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MANAGING REGIONAL ECONOMIC DEVELOPMENT BY REDUCING INTELLECTUAL INEQUALITY



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Given the growing importance of treating intellectual inequality as a factor in the persistent spatial differentiation of socio-economic development across Russia's regions, this work examines the need to devise a governance mechanism capable of reducing the risks of its deepening and of creating conditions for a region's economic development. At present, this task is being addressed in a fragmented manner. The risks of intensifying intellectual inequality are not framed as a governance challenge in strategic planning documents, which undermines the effectiveness of the management measures applied. The aim of this study is to substantiate and develop an organizational-managerial mechanism for reducing intellectual inequality, designed to promote the economic development of the Perm Territory and to increase the technological complexity of its economy. It is established that this industrial region possesses the potential to improve its position in terms of capitalizing its intellectual labor capacities and their effective realization in the creation of intellectual goods and services. General scientific methods of analysis, synthesis, comparison,

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and statistical analysis were employed to achieve the stated aim. The proposed mechanism makes it possible both to diagnose interregional intellectual inequality and to assess the region's standing and the factors that influence it. Such an assessment serves as the basis for designing differentiated measures that enhance the prospects for the Perm Territory to converge with the leading regions on indicators of intellectual labor. In future research, the proposed organizational-managerial mechanism is expected to be adapted for other constituent entities of the Russian Federation – not only those with an industrial type of economic development, but also predominantly agrarian and agrarian-industrial regions.

Intellectual inequality, organizational-managerial mechanism, regional economic development, spatial differentiation, intellectual inequality factors.

Introduction

The region's economic development is a multifactorial process, and the significance of the factors changes depending on the evolution of socio-economic systems. One such factor is labor, but there is a transformation of its essence and nature. It is known that in a post-industrial economy, the complexity of labor tends to increase toward its intellectualization. Accordingly, the concentration of intellectual labor in certain regions of the country, without the development of a strategically oriented regional policy that ensures a more balanced accumulation and distribution of knowledge for the purpose of creating intellectual goods and services, may become the basis for the reproduction of so-called secondary intellectual inequality, which will intensify the spatial differentiation of the socio-economic development of the regions.

The spatial heterogeneity of the socio-economic development of the constituent entities of the Russian Federation has been increasing in recent years (Antipin, Shishkina, 2024; Zubarevich, Safronov, 2024; Zemlyansky, Medvednikova, 2025). This makes it necessary to identify the factors that cause it and to subsequently develop management mechanisms aimed at minimizing the risks of creating barriers to the economic development of the regions. To date, the authors consider the unresolved nature of existing problems – such as the concentration of high rates of economic

activity in several constituent entities of the Russian Federation (Kolomak, 2014; Bufetova, 2024) and the inefficiency of the current system of spatial development institutions (Bazueva, Dubrovskaya, 2021; Nizhegorodtsev, 2019), among others – to be such factors. Among the new factors creating barriers to a more balanced development of the regions of the Russian Federation during the period of technological transformation of regional economic systems are the potential for increased digital inequality due to uneven access to information technologies by the population, depending on the area of residence (Arkhipova, Sirotin, 2019; Gruzdeva, 2020; Uskov, 2024), the differentiation of the level of digital maturity in the regions, and the lack of mechanisms for interregional digital interaction (Lavrik, 2026). Research devoted to the analysis of the concentration of resources of the intellectual component of the economy in certain constituent entities of the Russian Federation is becoming relevant. For example, the study of S.E. Afonin and V.S. Osipova notes the concentration of scientific expenses in several regions of the country (Afonin, Osipov, 2023). S.V. Avilkina draws attention to the differentiation of regions of the Russian Federation in terms of the number of teaching staff (Avilkina, 2021). Such patterns, taking into account the positive impact of human capital on regional economic development (Alekhine, 2021), con-

tribute to increasing the importance of considering the problem of concentration of intellectual resources in a small group of regions of the Russian Federation.

Based on the above, we can state that the factor of intellectual inequality becomes significant for the economic development of a territory in the context of the post-industrial economy. This is manifested through regional differences in the conditions for the accumulation of intellectual abilities and their effective implementation in the process of intellectual labor¹. It acts as a structural barrier to regional development, alongside infrastructure, investment, institutional, demographic and other constraints. Moreover, as our research has shown, the emerging intellectual inequality is of an intersectional nature, accumulating educational, professional, digital, and territorial differences (Bazueva et al., 2023), so reducing it cannot be reduced to individual measures in the areas of education, employment, or digitalization. Despite the existence of works in the field of spatial development management (Zubarevich, 2019; Kuznetsova, 2025) and reducing spatial differentiation (Bukhvald, 2025), the specifics of managing intellectual inequality are of interest to modern research. At present, management practices are implemented in a fragmented manner: educational projects, digital infrastructure, employment programs, and measures to support innovation and youth policy are developed separately. At the same time, the risks of interregional intellectual inequality are typically not presented as an independent management challenge in strategic documents at the regional level, which reduces the targeting and effectiveness of the decisions made (Bazueva et al., 2023). Based on this, the aim of this study is to develop directions for improving the system of managing the economic development of a

region based on reducing the level of intellectual inequality.

It appears that the system of tools for reducing interregional inequality is integrated into the conceptual model of managing the economic development of a region based on the implementation of regional development principles: the principle of regional self-development and the principle of regional (territorial) justice (Animitsa, 2020). Given that the principle of territorial self-development implies creating the region's capacity to ensure the reproduction of GRP using its own resource potential and income sources to achieve macro-economic and intra-regional priorities (Tatarkin, Tatarkin, 2009), reducing the barriers to the economic development caused by secondary factors is of paramount importance for regional policy.

In this regard, it is worth noting that the problem of managing social inequality has been the subject of long-term theoretical reflection in philosophy, sociology, and economic theory. As a result, diametrically opposed approaches to its consideration have emerged. For example, the egalitarian approach assumes that excessive differences undermine social justice and should be regulated through institutions that redistribute and guarantee basic goods. According to J. Rawls's theory of justice, socio-economic inequality is acceptable only if it benefits the least well-off members of society the most and ensures real equality of opportunity (Rawls, 1999). Representatives of the libertarian approach, by contrast, reject any redistributive mechanisms and view inequality as a natural outcome of freedom of choice. R. Nozick interprets inequality as acceptable if it arises as a result of voluntary exchange (Nozick, 1974). A. Sen also emphasizes the need to ensure equal real opportunities for individuals – their ability to receive an education, maintain health, and participate in economic and social life (Sen,

¹ For more information about the conceptualization of the concept, see (Bazueva, Stepanenko, 2025b).

1992). In the context of regional development, this idea is fully reflected, as it shifts the focus of addressing the problem of social inequality from purely distributive mechanisms to managing the factors that create inequality of opportunity, including the accessibility of development institutions. Thus, the management mechanism being developed should be oriented toward systematizing regional measures aimed at creating opportunities in the region for the realization of intellectual labor to reduce the level of interregional intellectual inequality and ensure the economic development of the territory.

Assessment of the current indicators of the Perm Territory in the field of managing its intellectual potential

In the context of the digital transformation of the economy, intellectual inequality is becoming not only a social but also an economic problem, affecting the pace of technological renewal in the region, the quality of human capital, the level of innovative activity, and the ability of the economic system to adapt to new production and management models. For regions belonging to the group of predominantly industrially developing constituent entities of the Russian Federation (Akberdina, 2020; Korovin, 2023), which includes the Perm Territory, this problem is of particular importance, since in such regions technological modernization depends not only on the availability of natural resources and the pace of updating production capacities, but also on conditions that ensure the population and organizations have access to educational and innovative infrastructure, creating opportunities for the accumulation and diffusion of knowledge and digital competencies.

To assess the parameters of interregional intellectual inequality, this article uses an integral method to calculate the index of capitalization of intellectual labor capabilities (I_{CAP}), the index of intellectual employment (I_{EMP}), and the aggregated index of intellectual labor (I_{IL}), which form the basis for intellectual inequality across regions (formulas 1–3).

$$I_{CAP} = \sqrt[3]{X_1 + X_2 + X_3} \quad (1)$$

$$I_{EMP} = \sqrt[3]{X_4 + X_5 + X_6} \quad (2)$$

$$I_{IL} = \sqrt[6]{X_1 + X_2 + X_3 + X_4 + X_5 + X_6} \quad (3)$$

where X_1 – number of employed people with higher education; X_2 – number of postgraduate students; X_3 – number of researchers holding a candidate's degree; X_4 – number of personnel engaged in scientific research and development, by categories and constituent entities of the Russian Federation (researchers); X_5 – number of personnel engaged in scientific research and development, by categories and constituent entities of the Russian Federation (equipment); X_6 – number of employees in high-tech industries².

Accordingly, the high level of unevenness among regions in terms of the aggregated index of intellectual labor reflects interregional intellectual inequality. The high level of spatial heterogeneity for this factor is confirmed by the value of the coefficient of variation, which was 79.2% in 2023 for all regions of the Russian Federation. Moreover, according to the results of our study, since 2018 the indicator has increased by 3.7%, which indicates the possibility of an increase in interregional intellectual inequality in the absence of a strategically oriented regional

² Data from the Federal State Statistics Service and the Unified Interdepartmental Information and Statistical System were used. To neutralize the influence of the region's size, each indicator was considered relative to 10,000 people of the average number of employed persons. Before including the indicators in the index, a normalization procedure was carried out.

policy aimed at mitigating it. These conclusions serve as a prerequisite for a detailed analysis of the current state of the intellectual component of the economy in the Perm Territory and for identifying the factors influencing the region's position compared to leading regions.

According to our previous studies³, the Perm Territory is part of a group of regions with a predominantly industrial type of economy, which is characterized by average values for the capitalization of intellectual labor capabilities (the index coefficient (I_{CAP}) ranges from 0.23 to 0.40) and their implementation in the process of intellectual employment (the index coefficient (I_{EMP}) ranges from 0.14 to 0.35). At the same time, this group of regions shows a significant lag behind the group of leading regions, for which the value ranges vary from 0.70 to 0.99 in terms of the capitalization of intellectual labor capabilities and from 0.59 to 0.63 in terms of the coefficient of their implementation in the process of intellectual employment.

As we have shown earlier, these are two essential characteristics of intellectual labor, the significance of which as a factor in the economic development of regions is increasing in the context of the emergence of the sixth technological order (Bazueva, Stepanenko, 2025a). It is the unevenness of the conditions that have developed in the regions – conditions that determine the possibilities for forming high-quality human capital (capitalization of the ability to engage in intellectual labor) and that limit access to using it in the process of intellectual labor for the purpose of creating knowledge-intensive goods and services (intellectualization of employment) – that creates barriers to the intensification of interregional intellectual inequality. In this regard, to identify the reasons for the Perm Territory's delay, we will analyze the dynamics of changes in the factors that shape it, comparing them with the leading regions in the Russian

Federation (Moscow) and the Volga Federal District (Nizhny Novgorod Region) in terms of the aggregated index of intellectual labor (I_{IL}). At the same time, examining the indicators of the Perm Territory in comparison with these regions is of interest for the subsequent development of regional policy, which will be considered effective if it creates opportunities for the region to move along an “upward trend” into the group of leaders in two indicators simultaneously (Moscow is the leader) or into the group of leading regions in terms of the intellectual employment index while maintaining average values for the second index (the Nizhny Novgorod Region belongs to this group).

For instance, the value of the aggregated index of intellectual labor in the Perm Territory amounted to 0.291 in 2023, while the leader in the Russian Federation (Moscow) had a value of 0.790, and the leader in the Volga Federal District (Nizhny Novgorod Region) had a value of 0.442 (*Tab. 1*). Consequently, the Perm Territory is noticeably lagging behind both the national and the district leaders, and despite its relatively strong position relative to the national and the Volga Federal District averages, it maintains a distinctly peripheral position in the development of intellectual labor.

The dynamics of the indicator in the regions under consideration are characterized by various trends. For example, Moscow, which consistently maintained a leading position in terms of the intellectual labor indicator over the analyzed period, has been increasing it since 2021. As a result, the index increased by 13% between 2018 and 2023. This means that the capital is experiencing a concentration of intellectually intensive types of employment and high-level human capital. In the Perm Territory, the indicator remained virtually stable, with only a slight decline observed over the analyzed pe-

³ The development and testing of methodological tools for assessing intellectual inequality in the regions of the Russian Federation are presented in a separate article by the authors, which is currently in press.

Table 1. Comparison of the aggregated index of intellectual labor in the Perm Territory with leading regions, according to the ranking of regions in 2023

Region	2018	2019	2020	2021	2022	2023	Change in the indicator (2023/2018)
Leading region in the RF (Moscow)	0.710	0.701	0.700	0.729	0.790	0.790	1.13
Leading region in the VFD (Nizhny Novgorod Region)	0.464	0.473	0.458	0.454	0.455	0.442	0.95
Perm Territory	0.294	0.309	0.293	0.289	0.285	0.291	0.99

Source: own compilation.

riod, followed by an increase in 2023. This trend suggests that the achieved level was maintained rather than that the process of labor intellectualization in the region intensified. As a result, over the analyzed period, the gap between the Perm Territory and Moscow did not narrow; on the contrary, it increased from 0.416 to 0.499. The отставание from the average leader indicator in the Volga Federal District is less significant, but also persistent. Throughout the entire period, the Nizhny Novgorod Region outpaced the Perm Territory, despite the wave-like nature of the indicator's change from year to year and its overall decline in 2023 compared to 2018 – from 0.464 to 0.442. Against this backdrop, the Perm Territory demonstrated greater stability, as its index decreased minimally, which may be due to strategic priorities focused on technological development and the need for an appropriate workforce to support knowledge-intensive industries. It is also worth noting that the aggregated index, despite the decline over the analyzed period, increased in 2019 in both the Nizhny Novgorod Region and the Perm Territory. The situation in the two regions became more similar, and the absolute gap decreased from 0.170 to 0.151 points. However, this convergence was not due to the accelerated economic growth of the Perm Territory, but mainly because of a more significant decline in the indicator in the Nizhny Novgorod Region.

The analysis of the dynamics of the indicators of the factor conditions (*Tab. 2*) generated by the Perm Territory indicates that the change

in the aggregated index of intellectual labor over the period from 2018 to 2023 was contradictory and was determined by combination of positive and constraining trends. The positive impact on the index value is due to a 91% increase in domestic spending on R&D; however, compared to the leading regions in terms of this indicator, there is a significant lag. It is also worth noting the increase in the share of organizations implementing technological innovations in the region from 15.2 to 28.5%, as well as the expansion of the use of advanced production technologies by 34%. These trends indicate the formation of a more favorable environment in the region for increasing the demand for intellectual labor, as well as the effectiveness of the measures implemented under the comprehensive state program of the Perm Territory, “Scientific and Technological Development of the Perm Territory”, which is focused on the technological development of the region. However, the stability of the share of high-tech and knowledge-intensive industries in the GRP indicates that the region's existing intellectual and technological potential has not yet been fully converted into structural changes in the region's economy.

At the same time, the growth of the aggregated index was constrained by reduction in the teaching staff, as well as by the instability of the indicator reflecting the digital equipment of higher education institutions. It is natural that the region faces limitations regarding the factors that contribute to the formation of high-quality human capital. A decline in the number of

Table 2. Comparative analysis of the values of the factors and conditions of intellectual inequality in the Perm Territory and leading regions in 2018–2023

Name of the factor	Description of the factor	Dynamics of the indicator over the period from 2018 to 2023						Change in the indicator (2023/2018)	Indicator of the leading region in the RF		Indicator of the leading region in the VFD	
		2018	2019	2020	2021	2022	2023		Change in the indicator (2023/2018)	Indicator of the PT / indicator of the leading region	Change in the indicator (2023/2018)	Indicator of the PT / indicator of the leading region
Factors creating conditions for the capitalization of intellectual abilities												
Number of people trained under additional professional programs, by form of training (people per 10,000 employees in the average number of employed persons)	It demonstrates the trend toward continuous updating of the population's knowledge in the region	1486.93	1663.70	1296.07	1464.33	1783.26	2196.28	1.48	2.38	1.07	1.28	2.66
Number of personal computers used for educational purposes under higher education programs (units per 1,000 students)	It indicates the level of digital equipment in higher education institutions (Izotova, Gavriljuk, 2023). For example, the distribution of digital learning resources in Chinese regions was also measured using the indicator of the number of computers (Liu, Ma, 2018).	290	296	310	298	343	314	1.08	0.97	1.37	1.16	1.27
Composition of the unemployed by education level (%)	It demonstrates long-term trends reflected in the mismatch between supply and demand in the labor market.	8.8	14.5	13.5	48.5	12.8	15.4	1.75	0.76	0.44	1.04	0.77
Number of teaching staff (people per 1,000 people of the average number of employed individuals)	It demonstrates the level of development of the higher education system in the region (Faggian et al., 2019; Safiullin et al., 2023)	29.84	29.18	27.99	25.57	25.93	25.35	0.85	1.03	0.45	0.90	0.92

End of Table 2

Name of the factor	Description of the factor	Dynamics of the indicator over the period from 2018 to 2023						Change in the indicator (2023/2018)	Indicator of the leading region in the RF		Indicator of the leading region in the VFD		
		2018	2019	2020	2021	2022	2023		Change in the indicator (2023/2018)	Indicator of the PT / indicator of the leading region	Change in the indicator (2023/2018)	Indicator of the PT / indicator of the leading region	
Factors contributing to the creation of conditions for the realization of intellectual labor													
Internal expenditures on research and development (million rubles per 10,000 employees in the average headcount)	Institutional effect of the scientific and educational environment (Shorokhova, 2024) and its attractiveness (Charlot et al., 2015; Zemtsov et al., 2016).	124.96	162.39	152.48	188.03	199.13	238.39	1.91	1.72	0.35	1.66	0.30	
Share of organizations implementing technological innovations (%)	It demonstrates the share of organizations involved in the systematic creation of innovations. Accordingly, the more organizations engage in innovative activities, the greater the employment opportunities.	15.2	19.0	23.1	24.2	24.4	28.5	1.88	0.79	0.87	0.95	1.05	
Advanced production technologies used (units per 10,000 people of average headcount)	It characterizes the company's ability to adopt new equipment and the latest production and technological lines (Mariev, Savin, 2010).	107.14	122.78	130.47	140.31	149.35	144.06	1.34	1.20	7.26	1.04	2.65	
Share of output from high-tech and knowledge-intensive industries in the gross regional product (%).	It demonstrates the economy's demand for people with high level of human capital. The indicator is introduced in light of the hypothesis in the academic community that there is a situation where businesses do not demand highly skilled labor (Gimpelson, 2016).	27.6	28.9	32.2	29.2	28.9	27.6	1.00	1.33	1.01	1.08	0.90	
According to: Federal State Statistics Service data.													

teachers means a weakening of the human resource base for higher education and scientific and educational reproduction, which in the long term limits the training of specialists for knowledge-intensive employment sectors. This aspect is also important, as the intellectualization of labor depends not only on the current implementation of technologies but also on the ability of the regional education system to consistently produce high-quality human capital.

Thus, the Perm Territory, along with the existing limitations on the development of intellectual labor, has positive trends and opportunities to improve its performance to reduce the gap with leading regions. The creation of an organizational and management mechanism will make it possible to intensify the region's capabilities for moving toward the cluster of leading regions, followed by an increase in technological potential to ensure economic development.

Designing an organizational and management mechanism to reduce intellectual inequality for ensuring the economic development of the Perm Territory

The creation of the organizational and management mechanism in the context of regional economic policy makes it possible to combine a set of management measures to achieve a specific strategic goal of the regional development. The practical value of developing an organizational and management mechanism is confirmed by the practice of its application. For example, O.V. Khabarova and E.V. Yakovleva developed a mechanism for the development of the regional labor market in the context of economic digitalization (Khabarova, Yakovleva, 2024). M.A. Ponomareva proposes a mechanism for managing the sustainable development of a region (Ponomareva, 2009) and also examines the conceptualization of the concept of "organizational and managerial mechanism" from

the perspective of the systemic nature of the concept and the description of its structural elements. In this case, the management mechanism should be understood as a set of goals, principles, and tools used by management entities to influence the managed objects. The organizational and managerial mechanism for regulating interregional intellectual inequality has its own specific features. First, such a policy is traditionally implemented at two levels – the federal level (in the form of establishing common goals and principles for reducing interregional differentiation across various parameters of socio-economic development) and at the level of specific regions. In turn, regional policy allows territorial units to independently monitor key indicators and carry out their regular assessment to improve the region's situation. It is regional policy that will be the subject of this study. Second, the region can only influence controllable factors and conditions; therefore, the organizational and management mechanism must take into account the differentiation of management methods and tools depending on its current position. Third, it is important to take into account the type of socio-economic development of the region, since the ultimate goal of management interventions is to create the possibility of its transition to a more complex technological structure by ensuring an upward trend associated with the region's transition to a group of regions with higher indicators. Moreover, as noted earlier, for the Perm Territory, it will be considered productive to move into the group of leaders in terms of the capitalization of intellectual labor capabilities and intellectual employment, or into the group of leaders in terms of intellectual employment, while maintaining consistently average values for the first indicator.

Based on this, goal-setting within the framework of the proposed organizational and management mechanism is built around

high-level benchmarks for ensuring the socio-economic development of the region, taking into account the creation of conditions to reduce the level of intellectual inequality. The subjects of management under the proposed mechanism are the regional state authorities, working in close cooperation with representatives of the scientific, expert, corporate, and entrepreneurial communities. To achieve the stated aims, the proposed tools and methods should comply with the key principles that define the logic of management procedures:

- *the principle of consistency and complexity* means that the system for managing intellectual inequality should include a coordinated set of organizational, economic, human resources, infrastructure, and information tools united by a common goal and logic of action.

- *the principle of equal opportunities* implies that the mechanism should be aimed not at formally equalizing territories in terms of final outcomes in the field of intellectual labor, but at creating comparable starting conditions for access to key resources for intellectual development.

- *the principle of procedural fairness and quality of management* is the most difficult to integrate into specific management procedures; however, according to modern research, the negative effects of inequality in outcomes are mitigated through fair procedures (Trautmann, 2023). Procedural fairness implies transparency of project selection criteria and unambiguity in the procedures for determining support recipients, as well as uniformity of administrative requirements when accessing resources for building high-level human capital and opportunities for its realization in the process of intellectual labor.

- *the principle of multi-level coordination* demonstrates that managing multi-criteria intellectual inequality requires alignment of

regional goal-setting with federal requirements, as well as interaction between the authorities, educational institutions, science, and business; interregional intellectual inequality is formed at the intersection of policies in several areas – education, science and technology, industry, investment, and digital sectors – so mechanisms to reduce it should include both vertical and horizontal coordination.

- *the principle of targeting and measurability* implies that the measures within the mechanism should be designed not as universal ones applicable to all territories, but as differentiated according to the types of deficits, the level of development, and the potential of specific territories. At the same time, targeting should be combined with measurability, i.e., for each measure it is necessary to pre-define the expected outcomes, time horizons, and monitoring methods.

- *the principle of focusing on controllable factors* means that the organizational and management mechanism should primarily focus on the factors of intellectual inequality identified at the analysis stage, which regional authorities and other bodies responsible for managing intellectual inequality are capable of influencing.

- *the principle of combining redistribution and development stimulation mechanisms* ensures that the organizational and economic mechanism includes equalizing and stimulating measures, depending on the region's classification into a specific group based on indicators reflecting the intellectual component of labor.

The algorithm for managing intellectual inequality across regions is a sequence of interrelated analytical, evaluative, and instrumental procedures aimed at creating conditions for capitalizing on intellectual labor capabilities and their implementation in the process of intellectual labor within the regional

socio-economic system. Its application involves a transition from diagnosing a region's position within the structure of interregional disparities to selecting management tools and subsequently assessing the effectiveness of the measures applied. The first two diagnostic stages are discussed in the previous section of this article, with reference to the Perm Territory. In general terms, at the first stage, the region's position is assessed based on key characteristics of intellectual labor: the capitalization of intellectual labor capabilities and their implementation in the process of intellectual employment. This stage is diagnostic in nature; based on the assessment results, the region can be assigned to one of the following groups: leading regions, lagging regions, or regions with average values. The classification makes it possible to determine the degree of the gap and to select the targets for subsequent management intervention.

At the second stage, an assessment of the factors contributing to intellectual inequality is carried out in comparison with the indicators of a group of leading regions. This stage is aimed at identifying the reasons for the lag, which limit the development of intellectual labor in the region. *Table 2* shows the dynamics of the Perm Territory's indicators for these factor-conditions over the analyzed period.

The third stage is devoted to selecting management methods and tools and has a project-instrumental character. The mechanism is based on both leveling methods and incentive methods. The inclusion of incentive and leveling measures in the organizational and management mechanism is determined by the content of the principle of combining redistribution and incentive mechanisms. Incentive measures ensure the activation of self-development mechanisms: project initiatives, support for high-tech

entrepreneurship, encouragement of inter-organizational cooperation, development of technology transfer, and retention of highly qualified personnel in the region. In turn, the alignment measures are aimed at reducing structural constraints: expanding access to knowledge and competencies, developing innovative and digital infrastructure, ensuring inclusion in professional and scientific-technological networks, and strengthening institutional support. Based on the achieved values for a specific region, which were presented in *Table 2* and previously analyzed, these measures are specified in the proposed organizational and managerial mechanism for reducing intellectual inequality to ensure the technological transformation of the Perm Territory (*Fig. 1*).

An independent element of the mechanism is the monitoring system, which is focused on regularly assessing the dynamics of intellectual inequality, the region's position among other entities, the degree to which set goals have been achieved, and the effectiveness of the implemented measures. These activities are carried out as part of the fourth stage of the organizational and management mechanism. Its operation makes it possible to timely identify limitations in access to intellectual resources and to assess the impact of the implemented policy on various groups of entities. If necessary, the assessment results become the basis for adjusting regional programs, reallocating resources, and refining the tools of managerial influence.

As a result of implementing the proposed measures, it is expected that the likelihood of increasing interregional intellectual inequality will be reduced by creating conditions for the economic development of the region, which will provide opportunities to enhance the technological structure of the regional economy.

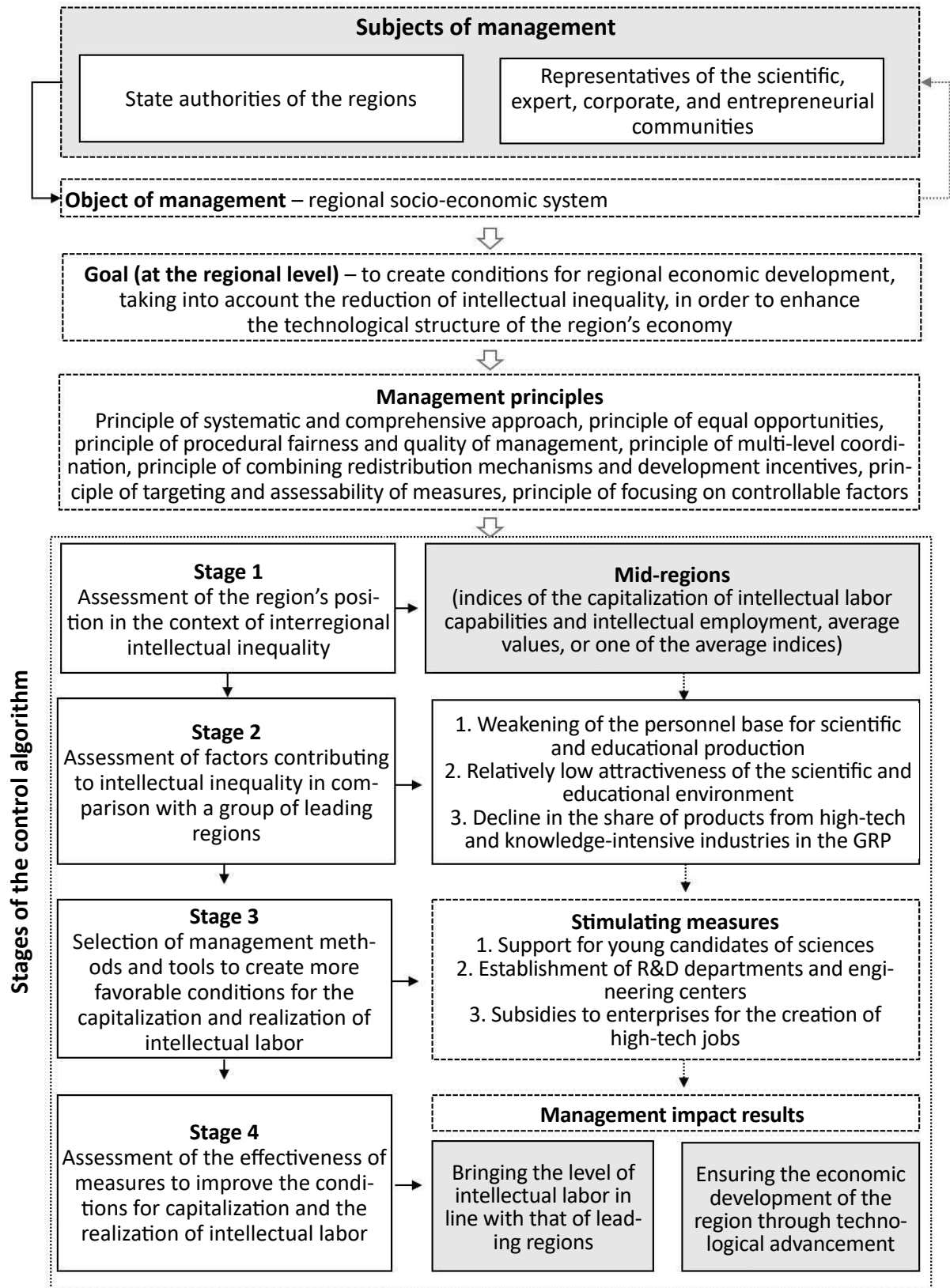


Figure 1. Organizational and managerial mechanism for reducing intellectual inequality for ensuring the economic development of the Perm Territory

Source: own compilation.

Conclusion

Given the need to consider intellectual inequality as a factor that creates barriers to regionaleconomicdevelopmentandexacerbates the spatial heterogeneity of socio-economic systems, the importance of developing a strategically oriented regional policy aimed at reducing these risks is growing. The proposed organizational and management mechanism is focused on systemic management of spatial development based on creating opportunities in the region to capitalize on intellectual labor capabilities and implement them, with the aim of reducing the level of interregional intellectual inequality and ensuring the economic development of the territory. It includes a set of goals, principles, and tools used by management entities to influence managed objects, aimed at creating conditions for the transformation of the technological structure of the region's economy. Based on the diagnostics of the current level of interregional intellectual inequality and an assessment of the position of the studied territory relative to other regions of the Russian Federation, it has been determined that the Perm Territory has the potential to increase the indicators of capitalization of intellectual labor capabilities and their effective implementation. At present, it lags significantly behind the leading region in the Russian Federation (Moscow) and the leading region in the Volga Federal District (Nizhny Novgorod Region), which determines the choice of differentiated management measures. Given that the Perm Territory belongs to the group of regions with average values for the index of intellectual labor capitalization and the index of intellectual employment, and has a predominantly industrial economic structure, the importance of implementing a stimulating policy aimed at achieving the strategic goal of a "upward transition" to the group of leading regions in terms of two

indicators – or to the group of leaders in terms of the index of intellectual employment while maintaining average values for the second index – is increasing.

Due to the fact that the region is experiencing limitations in terms of factors that reflect the potential for developing high-quality human capital and the attractiveness of the scientific and educational environment compared to leading regions in terms of intellectual labor, in the long term this will create barriers in the training of personnel for knowledge-intensive sectors and hinder structural changes in the region's economy. Consequently, these factors should be considered as priorities when developing management measures.

As a result of implementing the proposed measures, it is expected that the situation in the Perm Territory will improve and the likelihood of increased interregional intellectual inequality will be reduced by creating conditions for economic development that provide opportunities for the technological sophistication of the regional economy.

The prospects for further research are linked to the adaptation of the developed organizational and management mechanism for reducing interregional intellectual inequality to the conditions of other constituent entities of the Russian Federation. The universal nature of the diagnostic stages of the mechanism and the corresponding assessment procedures allows them to be considered as a methodological basis for identifying the specific factors of intellectual inequality in various regional systems. In turn, the regional policy tools developed based on the diagnostic results are of a differentiated nature. This approach will make it possible to ensure both the comparability of diagnostic results across regions and the targeting of management decisions aimed at stimulating the economic development of the territories.

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УПРАВЛЕНИЕ ЭКОНОМИЧЕСКИМ РАЗВИТИЕМ РЕГИОНА НА ОСНОВЕ СОКРАЩЕНИЯ ИНТЕЛЛЕКТУАЛЬНОГО НЕРАВЕНСТВА

В связи с повышением значимости рассмотрения интеллектуального неравенства в качестве одного из факторов устойчивой пространственной дифференциации социально-экономического развития регионов РФ изучается необходимость разработки управленческого механизма, позволяющего сократить риски его усиления и создать условия для экономического развития региона. На текущий момент данная задача решается фрагментарно. Риски усиления интеллектуального неравенства не представлены в качестве управленческого вызова в стратегических документах, что снижает результативность применяемых управленческих мер. Цель работы заключается в обосновании и разработке организационно-управленческого механизма сокращения уровня интеллектуального неравенства, призванного обеспечить экономическое развитие Пермского края и усложнение технологической структуры его экономики. Установлено, что данный индустриальный регион обладает потенциалом для улучшения своего положения по параметрам капитализации способностей к интеллектуальному труду и его эффективной реализации в создании интеллектуальных товаров и услуг. Для достижения поставленной цели использованы общенаучные методы анализа, синтеза, сравнения, а также статистический анализ. Предложенный механизм позволяет как провести диагностику межрегионального интеллектуального неравенства, так и оценить положение региона и факторов, на него влияющих. Такая оценка выступает основой разработки дифференцированных мер, которые повышают возможности приближения Пермского края к регионам-лидерам по показателям интеллектуального труда. Представляется, что в дальнейших исследованиях предложенный организационно-управленческий механизм будет адаптирован для других субъектов РФ, не только относящихся к регионам с индустриальным типом экономического развития, но и для преимущественно аграрных и аграрно-индустриальных регионов.

Интеллектуальное неравенство, организационно-управленческий механизм, экономическое развитие региона, пространственная дифференциация, факторы интеллектуального неравенства.

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