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INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)
(Int Peer Reviewed Journal)
Vol. 06, Issue 02, February 2026, pp : 352-357

e-ISSN : 2583-1062
Impact Factor : 7.001

IMPROVING THE STRATEGY FOR REDUCING REGIONAL DISPARITIES AND ENSURING SUSTAINABLE DEVELOPMENT

Bahtiyor Mamurov[1]

[1]Assoc. Prof.(Phd) Research Center "Scientific Foundations And Problems Of The Development Of The Economy Of Uzbekistan" Under Tsue, Associate Professor At Oriental University.

DOI: https://www.doi.org/10.58257/IJPREMS51434

ABSTRACT

This study examines regional economic disparities across the regions of Uzbekistan and substantiates strategic directions for improving a sustainable territorial development strategy. Based on official statistical data, an integral assessment of regional development was conducted using gross regional product indicators for 2016-2024. The results reveal significant interregional disparities, with economic activity highly concentrated in Tashkent city, Tashkent region, and Navoi region, while several regions demonstrate comparatively lower economic performance. Dynamic and comparative analysis confirms that regional development polarization is emerging, reflecting uneven distribution of economic potential, investment flows, and production capacities across territories. The regions were classified into three groups: favorable, transitional, and problematic according to their development levels. The findings justify the necessity of a differentiated regional policy aimed at reducing disparities and ensuring balanced territorial growth. Strategic recommendations include targeted state support for lagging regions, strengthening growth drivers in transitional regions, and promoting innovation-based cluster development in advanced regions. The proposed approach contributes to enhancing the effectiveness of sustainable regional development strategies and supports balanced spatial economic growth in Uzbekistan.

Keywords: Regional Development, Gross Regional Product, Regional Policy, Spatial Inequality, Regional Classification, Economic Polarization, Sustainable Development, Differentiated Strategy.

1. INTRODUCTION

In recent years, the acceleration of economic reforms in Uzbekistan and the state policy aimed at comprehensive territorial development have significantly increased the rates of socio-economic growth across regions. However, the uneven distribution of economic development indicators across territories continues to preserve the relevance of the problem of regional disparities. While industrial production, investment activity, and the service sector are rapidly developing in some regions, others are characterized by relatively low economic potential, insufficient infrastructure development, and limited investment inflows. This situation indicates an increasing differentiation in the level of territorial development within the national economic space and highlights the need to improve the strategy for sustainable regional development.

Regional disparities directly affect not only economic growth rates but also employment levels, income distribution, and interregional social equity. Therefore, in the process of improving the regional development strategy, it is essential to conduct an in-depth analysis of the economic potential of territories, classify them according to their level of development, and design targeted policy measures for each region based on a differentiated approach. The purpose of this study is to provide an integral assessment of regional disparities across the regions of Uzbekistan, to classify territories according to their development levels, and to scientifically substantiate priority directions for improving the strategy of sustainable regional development.

The scientific novelty of the research lies in the fact that the level of territorial development across regions was assessed through a comparative-dynamic analysis based on gross regional product indicators, enabling an empirical evaluation of the actual scale of regional disparities. Furthermore, the regions were classified into three groups according to their development levels—favorable, transitional (intermediate), and problematic regions. In addition, priority directions for improving the strategy of sustainable regional development were developed based on a differentiated model of territorial development.

The findings of this study have significant scientific and practical implications for enhancing the effectiveness of regional policy, reducing interregional economic disparities, and ensuring balanced development of the national territorial-economic space.

2. LITERATURE REVIEW

The issue of regional economic disparities and their reduction has been widely addressed in the international scientific literature. McCann (2016) substantiates that differences in regional development are determined not only by the distribution of economic resources but also by the quality of governance, the level of infrastructure development, and

the effectiveness of local policies. According to the findings, flexible strategies that take into account specific regional characteristics are more effective in reducing territorial disparities than centralized and uniform policy approaches.

Storper (2018) analyzes regional development processes and emphasizes that regional economic growth is closely linked to innovation activity, the institutional environment, and the territorial specialization of production sectors. The author argues that the concentration of economic activity in certain areas leads to the formation of "growth poles," which may deepen disparities with other regions. Therefore, regional policy should be oriented toward strengthening innovation-based clustering and enhancing interregional economic integration.

Hewings and Parr (2009) demonstrate that interregional economic linkages and cooperation play a crucial role in the development of regional economic systems. Their research explains regional disparities by the spatial concentration of production resources and the uneven development of transport and logistics infrastructure. The authors argue that strengthening interregional integration and expanding production chains across regions can significantly contribute to reducing development gaps.

Within the framework of the new economic geography theory, Krugman (1991) explains the polarization of regional development through agglomeration effects. According to this theory, economic activity tends to concentrate in regions with large markets and well-developed infrastructure, which leads to increasing disparities between core and peripheral areas. Consequently, reducing transport costs, strengthening spatial connectivity, and redirecting economic activity toward peripheral regions are considered essential for mitigating regional imbalances.

In the context of Uzbekistan, studies conducted by national scholars indicate that regional economic disparities are largely associated with the uneven distribution of investment resources, the territorial specialization of industrial sectors, and differences in infrastructure development. They argue that balancing regional development requires the application of a differentiated approach based on the economic potential of each region, targeted support for lagging areas, and the introduction of innovation-driven development mechanisms.

Furthermore, recent studies highlight the importance of innovation clustering and the development of regional digital infrastructure as key factors in improving regional development strategies. This approach suggests that the formation of innovative production clusters in economically advanced regions can increase the output of high value-added products and generate multiplier effects for other territories. As a result, regional development disparities can be gradually reduced, contributing to more balanced and sustainable spatial economic growth.

3. RESEARCH METHODOLOGY

In this study, a comprehensive statistical and analytical approach was employed to assess the level of regional development and identify territorial disparities across the regions of Uzbekistan. Official statistical data were selected as the methodological basis, normalized using an indexation method, and utilized to construct an integral assessment of regional development. Based on comparative, dynamic, and classification methods, the regions were grouped according to their development levels; interregional differences were empirically identified, and analytical generalization was conducted to provide a scientific justification for the directions of differentiated regional policy.

4. ANALYSIS AND DISCUSSION OF RESULTS

In order to identify regional disparities, a comprehensive assessment of key socio-economic indicators across the regions of Uzbekistan was conducted based on official statistical data from the National Statistics Committee of the Republic of Uzbekistan. The study applied an integrated indexation approach combining indicators such as gross regional product, industrial output, fixed capital investment, service sector volume, and employment levels. This approach enabled a comparative analysis of regional development levels, identification of territorial differences, and an empirical evaluation of the scale of regional disparities.

To ensure comparability of indicators in assessing regional development levels, their values were normalized and an integral development index was constructed. The indexation method provided a comprehensive representation of economic potential, investment activity, service sector development, and employment levels across regions. As a result, the relative development level of each region was determined, and the existence of interregional economic disparities was empirically assessed.

The obtained results indicate that the level of economic development across regions is uneven and characterized by significant differentiation. In particular, regions with higher shares of gross regional product and industrial output demonstrate considerably higher levels of economic activity. At the same time, the uneven distribution of investment flows contributes to regional differences in the development of the service sector and employment indicators. This situation strengthens the trend of economic potential concentration in specific regions, leading to the formation of high economic concentration in certain territories.

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Based on the integral assessment of regional development levels, it was revealed that regions differ sharply in terms of economic potential, and these differences are reflected across almost all key economic indicators. Regions with higher gross regional product also exhibit higher industrial production and service sector output, whereas regions with lower economic potential significantly lag behind in these indicators. This confirms that the level of regional development is closely linked to the comprehensive development of various economic sectors.

The indexation results further demonstrate that economic development across regions is unevenly distributed: while some regions maintain high growth rates, others exhibit relatively slower growth. In particular, disparities in investment activity and service sector development emerged as major sources of regional economic imbalances. Significant differences were also observed in employment levels, indicating that regions with higher economic development tend to have more stable labor markets, whereas regions with limited economic opportunities do not fully utilize their employment potential.

The integral assessment of regional disparities reveals that economic differences between highly developed regions and relatively lagging regions are systemic in nature. These disparities are not determined by a single indicator but manifest comprehensively across the main components of economic development. Regions where industrial production, investment volumes, service sector development, and employment indicators evolve harmoniously occupy leading economic positions, while regions with weaker performance in some of these components exhibit lower overall development levels.

The results confirm that regional development levels are directly associated with macroeconomic indicators and empirically demonstrate the uneven spatial distribution of economic potential. This indicates that regional disparities constitute a significant factor influencing sustainable territorial development. The substantial variation in integral index values across regions implies that the level of economic development is differentiated, suggesting the emergence of a process of regional development polarization.

Overall, the results of the comprehensive indexation confirm that economic development across the regions of Uzbekistan is uneven, that regional disparities have a systemic and persistent character, and that economic potential is distributed asymmetrically across territories. These findings provide a scientific basis for applying a differentiated approach in improving regional development strategies and for grouping regions according to their development levels.

Based on the integral indexation results, significant differences in economic development levels across the regions of Uzbekistan were identified. To determine regional disparities, a statistical analysis was conducted using selected years' data on gross regional product, which was adopted as the main integral indicator reflecting regional economic potential. This allowed an empirical evaluation of differences in development levels among regions and demonstrated that economic concentration has been intensifying in some territories, while growth rates in others remain relatively lower (Table 1).

Table 1. Gross Regional Product by Regions of Uzbekistan, billion UZS

Region	2016	2018	2020	2022	2024
Republic of Karakalpakstan	10,524.5	19,372.3	26,136.6	36,667.6	46,299.8
Andijan	18,376.6	31,623.2	44,097.9	65,233.4	93,026.3
Bukhara	16,594.9	25,773.6	36,621.6	53,714.9	73,434.1
Jizzakh	8,719.4	14,709.9	20,871.6	31,274.3	43,545.9
Kashkadarya	23,743.4	31,690.4	42,298.6	59,822.3	83,950.0
Navoi	12,739.3	27,190.4	60,326.4	78,668.2	130,439.5
Namangan	15,062.1	22,956.4	34,169.1	50,668.2	71,869.1
Samarkand	25,429.8	37,852.1	49,635.9	71,714.9	103,882.7
Surkhandarya	13,878.7	21,616.8	28,533.6	40,789.7	56,553.9
Syrdarya	6,802.1	9,992.6	14,676.8	20,746.6	28,655.5
Tashkent	26,724.2	45,784.6	74,685.6	105,520.0	151,251.8
Fergana	21,206.6	33,037.2	45,653.1	68,370.1	93,605.7
Khorezm	11,568.7	18,184.2	24,668.3	38,927.4	53,640.0
Tashkent city	42,307.8	75,074.2	111,465.3	178,973.3	302,878.5

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Source: compiled by the author based on data from the National Statistics Committee.

Statistical results clearly demonstrate sharp differences in economic development levels across regions. By the end of 2024, the highest economic potential was observed in Tashkent city (302,878.5 billion UZS), Tashkent region (151,251.8 billion UZS), and Navoi region (130,439.5 billion UZS). In these regions, the high concentration of industrial production, service sector development, and investment activity ensured rapid economic growth, distinguishing them as highly developed territories.

The transitional development zone includes Samarkand (103,882.7 billion UZS), Fergana (93,605.7 billion UZS), Andijan (93,026.3 billion UZS), Kashkadarya (83,950.0 billion UZS), and Namangan (71,869.1 billion UZS). Although these regions demonstrate stable economic growth, the development level of industrial and service sectors remains relatively lower compared to leading regions, indicating their potential as transition regions with significant growth capacity.

Relatively lagging regions comprise Syrdarya (28,655.5 billion UZS), Jizzakh (43,545.9 billion UZS), the Republic of Karakalpakstan (46,299.8 billion UZS), Khorezm (53,640.0 billion UZS), and Surkhandarya (56,553.9 billion UZS). In these regions, gross regional product remains considerably lower than in other regions, which can be explained by limited industrial bases, relatively low investment inflows, and insufficient diversification of economic activities.

Dynamic analysis indicates that although all regions experienced growth between 2016 and 2024, the growth rates were uneven. For example, Navoi region's GRP increased more than tenfold from 12,739.3 billion UZS in 2016 to 130,439.5 billion UZS in 2024. In contrast, Syrdarya region's GRP grew from 6,802.1 billion UZS to 28,655.5 billion UZS, yet a significant gap in absolute scale remained.

Overall, empirical findings reveal the existence of three distinct zones of regional economic development: highly developed regions (Tashkent city, Tashkent region, Navoi), moderately developed regions (Samarkand, Fergana, Andijan, Kashkadarya, Namangan), and relatively lagging regions (Syrdarya, Jizzakh, Republic of Karakalpakstan, Khorezm, Surkhandarya). This confirms that regional disparities are real and systemic within the national economic space.

The results clearly demonstrate the uneven spatial distribution of economic potential. Regions with large industrial centers, developed transport and logistics infrastructure, and high investment attractiveness exhibit higher economic growth rates and a concentration of economic resources. Conversely, regions with limited industrial bases, lower investment inflows, and underdeveloped service sectors continue to show relatively slow growth. This situation indicates unequal distribution of economic opportunities across territories and scientifically substantiates the necessity of improving the strategy for sustainable regional development, requiring the application of a differentiated approach in regional policy.

Based on the empirical assessment of regional disparities, the regions were classified into three groups according to their level of development, using the volume of gross regional product and its dynamics as key criteria. The grouping criteria included the final gross regional product for 2024 and the growth rates observed during 2016–2024. This approach made it possible to comprehensively evaluate the economic potential of regions, their production base, and the level of investment attractiveness (Table 2).

Table 2. Classification of Regions by Level of Development

Group	Regions	Description
Group I – Favorable regions	Tashkent city, Tashkent region, Navoi	Highly diversified industrial and service sectors, strong investment attractiveness, developed high-tech production and logistics infrastructure, serving as the main locomotives of economic growth
Group II – Intermediate regions	Samarkand, Fergana, Andijan, Kashkadarya, Namangan, Bukhara	Stable development of industry and services, high domestic market potential, moderate investment activity, with opportunities to move to a higher development level through structural modernization and technological upgrading
Group III – Problematic regions	Surkhandarya, Khorezm, Jizzakh, Syrdarya, Republic of Karakalpakstan	Limited industrial base, low diversification of the economic structure, insufficient investment inflows, presence of infrastructural disparities, requiring state support and targeted regional policy measures

Source: developed by the author.

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The grouping results indicate that a three-tier hierarchical structure of economic development has formed across the country's regions. Highly developed regions act as the main centers of economic resources and production potential, while intermediate regions represent transitional areas with significant growth capacity. Problematic regions, in contrast, are characterized by low economic potential and require additional institutional and investment support. This classification provides an important empirical basis for designing a differentiated regional policy aimed at reducing regional disparities.

The empirical grouping by development level confirms the uneven distribution of economic potential across regions and the formation of a three-level hierarchical structure of development. This situation scientifically substantiates the necessity of applying a differentiated regional policy rather than a uniform universal approach to reduce regional disparities and ensure sustainable territorial development. The economic potential, sectoral structure, and investment attractiveness of highly developed, intermediate, and problematic regions differ significantly; therefore, the effectiveness of regional policy depends on the implementation of targeted strategic measures tailored to the specific development level of each region.

The first strategic direction involves the introduction of a differentiated regional policy. Empirical findings show that economic resources and production capacities are largely concentrated in certain regions. This indicates that a centralized development model alone is insufficient to reduce interregional disparities. Consequently, regional development strategies should be formulated differentially, taking into account the economic potential, production specialization, and infrastructure level of each territory. Such an approach contributes to the efficient use of regional resources, the balancing of investment flows, and the strengthening of interregional economic integration.

The second direction is related to strengthening targeted support mechanisms for problematic regions. Regions included in Group III are characterized by limited industrial bases, low investment inflows, and insufficient diversification of economic activities. Therefore, it is necessary to implement targeted state investment programs, develop production infrastructure, and support projects aimed at creating new jobs in these areas. In particular, improving transport and logistics infrastructure, expanding small industrial zones, and developing industries consistent with regional specialization will enhance the economic activity of problematic regions. This, in turn, will help reduce interregional economic disparities and ensure sustainable regional development.

The third strategic direction focuses on strengthening growth drivers in intermediate regions. Regions in Group II possess considerable growth potential, with relatively stable development of industrial production and service sectors. However, the share of high-tech production and the level of innovation activity in these regions remain lower than in leading regions. Therefore, modernizing industry, developing high value-added production sectors, expanding regional innovation infrastructure, and encouraging private investment are of crucial importance. Strengthening these growth drivers will increase the economic potential of intermediate regions and facilitate their transition toward the level of highly developed territories.

The fourth strategic direction envisages the development of innovation-based clustering mechanisms in favorable regions. Regions in Group I are distinguished by high industrial concentration, developed service sectors, and strong investment attractiveness. Expanding innovation clusters, technoparks, and high-tech industrial zones in these areas will enable the transition to a new qualitative stage of economic growth. Innovation clustering will enhance interregional cooperation, facilitate the commercialization of research outcomes, and promote the expansion of digital economy elements. As a result, leading regions can transform into "innovation centers" of the national economy and generate multiplier effects across the entire territorial system.

Overall, the strategic directions for improving regional development should include the introduction of a differentiated regional policy, targeted support for problematic regions, strengthening growth drivers in intermediate regions, and the development of innovation clustering in favorable regions. This approach will ensure efficient utilization of regional economic potential, gradual reduction of interregional disparities, and balanced territorial development at the national level.

5. CONCLUSION

The empirical analyses conducted across the regions of Uzbekistan clearly demonstrate the existence of substantial territorial disparities in the level of regional development. The dynamics of gross regional product (GRP) over 2016–2024 confirm that economic potential is distributed unevenly across territories. In particular, a high concentration of economic activity is observed in Tashkent city, Tashkent region, and Navoi region, whereas Syrdarya, Jizzakh, Khorezm, Surkhandarya, and the Republic of Karakalpakstan continue to exhibit relatively lower levels of economic development. This pattern provides empirical evidence of emerging spatial polarization, meaning that the gap between leading regions and problematic territories remains persistent and structurally entrenched.

The classification of regions by development level indicates that a three-tier structure has formed within the national territorial system: favorable regions (Tashkent city, Tashkent region, Navoi), intermediate regions (Samarkand, Fergana, Andijan, Kashkadarya, Namangan, Bukhara), and problematic regions (Surkhandarya, Khorezm, Jizzakh, the Republic of Karakalpakstan, Syrdarya). This hierarchical configuration reflects the uneven spatial distribution of economic resources, investment flows, and production capacities, and it provides a scientific justification for the need to improve regional policy instruments.

Overall, the research findings emphasize that reducing regional disparities and ensuring sustainable territorial development requires the implementation of a strategic policy framework based on a differentiated approach. In other words, given differences in development levels, sectoral structures, and investment attractiveness, territories require distinct development mechanisms and policy interventions rather than a uniform one-size-fits-all model.

Based on these findings, the following scientific and practical recommendations are proposed:

1. Formulate regional policy on a differentiated basis. It is advisable to design tailored regional development programs for each region by taking into account its economic potential, production specialization, and infrastructure level. This will help reduce interregional economic gaps and ensure more efficient use of available resources.

2. Strengthen targeted state support mechanisms for problematic regions. In particular, it is necessary to develop industrial infrastructure, establish new production capacities, and attract investment flows through the expansion of small industrial zones and free economic zones. These measures will contribute to increasing employment and stimulating economic activity in lagging territories.

3. Reinforce growth drivers in intermediate regions. This requires industrial modernization, the development of high value-added production sectors, diversification of the service sector, and stronger incentives for private investment. Enhancing these drivers will raise the economic potential of intermediate regions and facilitate their transition toward the group of more advanced territories.

4. Promote innovation-based clustering in favorable regions. It is recommended to expand technoparks, innovative industrial zones, and science - industry clusters in leading regions in order to increase the share of high-tech production. Innovation clustering can support a transition to a higher quality stage of economic growth and generate multiplier effects for other regions.

5. Develop transport and logistics infrastructure to strengthen interregional integration. Improving connectivity will accelerate the movement of production resources, expand economic linkages among regions, and contribute to a more balanced spatial structure of the domestic market.

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