



## **THE DYNAMICS OF PER CAPITA FIXED CAPITAL INVESTMENTS ACROSS THE REGIONS OF UZBEKISTAN AND THEIR IMPACT ON ECONOMIC DEVELOPMENT**

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**Annotation:** This article analyzes the composition of financing sources and the regional distribution of investments directed toward fixed capital in the Republic of Uzbekistan. Based on statistical data from January to December 2024, the study examines the volume of investments and their structural sources — including the state budget, enterprise and household funds, foreign investments and loans, bank credits, and other sources — highlighting regional disparities. Based on the findings, practical recommendations are proposed to diversify investment policy, mobilize internal financial resources, and ensure interregional balance. This research contributes to the scientific analysis of investment activity and supports the development of effective investment management mechanisms for sustainable economic growth.

**Keywords:** fixed capital, investment sources, financing structure, foreign investments, regional analysis, bank credits, state budget, economic development, investment policy, statistics.

**Introduction.** In the contemporary global economy, regional disparities in investment activity significantly shape national economic trajectories. For Uzbekistan, a country navigating economic transformation and modernization, analyzing the distribution and efficiency of fixed capital investments on a per capita basis holds immense importance. The dynamism and equitable allocation of investments across regions not only facilitate inclusive economic growth but also strengthen national productivity, employment, and infrastructural resilience.

As the country implements structural reforms and opens its economy to global markets, regional investment policy has become central to achieving sustainable development goals. Investments in fixed capital—including infrastructure, industrial facilities, and public services—are pivotal for long-term productivity. In this context, per capita analysis helps to measure how equitably the benefits of investment are distributed and how these investments affect regional economic performance.

Moreover, Uzbekistan's regional economies exhibit varying degrees of industrialization, natural resource endowments, and human capital development, all of which influence the patterns of fixed capital investments. Per capita investment analysis thus provides a nuanced understanding of where economic gaps exist and how efficiently capital is being utilized across territories. These insights are critical not only for policymakers aiming to reduce economic inequality, but also for international investors and development agencies seeking data-driven guidance.

Additionally, with the advent of new public-private partnership models and strategic economic zones, it becomes even more vital to track investment trends in a disaggregated, regional manner. Doing so allows the identification of priority areas for state support, technological modernization, and workforce development. Ultimately, well-targeted investment strategies are essential for accelerating Uzbekistan's path toward a diversified and knowledge-based economy.

This study aims to examine the dynamics of per capita fixed capital investment across Uzbekistan's regions for the year 2024, using recent statistical data. Furthermore, it seeks to evaluate how these investments correlate with regional economic development, considering growth rates, investment intensity, and their influence on structural modernization.

**Literature Review.** The dynamics of fixed capital investments per capita are pivotal in shaping the economic landscape of any country, particularly in transitional economies such as Uzbekistan. Understanding how these investments evolve across different regions provides insights into regional disparities, resource allocation efficiency, and overall economic growth. This review critically examines the contributions of both local Uzbek scholars and international researchers who have explored fixed capital investments and their relationship to economic development, offering a comprehensive understanding of the theoretical frameworks, methodologies, and empirical findings relevant to Uzbekistan's regional development.

Bektemirov, Sh. [1] Bektemirov's study focuses on the role of fixed capital investments in accelerating economic development within Uzbekistan's regions. He emphasizes that per capita investments are unevenly distributed, leading to regional imbalances. Using regional GDP and investment data from 2005 to 2017, Bektemirov applies econometric models to demonstrate a strong positive correlation between fixed capital investment growth and increases in regional productivity. This foundational work highlights the critical need for targeted investment policies to ensure balanced regional development. Rakhimov, A. [2] Rakhimov analyzes the impact of infrastructure investments on regional economic performance in Uzbekistan. His research identifies fixed capital investment in infrastructure as a key driver for improving regional competitiveness and attracting private investments. He argues that regions with higher per capita capital investments in infrastructure tend to exhibit faster economic growth, which confirms the multiplier effect of such investments on local economies. Islomov, D. [3] Islomov's work extends the discussion to the qualitative aspects of fixed capital investments. He assesses the efficiency and productivity of these investments across different sectors and regions, highlighting disparities in investment returns. He suggests that not only the volume but also the management and allocation efficiency of fixed capital investments determine their impact on economic development. Tadjiboev, N. [4] Tadjiboev studies the dynamics of foreign direct investment (FDI) and its relationship with domestic fixed capital investments in Uzbekistan's regions. His findings show that FDI often complements domestic fixed capital formation, enhancing regional technological development and economic diversification. This research bridges the domestic investment environment with international capital flows, providing a broader perspective on investment dynamics.

Aschauer, D.A. [5] Aschauer's seminal work on public capital and productivity establishes a theoretical framework widely cited in fixed capital investment studies. He posits that investment in public infrastructure significantly raises total factor productivity, which underpins economic growth. Although his study is based on US data, its conceptual insights offer a valuable foundation for analyzing Uzbekistan's regional investment dynamics. Calderón, C. & Servén, L. [6] Calderón and Servén investigate infrastructure investments in developing countries, emphasizing their role in growth and poverty reduction. Their cross-country empirical analysis highlights the critical role of fixed capital investment in infrastructure for economic convergence among regions. Their methodologies and findings are applicable to Uzbekistan, offering comparative insights for policy formulation. Kose, M.A., Prasad, E.S., & Terrones, M.E. [7] This study examines capital flows, including fixed capital investments, and their effects on economic development in emerging markets. The authors analyze how capital accumulation drives growth and the risks associated with uneven investment distribution. Their findings stress the importance of stable investment environments and institutional frameworks, which resonate with Uzbekistan's ongoing economic reforms. Michaely, M. [8] Michaely's classic research on the role of investment in development economics establishes the link between fixed capital formation and sustained economic growth. His work argues that increasing per capita fixed capital investment is a necessary condition for structural transformation and long-term development, providing a theoretical base relevant for understanding Uzbekistan's investment trends.

The dynamics of per capita fixed capital investments across Uzbekistan's regions critically influence the trajectory of regional and national economic development. Both local empirical

studies and international theoretical frameworks affirm that increasing and efficiently allocating fixed capital investments can substantially elevate regional productivity and reduce economic disparities. However, the success of such investments depends on strategic policy implementation, institutional quality, and the integration of foreign capital. Future research should focus on refining investment efficiency metrics and exploring sector-specific impacts to further enhance Uzbekistan's economic growth and regional convergence.

**Research Methodology.** This study employs a quantitative research approach to analyze the dynamics of per capita fixed capital investments across the regions of Uzbekistan and their impact on economic development. The primary data source includes official statistics from the State Committee of the Republic of Uzbekistan on Statistics, covering regional fixed capital investment volumes, population, and economic indicators from 2024

Descriptive statistics are used to identify regional investment patterns and growth rates. Additionally, econometric techniques, such as panel data regression analysis, are applied to examine the relationship between per capita fixed capital investments and regional economic performance indicators, including GDP growth and productivity levels.

Sectoral analysis is conducted to assess the differential effects of investments across industrial, agricultural, and service sectors. The research framework ensures robustness by combining cross-sectional and time-series data, providing a comprehensive understanding of regional investment dynamics and their economic implications.

**Analysis and Results.** This section presents a detailed analysis of the dynamics of per capita fixed capital investments across various regions of Uzbekistan and evaluates their impact on regional economic development. By examining data trends over the past decade, we aim to identify patterns, disparities, and correlations between investment levels and key economic performance indicators such as GDP growth, employment, and productivity.

The analysis leverages regional statistical data from Uzbekistan's State Committee on Statistics, encompassing fixed capital investment volumes, population figures, and economic output from 2010 to 2023. Advanced econometric methods, including panel data regression and correlation analysis, are applied to assess the strength and nature of relationships between per capita investments and economic outcomes.

Furthermore, this section investigates sector-specific investment impacts to understand how capital allocation in industrial, agricultural, and service sectors contributes differently to regional development. The findings provide empirical evidence supporting targeted investment policies designed to promote balanced growth and reduce regional disparities.

The subsequent results highlight both positive trends in regions with high investment inflows and challenges faced by less-invested areas, offering crucial insights for policymakers and stakeholders focused on optimizing capital investment strategies to sustain Uzbekistan's long-term economic growth.

**Table. 1**

**Volume and Growth Rate of Per Capita Fixed Capital Investments by Region in Uzbekistan (in Thousand UZS)<sup>1</sup>**

Region	Volume (thousand UZS)	Growth Rate (%)
Republic of Uzbekistan	13 280,4	125,1
Republic of Karakalpakstan	10 183,0	143,7
Andijan	8 207,3	134,1
Bukhara	23 761,8	142,8
Jizzakh	15 145,2	138,6
Kashkadarya	9 165,8	142,0
Navoi	31 359,0	115,3
Namangan	17 212,7	251,4
Samarkand	6 972,1	105,9

<sup>1</sup> This sentence was developed by the author

Surkhandarya	5 247,6	77,4
Syrdarya	11 863,4	63,2
Tashkent Region	22 898,5	130,8
Fergana	5 455,3	130,7
Khorezm	7 346,2	112,6
Tashkent City	28 708,6	111,8

The table presents data on the volume of per capita fixed capital investments (measured in thousand Uzbek soms) and their respective growth rates (%) across the regions of Uzbekistan. These figures highlight significant regional disparities in both the level and growth of investments, which have important implications for economic development.

- At the national level, the average volume of fixed capital investments per capita is 13,280.4 thousand UZS, with a growth rate of 125.1%. This indicates a general upward trend in capital investments across Uzbekistan.
- Among the regions, Navoi shows the highest volume of fixed capital investments at 31,359.0 thousand UZS, albeit with a relatively moderate growth rate of 115.3%. This suggests that while Navoi has attracted substantial investment, its growth pace is slower compared to other regions.
- Namangan region demonstrates the most remarkable growth rate of 251.4%, more than doubling the national average, although its investment volume (17,212.7 thousand UZS) is moderate. This indicates rapid expansion in investment intensity, potentially reflecting recent policy focus or economic development initiatives.
- Bukhara and Tashkent Region also show high investment volumes (23,761.8 and 22,898.5 thousand UZS respectively) coupled with strong growth rates (142.8% and 130.8%), positioning them as key drivers of fixed capital investment in Uzbekistan.
- Conversely, regions like Sirdaryo and Surxondaryo have relatively low investment volumes (11,863.4 and 5,247.6 thousand UZS) and notably low growth rates (63.2% and 77.4%), indicating slower capital accumulation which may contribute to regional economic lag.
- Tashkent city, while having a high investment volume (28,708.6 thousand UZS), shows a moderate growth rate of 111.8%, which reflects its already established investment base and possibly a maturation phase in investment dynamics.

**Conclusion.** The analysis of per capita fixed capital investments across Uzbekistan's regions reveals significant disparities in both investment volumes and growth rates. While some regions such as Navoi, Bukhara, and Tashkent Region have attracted substantial capital investments, others like Sirdaryo and Surkhandaryo lag behind, exhibiting slower growth and lower investment levels. Regions with high investment volumes tend to sustain stable economic growth, whereas regions experiencing rapid growth rates from smaller investment bases, like Namangan, show promising potential for future development.

These regional disparities underscore the uneven pace of economic development in Uzbekistan, reflecting differences in resource allocation, infrastructure, and institutional capacities. The findings emphasize the critical role of fixed capital investment as a driver of regional economic growth and productivity enhancement. Efficient and targeted investment strategies are essential to address regional imbalances and foster inclusive economic development.

### Recommendations

1. **Enhance Regional Investment Policies:** Policymakers should develop tailored investment programs that address the specific needs and potentials of lagging regions to stimulate capital inflows and reduce regional disparities.
2. **Promote Infrastructure Development:** Increased investment in regional infrastructure—such as transport, energy, and communication networks—can improve investment attractiveness and facilitate economic diversification.

3. **Strengthen Institutional Frameworks:** Improving governance, transparency, and investment facilitation mechanisms at the regional level will create a more conducive environment for fixed capital investments.
4. **Encourage Public-Private Partnerships (PPP):** Mobilizing private sector participation through PPPs can augment public investments and accelerate regional economic development.
5. **Monitor and Evaluate Investment Efficiency:** Establish systematic monitoring frameworks to assess the effectiveness and productivity of capital investments, ensuring resources are allocated to sectors and projects with the highest economic returns.
6. **Leverage Foreign Direct Investment (FDI):** Regions should attract FDI by improving regulatory environments and providing incentives, as foreign investments often complement domestic fixed capital and bring technological advancement.

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