects that are created, generated and replicated through technological tools based on digital formats. It is noteworthy that at the moment "digital" and "new" media are indistinguishable from each other, however, such an analogy naturally disappears due to technological progress in this area.

At the same time, the concepts of "new media" and "digital media" are currently academically unstable. Their understanding in the system of humanitarian knowledge is conventional.

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上合组织国家的科学研究：协同和一体化

国际科学大会的材料

2022 年 11 月 24 日，中国北京

编辑A.A.Siliverstova
校正A.I.尼古拉耶夫

2022 年 11 月 24 日，中国北京
USL。沸点：98.7。 订单253.流通500份。

在编辑和出版中心印制
无限出版社