

Investment Policy of the Region in the Age of Informatization and New Industrialization (on the Example of Sverdlovsk Region)

Kvon Gulnara Magsumovna
Ural State Economic University (USUE),
Yekaterinburg, Russia
sung2002@mail.ru

Titovets Alisa Yuryevna
Ural State Economic University (USUE),
Yekaterinburg, Russia
alisa.titovets@mail.ru

Abstract—The urgency of the problem investigated in the paper is due to the fact that the stable functioning and development of business entities, sectors of the economy, regions, and the country cannot be implemented without investments. However, the modern paradigm of regional development requires new approaches in the conduct of investment policy, resulting from the change of strategic priorities in the formation of spatial development strategies. The need to develop innovative technologies, the introduction of digital technologies in the implementation of technological processes in many sectors of the economy leads to increased investment policy in the regions. It is worth noting that the implementation of the investment policy of the regions is complicated by crisis phenomena and unfavorable political situation in the world, which causes a slowdown in economic growth in the country. The purpose of the paper is to study the issues of identifying innovative investment projects aimed at introducing modern information systems (using the example of Sverdlovsk Region). The leading method in the study of this problem is the statistical one, which is a method of quantitative analysis of a multitude of homogeneous facts, which in the aggregate cause the transition of quantitative changes into qualitative ones. The paper presents the results of analysis and evaluation of a number of indicators characterizing the investment policy of the region. Furthermore, an assessment of the volume of investments in the introduction and implementation of innovative information systems which ensure the improvement of the infrastructure of the studied area has been carried out. The materials of the paper are of practical value for professionals involved in the realization of digital technologies in the implementation of the investment policy of the region.

Keywords—*region, investment policy of the region, regional informatization, information systems.*

I. INTRODUCTION

Changing priorities in developing strategies for spatial development, due to the influence of crisis phenomena, which, according to various authors [1], [2], may continue until 2030, requires new approaches in shaping the investment policy of the regions. The refusal of the inertial development scenario, which preserves the raw material model for the economic development of Russia and its regions, the transition

to a program of new industrialization suggests increasing the importance of human capital, developing and introducing new digital technologies, activating investment policies based on innovation. Avoiding the inertial scenario, which, according to M.A. Gusakov [3], was realized "... in our country in the last 10 years" and did not lead to fundamental changes "in relation to the dynamics of technological and innovative development", requires the involvement of the maximum number of regions in the innovation and investment process. Regions are required to maximize their involvement in the creation of technological and information base platforms to create conditions for the implementation of new industrialization and the digital economy.

Regional investment policy, as a part of the general policy of the socioeconomic development of the region, is the result of scientifically grounded detail of regional authorities. The efforts of the authorities to implement it should be aimed at ensuring the achievement of the strategic goals of the region through the activation of investment processes [4].

The ability of the region's economy to sustainable growth as a result of investment security is one of the indicators of its economic security as a whole [5].

The investment policy of the region is implemented through the realization of investment projects whose main purpose is to create competitive conditions for the development of innovations, namely: creating and implementing software and data systems for managing regional processes, automating production processes in regional enterprises, strengthening the positions of information products and services in the structure of gross regional product, the formation of digital interest in systems, and the creation of digital technologies. Thus, in the age of informatization, a new vector of technological development of world, national, and regional processes is currently being created.

The creation of interest in the processes of informatization begins with the research of D. Bell, since the key parameter of the post-industrial society formation is the qualitative change in production (high-tech and knowledge-intensive), which will be based on the processes of informatization. As D. Bell [6] noted, the development of post-industrial society is not the threshold, this model will be

supplemented by new concepts, which is happening at the current moment in time—a new concept is being formed, actualized by the requirements of the new neo-industrial paradigm of economic development in Russia. According to a number of scientists [7], the digital economy has marked the “onset of the new information age”, while everything that can be formalized can be included in its composition.

Informatization is important from the point of view of the development of society: it can be represented as a complex process of social development, “associated with numerous changes in the life of the population” [8]. In the opinion of the authors, digitization entailed with the conceptual guidelines of new industrialization and it is a kind of trigger for the new industrial development of the regions. Therefore, this process in the era of neo-industrialization will require innovative changes in all areas of society and, accordingly, large investments.

II. LITERATURE REVIEW

Changes in the functioning of large economic meso- and macrosystems, which are determined by the factors of the third industrial revolution based on digital systems and the fourth industrial revolution based on the achievements of the third one, are presented in the work of Klaus Schwab and Nicholas Davis [9]. In this paper, the authors have examined the possibilities of expanding digital technologies and creating fundamentally new approaches and new opportunities for “developing infrastructure that support the operation of global systems”.

Positive and negative results of the reforms that took place in the Russian Federation and its regions, an analysis of the macroeconomic situation, which together influenced the implementation of investment projects, are presented in the research of V.Sh. Livshits [10]. The author also presents features of the implementation and evaluation of investment projects in stationary and non-stationary macroeconomic systems, features of State investment policy in the design of field development projects.

The digital revolution, according to S. Glazyev [11], is capable of destroying “the usual stereotypes of management”. Its influence on economic systems when expanding the scope of activities leads to an increase in the marginal cost of investment (as opposed to the sphere of material production).

A methodological approach to assessing the conditions for implementing a regional investment policy is provided in the author’s work [12]. This paper represents the factors that allow characterizing the effectiveness of the investment policy, using the example of the Republic of Tatarstan. In our opinion, this approach can be used in assessing the conditions for implementing the investment policy of Sverdlovsk Region, taking into account the influence of the digitization processes on the regional economy.

The importance of developing new economic conditions for economic systems is due to the adoption of the Strategy for the Development of the Information Society of the Russian Federation for 2017-20130 [13], within the framework of which the Government of the Russian Federation has approved the program “Digital Economy of the Russian Federation” dated July 28, 2017 [14]. This document

defines the basic directions for the development of the Russian digital economy, which include regulation, staffing for program implementation, information infrastructure, and information security. Within each direction, the program defines the goals and objectives of the digital economy development for the period up to 2024.

A comparative analysis of the results of the investment policy of Russia from 1990 to 2016, an analysis of the structure of investment sources is given in the paper by A. Neshityi [15]. The author concludes that today investments do not fulfill the function of the driving force of economic development, “investment activity... is not manageable, and the structure of investments is deformed”. The aforesaid, according to the author, “fixes the raw material orientation of the development of the economy”. In this regard, the author emphasizes the need to revive the high-tech sector of the economy that meets the needs of neo-industrial development.

The paper by Andreas Pyka [16] speaks about the peculiarities of the formation of regional innovation systems, while the authors reject the traditional approach, in which investment in private and public research and development will immediately lead to a flow of products and processes with high commercial and social returns. Based on a deep analysis of innovation processes, the authors believe that when forming a modern innovation economy, one should not use a simplified understanding of the role of investment in R&D—instead, it is necessary to consider the complex processes of generating and disseminating knowledge in innovation networks.

An analysis of theoretical and methodological approaches to informatization is provided in the Sokolova’s research [17], while the author emphasizes the humanitarian significance of information technologies that are important for the development of the sociocultural sphere.

Problems of regional informatization are identified in the work of A.N. Shvetsov [18], who believes that “the regions ... are in different degrees of readiness to achieve the goals of informatization; besides, the achievements of informatization are not balanced, because concentrated mainly in large cities and not always distributed throughout the region.

The unevenness of globalization processes is also examined in the research of N.V. Zubarevich [19], who notes that “the processes of globalization were first of all manifested in the largest urban agglomerations...”.

III. METHOD OF DATA ANALYSIS

When writing the paper, various methods were used:

- statistical methods;
- periodization method;
- methods of system and logical analysis;
- comparative and retrospective methods;
- methods of analysis and synthesis.

IV. ESTIMATION RESULTS

According to analysts [8], the investment costs of carrying out activities to digitize the economy will amount to 500 billion rubles, including budget funds—150 billion rubles, and the effect of the measures will range from the expected growth of the country’s GDP up to 34%.

In order to substantiate the possibilities of implementing the investment policy in the region, we will use the data presented in [20], in which the development trends of the Ural macroregion are indicated. The results of the analysis have shown a loss of the position of the Ural macroregion in the Russia's economic indicators: this is a decrease in the share of the macroregion in the total volume of the gross regional product of the Russian Federation; in the total investment, in the total volume of industrial products shipped, there was a slowdown in the dynamics of industrial production in the regions of the Urals, etc. The analysis carried out by the authors also suggests that the expectations of a sharp acceleration of scientific and technical progress in the region, which could lead to an improvement in the progressive technological capital structure, were not confirmed. Unfortunately, the transition to market conditions of management has caused the fact that in the lack of government funding for research and design institutes, the high-tech and knowledge-intensive sectors of the sector were left without scientific support. The prospects for economic growth in the region are associated only with the need to intensify industrialization processes, which, in turn, require activation of the investment policy.

Dynamics of investment directly in Sverdlovsk Region is shown in Figure 1. Indicators are considered in dynamics (for the period 2012-2017).

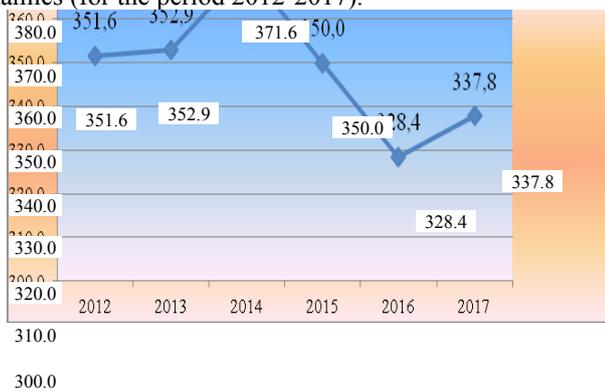


Fig. 1. Dynamics of investments in fixed assets in Sverdlovsk Region in 2012-2017

As can be seen from the graph, since 2014, there has been a decrease in this indicator due to the unsteady conditions of the Russian economy, which have a negative effect on most regions. The availability of funding sources is of particular interest (Fig. 2).

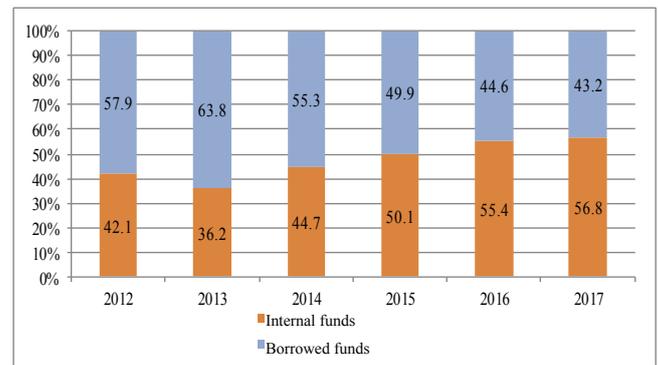


Fig. 2. The share of internal (own) and borrowed funds in investments in fixed assets in Sverdlovsk Region for 2012-2017

As can be seen from the graph, the main share in the amount of sources is the attracted funds, but the trend of the last two years shows an increase in the share of own funds of the region.

It should be noted that the Ural, due to their median location, has pronounced specificity in the field of investment activity [21]. The successful location of the region allows it to diversify investment resources in different geographical areas, attracting them from various sources.

According to the rating of investment attractiveness of the regions of Russia RAEX, conducted by the Expert rating agency, Sverdlovsk Region is rated 1B (high potential—moderate risk) [22].

In addition, Sverdlovsk Region was included in the Top 20 regions of the National Investment Rating of the RF subjects (the rating was presented on May 25, 2018, at the St. Petersburg International Economic Forum).

Table 1 represents the top twenty regions of the National Investment Rating of the subjects of the Russian Federation.

TABLE I. RESULTS OF THE NATIONAL INVESTMENT RATING OF THE SUBJECTS OF THE RUSSIAN FEDERATION [23]

Region	Place in the ranking		Position change (2018 to 2017)
	2018	2017	
Tyumen Region	1	6	5
Moscow	2	3	1
Republic of Tatarstan	3	1	-2
Saint Petersburg	4	17	13
Tula Region	5	4	-1
Krasnodar Krai	6	7	1
Voronezh Region	7	8	1
Chuvash Republic	8	2	-6
Moscow Region	9	9	0
Ulyanovsk Region	10	10	0
Belgorod Region	11	23	12
Leningrad Region	12	20	8
Kaluga Region	13	5	-8
Khanty-Mansi Autonomous Okrug—Yugra	14	30	16
Kaliningrad Region	15	39	24
Tambov Region	16	11	-5
Yaroslavl Region	17	25	8
Khabarovsk Krai	18	40	22
Novosibirsk Region	19	27	8
Sverdlovsk Region	20	33	13

According to the rating developed by the Agency for Strategic Initiatives to Promote New Projects Autonomous Non-Profit Organization, Sverdlovsk Region was in the Top 20, having improved its result in 2017 by 13 points.

Acceleration of the regional informatization process is directly determined by the strategy of Sverdlovsk Region, the priority tasks of which is to create conditions for increasing the competitiveness of the industrial, innovation, and entrepreneurial potential of the economy of Sverdlovsk Region; the creation of innovation infrastructure, the infrastructure development to support innovation, the development and implementation of an effective model of innovation infrastructure management [24]. The above requires the introduction of modern information systems into the regional economy, characterized by the requirements of new industrialization.

Based on the data provided by the Digital Economy Autonomous Non-Profit Organization, an analysis of the available investment cases has been carried out to enhance the informatization processes in the country's regions. This organization presents a rather large list of information systems (IS), which is 52 names in different areas of the region's digitalization. Our data programs are grouped into three large blocks (Table 2):

- 1). Managing the citizens' quality of life.
- 2). Improving business performance.
- 3) Improving the efficiency of public administration.

TABLE II. THE LIST OF DEVELOPED INFORMATION SYSTEMS FOR THE SUBJECT OF THE RUSSIAN FEDERATION—SVERDLOVSK REGION []

Directions	IS number, units		Total investments, million rubles*	
	Implemented	Planned for implementation	Total	Including implemented
1. Managing the citizens' quality of life	5	4	55.84	25
2. Improving business performance	5	6	6.2	0.5
3. Improving the efficiency of public administration	3	29	555.4	29
Total:	13	39	617.44	54.5

Note: Part of the investment costs is not taken into account due to the lack of data on the number of enterprises implementing these measures

According to the results of the analysis presented in Table 2, 13 projects worth 54.5 million rubles were implemented in Sverdlovsk Region, while the total investment costs of implementing these systems are insignificant and, according to preliminary estimates, will amount to 617.44 million rubles.

V. CONCLUSION

Investment activity in the age of informatization and new industrialization is regarded as an important high-quality assessment of the country's economic system, which ensures the necessary level of competitiveness of the region, as well as the realization of national and State interests.

At present, the introduction of innovative investment projects is aimed at the implementation of tasks in accordance with the strategic aspects of the information society development in Russia and its regions. The region's economy needs new projects that ensure the technological development of national and regional processes.

The paper provides an analysis of indicators representing an assessment of planned and implemented investment projects for the implementation of information systems aimed at digitizing the region using the example of Sverdlovsk Region.

References

- [1] Zemtsov S., Barinova V. (2016) Changing the paradigm of regional innovation policy in Russia: from leveling to smart specialization, *Economic issues*, No. 10, pp. 65-81.
- [2] Neshchadin A.A., Tulchinsky G.L. (2013) Change the paradigm of the strategy of regional development of Russia, *Society and economy*, No. 6, pp. 146-156.
- [3] Gusakov M.A. (2014) Identifying directions and ways of transforming the research and innovation space of different types of regions, *Economic and social changes: facts, trends, forecast* No. 3 (33), pp. 151-168.
- [4] Novokshonova E.N. (2014) Evaluation of the effectiveness of regional investment policy, *Regional economy: theory and practice*, No. 11 (338), pp. 49-60.
- [5] Tatarin A.I., Kuklin A.A. (2012) Changing the paradigm of studies of economic security of the region, *Economy of the region*, No. 2 (30), pp. 25-39.
- [6] Bell D. (1973) *The coming of post-industrial society: A venture of social forecasting*, N.Y. Basic Books.
- [7] Evenko L.I. (2005) Organizational management structures of US industrial corporations, M.: Science, p. 349.
- [8] Silin Y.P., Animitsa E.G. (2018) The contours of the formation of the digital economy in Russia, *News of the Ural State Economic University*, Vol.19, No.3, pp.18-25.
- [9] Schwab Klaus, Davis Nicholas (2018) *Technologies of the Fourth Industrial Revolution*: [translation from English], Moscow: Eksmo, p. 320, (Top Business Awards).
- [10] Livshits V.N., Livshits S.V. (2015) Macroeconomic theory, real investment and Russian state economic policy. M.: LENAND, p. 248.
- [11] Glazyev S. (2018) *Breakthrough into the future. Russia in the new technological and world economic structures*, (Collection of the Izborsk club), M.: Book World, p. 768.
- [12] Kvon G.M. (2017) Regional investment policy, *Eurasian Journal of Analytical Chemistry*, Vol. 12, No. 5b, pp. 835-853.
- [13] Presidential Decree of May 9, 2017 No. 203 "On the Strategy for the Information Society Development in the Russian Federation for 2017-2030" [Electronic source]: Retrieved from <http://www.garant.ru/products/ipo/prime/doc/71570570> / #ixzz5Uduedyoh.
- [14] The program "Digital economy of the Russian Federation" No. 1632-p [Electronic source]: Retrieved from <http://static.government.ru/media/files/9gFM4FHj4PsB7915v7yLVuPgu4bvR7M0.pdf>.
- [15] Nashita A.S. (2018) The revival of the high-tech sector of the Russian economy is the main goal of industrial policy at the macro-meso level, *Investments in Russia*, No. 8, pp. 3-9.
- [16] Andreas Pyka, Matthias Mueller Muhamed Kudic (2018) Regional Innovation Systems in Policy Laboratories, *Journal of Open Innovation: Technology, Market, and Complexity*, Open Access Journal, No. 4 (4), p. 44.

- [17] Sokolova, I.V. (1999) *Social informatics and sociology: problems and prospects of interrelation: monograph*. M.: Publishing House of Moscow State University.
- [18] Shvetsov A.N. (2012) Russian informatization in the regional dimension, *Federalism*, No. 4, pp. 73-84.
- [19] Zubarevich N.V. (2002) Russia's largest cities as "agents" of globalization, *Russia and the modern world*, No. 4 (37), pp. 97–101.
- [20] Silin Y.P., Animitsa E.G., Novikova N.V. (2017) Trends in the development of the economic space of the Ural macro-region, *Manager*, No. 2 (66), pp. 2-11.
- [21] Animitsa E.G. (2009) *Middle region: theory, methodology, analysis*, Publishing house of Ural State University of Economics, p. 508.
- [22] Rating of investment attractiveness of the regions of 2017 Website of the RAEX rating agency ("Expert RA") Retrieved October 21, 2018 [Electronic source]: Retrieved from <https://raexpert.ru/ratings/regions/>
- [23] National rating of the investment climate in the regions of the Russian Federation (2017) The website of the Agency for Strategic Initiatives. Retrieved October 21, 2018, [Electronic source]: Retrieved from <https://asi.ru/investclimate/rating/>
- [24] Law of the Sverdlovsk region of December 21, 2015 No. 151-OZ "On the strategy of socio-economic development of the Sverdlovsk region for 2016-2030" [Electronic source]: Retrieved from <http://economy.midural.ru/content/strategiya-2030>.