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Issue Article

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ON THE EFFICIENCY OF MODERNIZING THE ECONOMY OF THE NORTH CAUCASUS MACROREGION USING THE MECHANISM OF PUBLIC-PRIVATE PARTNERSHIP

Abstract*: In this article, the authors examined the structure of a public-private partnership mechanism for modernizing the economies of Russian regions using research on labor market development trends in the regions, including the sustainability of entrepreneurship in Russia. Specifically, they explored the characteristics, trends, patterns, and new forms of innovative management within the labor market system. The authors also examined current and controversial issues of economic restructuring, explored ways to improve its efficiency, and formulated key guidelines for long-term economic policy.*

Key words*: transformation, development model, economic restructuring, efficiency, economic policy, innovation management, small and medium-sized businesses.*

Language*: English*

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Introduction

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Structural transformation of the regional economy is currently a primary necessity and driving force behind the transformation of the country's economy. Due to persistent external and internal threats and the need to overcome their consequences, the regional economy requires structural modernization and the identification of its essential characteristics, which serve as the basis for shaping regional policy priorities, implementing mechanisms, and improving the tools and methods for implementing modernization measures. Today, civil society is developing unevenly across various regions of the Russian Federation, largely dependent on the political activity of citizens of all ages, including the most mobile group—young people. This is particularly relevant in the North Caucasus macroregion, characterized by the scale and severity of socioeconomic development challenges. The search for strategic imperatives for structural economic modernization is also important given that the North Caucasus Federal District consistently demonstrates subpar results across several economic indicators (level of economic development, standard of living). There are several explanations for this: significant depreciation of fixed assets, a shortage of qualified personnel, low infrastructure, and a dearth of truly launched investment projects. Determining strategic directions for structural modernization of the North Caucasus economy is determined by resource constraints, the impossibility of economic expansion through extensive factors, the presence of a large number of governing entities, their conflicting interests, and the complexity of their relationships. These circumstances make this research highly relevant.

Main part

Since the North Caucasus Federal District separated from the Southern Federal District in 2010, the Russian Federation has acquired one of the most underdeveloped macroregions in terms of key macroeconomic indicators, along with some of the most depressed regions. This, in turn, has increased the overall differentiation between the Russian Federation's federal districts and exacerbated the problems of interregional cooperation among the district's constituent entities. The North Caucasus regions are agricultural, trade-oriented entities with small industrial production, often in the construction and energy sectors. They are home to fossil fuel deposits, hydroelectric resources, and other assets. Potential exists in industry (mechanical engineering, processing) and agriculture (grain farming, livestock farming, viticulture, and horticulture). Favorable climatic conditions, a unique geopolitical position, and abundant labor and natural resources make the North Caucasus macroregion a promising district for economic development. One of the key indicators of socioeconomic development is the gross regional product (GRP). GRP is a derivative of many market factors, the most important of which currently are capital (fixed assets), labor, and effective demand. It is worth noting that the North Caucasus Federal District (NCFD) lags behind all other federal districts in terms of GRP and GRP per capita, indicating destructive trends in the macroregion's economy. The dynamics of the key socioeconomic development indicators for the North Caucasus Federal District regions for 2024 are presented below (Table 1).

Table 1. Key economic development indicators for the regions of the North Caucasus Federal District in 2024

Indicators	RD	RI	KBR	Karachay-Cherkessia	RSO-A	Czech Republic	SK
Gross regionalproduct	625063.4	55457.1	145658.2	77046.3	130043.4	193077.1	715511.4
Gross regionalproduct per capita population, rubles	203272.3	112553.4	168192.1	165358.9	185641.3	133435.8	255726.3
Investments in fixed capital per capita, rubles.	72543	47556	50843	48515	47035	56309	64305
Inflow of foreign direct investment,million dollars	1	0.1	0.1	0.5	0.1	10	41
Efficiencyъ investments (GRP per ruble of investments)	2.8	2.3	3.3	3.4	3.9	2.3	3.9

Impact Factor:	**ISRA** (India) = **6.317** **ISI** (Dubai, UAE) = **1.582** **GIF** (Australia) = **0.564** **JIF** = **1.500**	**SIS** (USA) = **0.912** **РИНЦ** (Russia) = **0.191** **ESJI** (KZ) = **8.100** **SJIF** (Morocco) = **7.184**	**ICV** (Poland) = **6.630** **PIF** (India) = **1.940** **IBI** (India) = **4.260** **OAJI** (USA) = **0.350**

Accounts payable of organizations,million rubles	108250	2941	50130	50775	29938	152435	216859
Accounts receivable of organizations,million rubles	41023	1836	20687	41532	14809	38550	274433

The North Caucasus Federal District's overall GRP in 2024 was RUB 1,941.8 billion (2.3% of the total regional GRP). Below is a list of the leading economic activities within the GRP (Figure 1).

Figure 1. Structure of GRP of the North Caucasus Federal District, 2024, %

The following regions account for the main share of the district's total GRP:

- Stavropol Krai – 36.8%;
- Republic of Dagestan – 32.2% (see Figure 2).

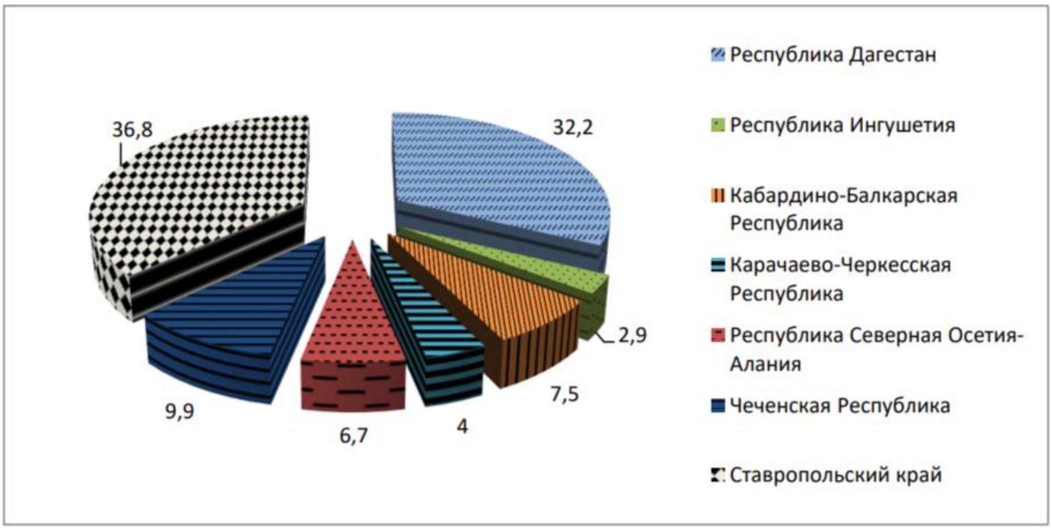

Figure 2. Share of subjects in the total GRP of the North Caucasus Federal District, 2024, %

Over the analyzed period from 2018 to 2024, the total GRP of the North Caucasus Federal District regions demonstrated stable growth. The most significant growth rates were recorded in 2024; however, the rate slowed in subsequent years (Figure 3).

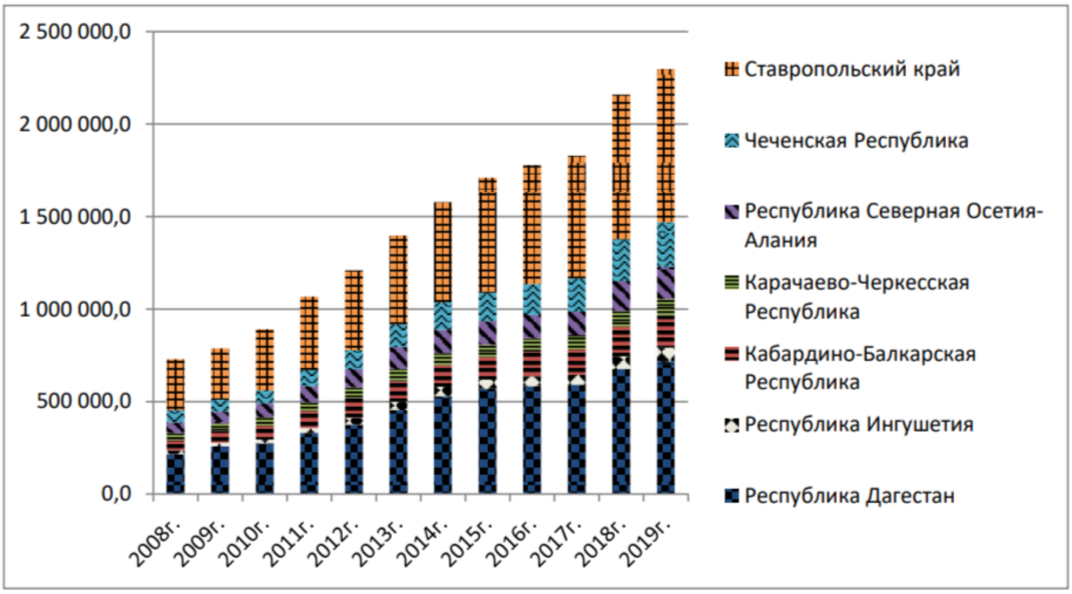

Figure 3. Dynamics of GRP by regions of the North Caucasus Federal District, million rubles.

Between 2018 and 2024, agriculture (-0.3%), real estate (-0.6%), and wholesale and retail trade (-1.7%) experienced the most significant declines in their share of the district's GRP, while healthcare and social services (1.3%) and education (0.7%) achieved positive results. It can be concluded that the region is developing a non-production sector rather than a real sector of the economy, which negatively impacts socio-economic development, as these sectors are unable to generate synergies and serve as a source of economic growth for the district. Investments are one of the main sources of wealth and development for the region. In recent years, the regions of the North Caucasus Federal District have demonstrated positive results in terms of investment primarily in capital and investment in fixed capital per capita, with growth rates at the district level of 123.1% and 121.9%, respectively. However, the North Caucasus Federal District significantly lags behind other macroregions in terms of investment activity. Attracting private capital, and particularly foreign investment, remains a pressing issue in the district. In particular, foreign direct investment inflows into the district have declined in recent years: $486 million (2021), $143 million (2022), and $54 million (2024). This decline is due to investors' reluctance to invest in the economies of the North Caucasus Federal District regions due to the tense political situation, complex interethnic relations, and social tensions in the North Caucasus, resulting in a lack of guarantees for business security and profitability, as well as a high level of investment risk. Methodological analysis by the Expert RA rating agency indicates that the regions of the North Caucasus Federal District (with the exception of Stavropol Krai) rank very low in the investment potential, investment risk, and investment climate ratings for 2024 (Table 2).

Table 2. Investment rating of the regions of the North Caucasus Federal District for 2024

Region	Place in the ranking		
	Investment climate	Investment risk	Investment potential
Republic of Dagestan	83	84	30
Republic of Ingushetia	84	85	76
Kabardino-Balkarian Republic	75	81	68
Karachay-Cherkess Republic	76	76	79
Northern RepublicOssetia-Alania	77	80	63
Chechen Republic	78	82	62
Stavropol Krai	41	30	25

SimilarThe results are also demonstrated by the data from the rating agency "AV Group" (Table 3).

Table 3. Ranking of regions of the North Caucasus Federal District by key development areas for 2024

Region	Place in the ranking							
	AV RCI	Markets	Institutes	Human capital	Innovations and information	Natural factors	Investtions and financial capital	Spacestatehood and real capital
Republic of Dagestan	50	60	43	27	75	39	72	17
Republic of Ingushetia	83	85	81	43	80	85	83	69
Kabardino-Balkarian Republic	73	76	72	24	82	63	77	61
Karachay-Cherkess Republic	79	82	78	62	77	70	78	78
Northern Republic Ossetia-Alania	72	77	79	7	70	81	82	65
Chechen Republic	68	74	39	32	72	82	75	71
Stavropol-sky region	24	35	35	13	27	27	26	28

One of the very promising areas of activity for regions in modern conditions is their foreign economic activity. Analysis of statistical data on exports and imports showed that foreign trade turnover in the North Caucasus Federal District is increasing, although at a slow pace (in 2005 - 1851.5 million US dollars, in 2010 - 1961.5 million US dollars, in 2015 - 2181.2 million US dollars, in 2018 - 2303.1 million US dollars, in 2023 - 2346.2 million US dollars, in 2024 - 2350.1 million US dollars). Moreover, in 2024, the share of exports amounted to 1401.3 million US dollars, which is 105.9 million US dollars more than the same figure for 2023 and 234.5 million US dollars more than the figure for 2018. The share of imports also shows a decrease: in 2024 it amounted to 948.8 million US dollars, in 2023 - 1050.8 million US dollars, and in 2018 - 1136.3 million US dollars.

All this indicates that the district's regions have significant potential for import substitution, as local enterprises can fill this niche. However, it is too early to speak of their competitiveness in the national market. An analysis of the commodity structure of exports showed that by 2024, the majority of foreign trade activity will be accounted for by food products, agricultural raw materials, and chemical products. These circumstances suggest potential for domestic production, particularly in agriculture, as imported food products can be produced locally in the North Caucasus Federal District. At the same time, the low share of high-tech goods should be noted, highlighting the need to develop the production of high-tech products with high added value. Another significant factor hindering the district's progressive development is its high reliance on subsidies. Experience shows that "subsidized" regions (i.e., recipient regions) are unable to fully support their public sector employees; therefore, they receive non-repayable subsidies—transfers—from the federal budget. It is worth highlighting the Republic of Dagestan, the leader in receiving subsidies (2024 – 66.2 billion rubles, 2023 – 58.3 billion rubles, 2022 – 61.5 billion rubles).

The situation is further aggravated by the fact that, according to the Russian Ministry of Finance, of the ten regions in whose consolidated budgets subsidies account for a significant share, half are North Caucasian republics: the Republic of Dagestan (52%), the Chechen Republic (50%), the Republic of Ingushetia (49%), the Kabardino-Balkarian Republic (35%), and the Karachay-Cherkess Republic (34%).

Furthermore, the district faces a serious problem with unfinished construction projects. According to the Accounts Chamber of the Russian Federation, as of January 1, 2018, the North Caucasus Federal District had 4,038 unfinished construction projects with an investment volume of 160.7 billion rubles, including 1,531 projects worth 88.3 billion rubles co-financed from the federal budget. Financing for 1,178 projects began more than eight years ago, while construction on 1,046 projects has been suspended, including 1,018 without mothballing. The largest number of unfinished construction projects are located in Dagestan (1,604) and Chechnya (464). It is essential to create a truly competitive economy in the district, focusing not only on social infrastructure but also on the development of high-tech production, the creation of new jobs, and the attraction of private capital. The implementation of all planned projects is possible through the incorporation of public-private partnerships (hereinafter referred to as PPPs) or privatization. Let's examine the potential for structural modernization of the North Caucasus macroregion's economy in the context of the development of PPPs. Here, we see the volume of private investment in public-private partnership projects as a systemic indicator of the application of PPPs in the North Caucasus Federal District (Table 4).

Table 4. Development of the PPP sector in the North Caucasus Federal District

Subject of the North Caucasus Federal District	Final integralindicator, %			Place in the PPP ranking			Volume of private investmentsinvestment in PPP projects, billion rubles		
	2020	2023	2024	2020	2023	2024	2020	2023	2024
SK	41.2	48.0	45.5	45	47	46	0.15	0.11	0.02
RI	4.5	10.2	14.9	83	84	85	0	0	0
KBR	25.7	29.7	33.1	62	78	81	0.15	0	0
Karachay-Cherkessia	1.5	12.4	26.7	70	82	80	0	0	0
RSO-A	1.5	9.6	13.4	84	85	83	0	0	0
RD	12.2	23.9	37.7	54	76	58	0.19	0	0
Czech Republic	3.0	11.3	23.7	73	69	77	0.1	0	0

Based on the data in Table 4, we can conclude that Stavropol Krai leads in the overall integrated indicator, with this trend continuing throughout the sample period. The Republic of Dagestan ranks second (as of 2024), as shown in Figure 4.

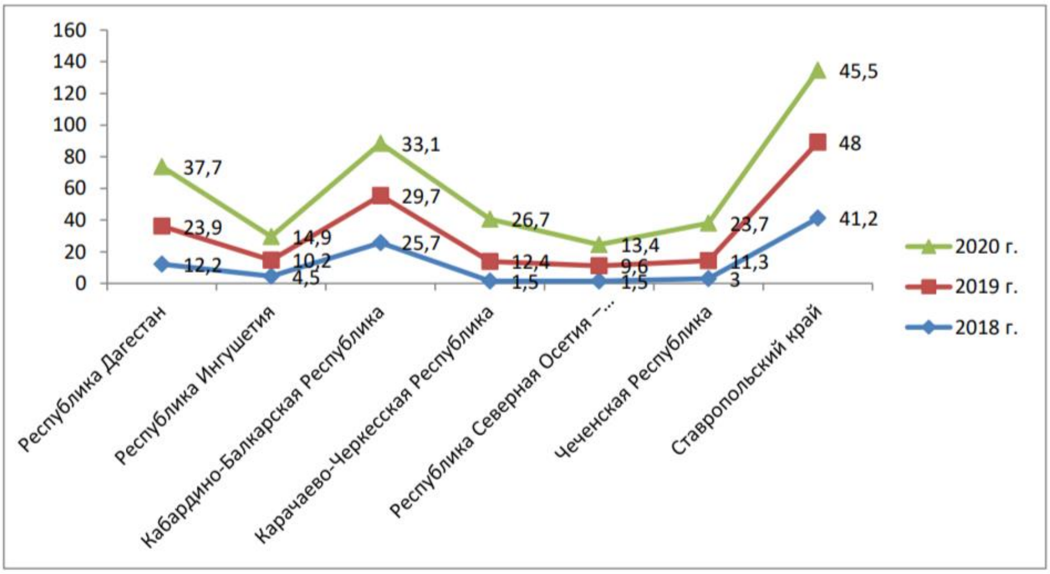

Figure 4. Dynamics of final integrated indicators of the constituent entities of the Russian Federation according to the methodology of the Ministry of Economic Development of the Russian Federation, %.

Stavropol Krai occupies a leading position in the North Caucasus Federal District in terms of the "Place in the PPP ranking" indicator, while the other North Caucasian republics (with the exception of Dagestan) are at the bottom of this ranking (Figure 5).

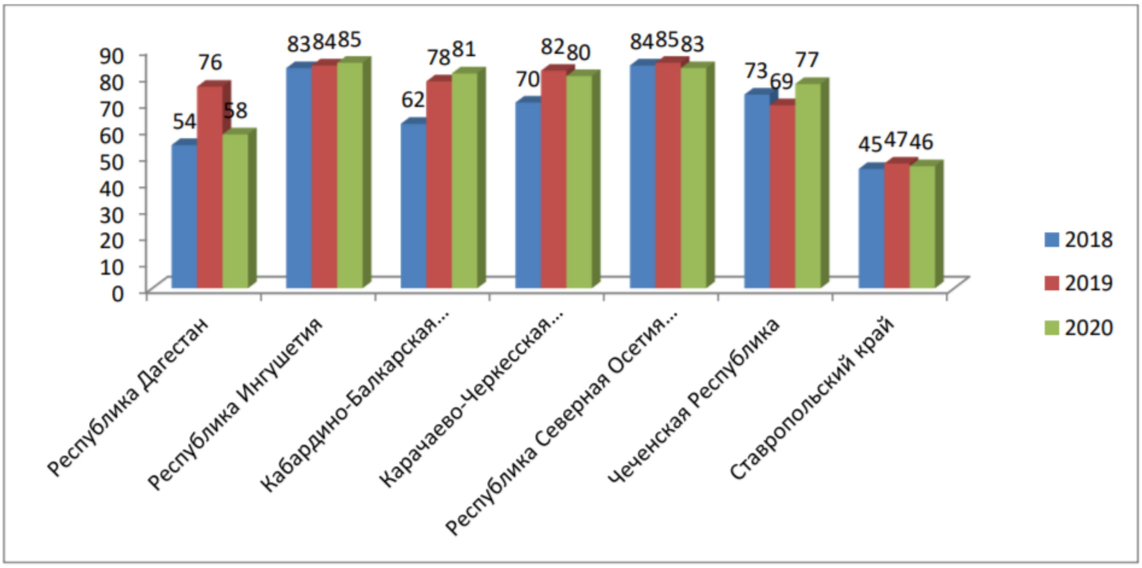

Figure 5. Dynamics of the places of PPP entities in the PPP development rating

Analyzing the number of agreements concluded and the volume of private investment attracted in PPP projects, we can conclude that for the selected period, the total volume of investment in the North Caucasus Federal District is quite "modest" compared to other macro-regions (Table 5 and Figure 6).

Table 5. Information on ongoing projects and investment volumes in the Russian Federation

Macro-region	Number of PPP projects			Total investment volume, billion rubles		
	2020	2023	2024	2020	2023	2024
Siberian federal district	42	15	0	0.67	0.22	0
Far Eastern Federal District	9	9	0	0.13	0.42	0
North-West Federal district	24	10	0	0.2	0.08	0
Southern Federal district	12	8	1	0.08	0.02	0
Central Federal district	23	11	3	0.9	0.47	0.04
North Caucasian Federal district	2	3	2	0.5	0.11	0.02
Ural Federal district	22	9	1	0.81	0.2	0.05
Volga Federal district	72	16	4	1.23	0.65	0.02

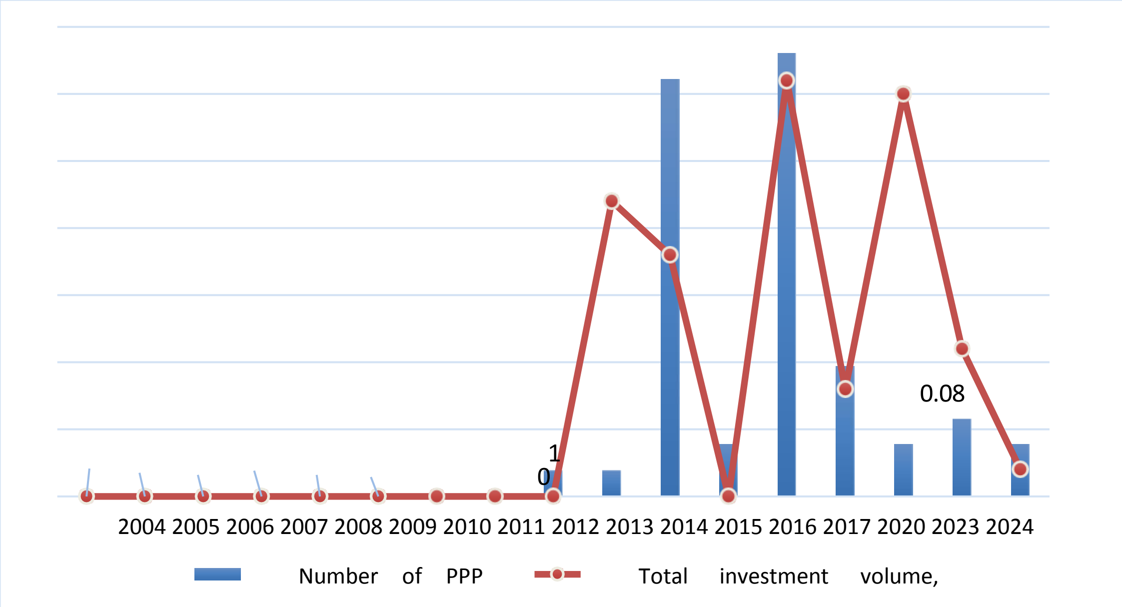

Figure 6. PPP projects in the North Caucasus Federal District

A similar situation is observed with the level of development of municipal-private partnerships in the district (Table 6).

Table 6. Ranking of cities by level of development of private international law

Place	City	Number of projects	Volume of investments, million rubles	Key industry
1	Surgut	6	8,638.1	Education
2	Novosibirsk	18	2,390.5	Heat supply andhot water supply
3	Nizhnevartovsk	4	15,257	Cold water supply and sanitation
4	Volgograd	5	88,916.9	Cold water supply and sanitation
5	Nizhny Novgorod	5	8 859	Cold water supply and sanitation
…	…	…	…	…
38	Stavropol	2	723	Organization of parking space and development of streetroad network
63	Makhachkala	1	145	Social services population
80	Vladikavkaz	0	0	-
84	Nalchik	1	77	Culture, leisure, tourism and restoration OKN
93	Grozny	0	0	-

It can be seen that public-private (municipal-private) partnerships are currently underperforming in the North Caucasus macroregion. A decline in the final integrated indicator (according to the methodology of the Russian Ministry of Economic Development), failure to achieve KPI (Key Performance Indicators), "weak" results in the overall ranking of Russian regions for PPP use, and a shortage of actually launched investment projects confirm our view. Moreover, experience shows that such projects are often implemented in the social, transport, and utilities/energy infrastructure sectors, neglecting the development of high-tech production. Furthermore, an analysis of the implementation of PPP mechanisms in the North Caucasus macroregion suggests that the official websites of authorized bodies provide insufficient and incomplete information on current projects being implemented in the regions, investor support measures, and the conditions for participation in project implementation. Thus, we are currently observing the following economic problems in the North Caucasus Federal District that cannot yet be resolved: low investment attractiveness of the economy, lack of instruments for attracting investment funds, structural imbalances in the economy with an excess of agricultural components, significant depreciation of fixed assets, and the absence of an effective mechanism for stimulating the inflow of private capital.

Conclusion

The above-mentioned problems should be considered among the key constraints to the successful development of regions, which limit the implementation of effective socio-economic regional reforms and negatively affect the political situation in the district.

Based on this, we see a need to analyze the activities of development institutions in the North Caucasus Federal District and develop practical recommendations for their effective use. Unfortunately, interaction and coordination between government bodies in the North Caucasus regions, various agencies at different levels, and business entities in the region's modernization strategy are currently weak. Enterprises' access to financial resources, even for priority projects, is hampered. Public surveys and assessments of the social significance of current issues related to ongoing structural modernization are lacking. It should be concluded that structural modernization issues are derivatives of general economic problems, and their solution is possible only through comprehensive socioeconomic development in the regions. Systematic and planned work in these areas must be organized, focusing on long-term strategic economic development goals and fundamental changes in its sectoral structure.

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