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Article

Current State, Dynamics and Structural Characteristics of Poverty in the Bukhara Region

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Abstract: This paper presents a comprehensive empirical analysis of the current state, dynamics, and structural characteristics of poverty in the Bukhara region of Uzbekistan for the period 2021-2025. Using World Bank monetary poverty estimates, the UNDP-OPHI-CERR Multidimensional Poverty Index (MPI) pilot data, International Labour Organization (ILO) employment statistics, and official data from the Statistics Agency of Uzbekistan, the study examines both the pace and determinants of poverty reduction. The findings reveal that while the national monetary poverty rate declined substantially from 17.0 percent in 2021 to 5.8 percent in 2025, multidimensional poverty remains significantly higher at 18.4 percent, underscoring the limitations of income-based measures alone. The Bukhara region (MPI index M0 = 0.095; monetary poverty 6.0%) is classified in the middle depressed-yet-developing group, where low educational attainment, food insecurity, and informal employment are the primary deprivation drivers. A widening Gini coefficient (0.31 to 0.35 in 2022-2023) signals growing inequality that risks undermining the inclusiveness of economic growth. The paper concludes that effective poverty reduction in the region requires multidimensional intervention strategies encompassing wage policy, formal employment promotion, investment in human capital, and targeted social transfers.

Keywords: Poverty measurement; multidimensional poverty index (MPI); regional poverty dynamics; Bukhara region; Uzbekistan; informal employment; income inequality; human capital deprivation.

Introduction

Since gaining independence, the Republic of Uzbekistan has been consistently implementing large-scale socio-economic reforms. These reforms are aimed at improving the public administration system, liberalizing the economy, enhancing the investment climate, and raising the living standards of the population; as a result, the country's macroeconomic indicators have been steadily improving.

At the same time, the problem of poverty has not lost its relevance. Identifying the factors that influence poverty and quantifying them is a necessary prerequisite for formulating effective socio-economic policy. Prior to 2020, the concept of poverty was restricted in official discourse in Uzbekistan, with the term "low-income population" used in its place. Thanks to the current open and democratic policy, systematic research aimed at a deeper analysis of the nature of this problem — as well as at its reduction and ultimate elimination — is gaining momentum[1].

The objective of this study is to comprehensively analyze the current state, dynamics, and structural characteristics of poverty in the Bukhara region; to identify the socio-economic determinants of territorial differentiation; and to establish a theoretical and statistical foundation for formulating the empirical basis of a poverty-reduction mechanism[2,3].

The research is structured around three key questions: (1) What are the monetary and multidimensional levels of poverty in Uzbekistan and the Bukhara region? (2) How have poverty dynamics and regional differentiation evolved during the period 2021–2025? (3) How do the structural factors of poverty — wages, employment, infrastructure, and human capital — affect the poverty rate?

Data and Methodology

The data employed in this study are drawn from four primary sources. First, the World Bank has played a leading role in introducing a new methodology for measuring poverty in Uzbekistan. In March 2024, the World Bank published, for the first time, internationally comparable poverty estimates for Uzbekistan using the thresholds of USD 3.65 per day for lower-middle-income countries and USD 8.30 per day for upper-middle-income countries.

Second, a pilot study conducted jointly in 2023 by the United Nations Development Programme (UNDP), the Oxford Poverty and Human Development Initiative (OPHI), and the Centre for Economic Research and Reforms (CERR) was carried out using the Multidimensional Poverty Index (MPI) methodology. This methodology, based on the Alkire–Foster approach, enables a comprehensive assessment of deprivations across three dimensions: basic infrastructure and living standards, health and social capital, and financial inclusion and employment.

Third, data from the International Labour Organization (ILO) were used to determine the level of informal employment. Fourth, official data from the Statistics Agency of the Republic of Uzbekistan served as the basis for analyzing poverty levels, nominal wages, unemployment, and real income dynamics across regions for the period 2021–2025.

The MPI index is calculated using the formula $M_0 = H \times A$, where H is the poverty incidence (the share of the population identified as poor, %) and A is the deprivation intensity (the average share of deprivations among the poor population, %). Monetary poverty was assessed using Foster–Greer–Thorbecke (FGT) indices, which allow simultaneous measurement of poverty incidence, depth, and severity.

The regional analysis employed a panel data approach: time series collected for 14 regions over the period 2021–2025 were cross-compared, and trends and structural changes were assessed. To neutralize the effects of inflation, nominal indicators were analyzed alongside real income data.

Results

According to World Bank analyses, the national poverty rate in Uzbekistan declined from 36 percent to 17 percent between 2015 and 2022 — a result exceeding the average for the Europe and Central Asia region. By the lower-middle-income country standard (USD 3.65 per day), the poverty rate stood at 5 percent in 2022[4,5]. By the upper-middle-income country standard (USD 8.30 per day), this figure reached 20.7 percent as of November 2024.

The primary factor contributing to poverty reduction was growth in household incomes, particularly wage income, which accounted for 60 percent of the gains achieved. The second significant factor was the improvement of pension payments and the expansion of the social benefit system.

However, the rising inequality recorded in 2022–2023 stands out as a distinct concern. The Gini coefficient increased from 0.31 in 2022 to 0.35 in 2023. During this period, the income of the poorest 10 percent of the population grew by only 6 percent, while the

income of the wealthiest 10 percent increased by more than 30 percent. According to expert estimates, had inequality not grown at this rate, the poverty rate would have declined by 3.1 percentage points rather than 5.5 percentage points[6].

Rural poverty is approximately twice as high as urban poverty, reflecting the persistence of regional inequality. Informal employment is identified as one of the primary factors increasing poverty risk: according to ILO data, informal employment constituted 60 percent (more than 6 million people) in 2021, and approximately 39–40 percent in subsequent studies.

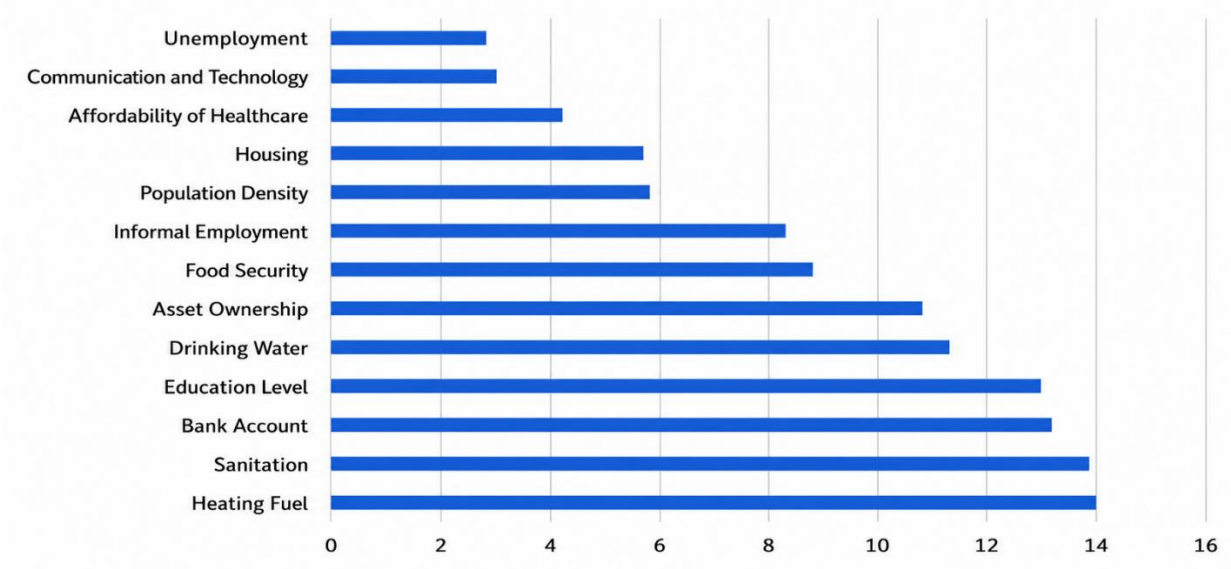


Figure 1. MPI indicators among adults (in percent)* in Uzbekistan

According to the UNDP–OPHI–CERR pilot report, approximately 18.4 percent of the population of Uzbekistan — that is, 4.2 million people — live in multidimensional poverty. The three dimensions exerting the greatest impact on poverty were identified as low educational attainment, inadequate food security, and the widespread prevalence of informal employment. Deprivation intensity was recorded at approximately 43–44 percent, indicating that nearly half of the basic needs of the population identified as poor remain unmet[7,8,9].

In the analysis of deprivation indicators among the population aged 18 and above, the highest levels were recorded for sanitation and poverty (14.0 percent), lack of a bank account (13.9 percent), and lack of access to heating fuel (13.0 percent). Conversely, the indicators for deprivation of essential medical care (4.2 percent), lack of access to communication and technology (3.0 percent), and unemployment (2.5 percent) were comparatively low. Figure 2.1 below presents the regional MPI indicators — the poverty index (M_0), incidence (H), intensity (A), and principal areas of concern — generated on the basis of the UNDP–OPHI–CERR pilot report methodology[10,11,12].

The data in Figure demonstrate that multidimensional poverty varies sharply across regions of the country. Tashkent city has the lowest poverty indicator (M_0 = 0.010; H = 2.4%), while the Republic of Karakalpakstan, Namangan, Kashkadarya, and Surkhandarya regions exhibit the highest incidence. In Karakalpakstan, M_0 = 0.136 and H = 29.9%; in Namangan, M_0 = 0.127 and H = 27.5% — meaning that approximately one third of the population in these regions lives in multidimensional poverty.

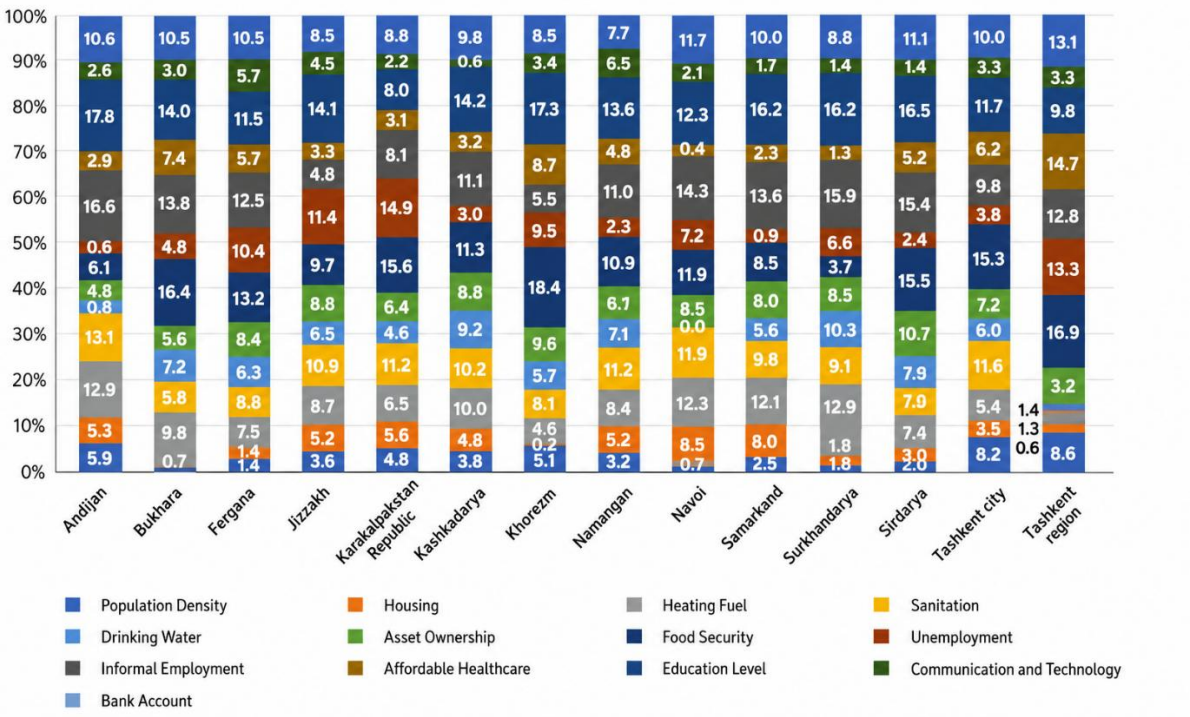


Figure 2. Poverty indicators by regions

The Bukhara region falls into the middle group, with an MPI of M_0 = 0.095 and an incidence of H = 21.0%. The primary areas of concern are low educational attainment, inadequate food security, and the widespread prevalence of informal employment. At the same time, lack of bank accounts is most prevalent in Karakalpakstan and Tashkent region, indicating a low level of financial inclusion.

In order to more precisely characterize the geographic structure of poverty, the regions of Uzbekistan have been divided into five groups based on their 2024 data[13]. This grouping is not arbitrary, but derives from the historical, geographic, and economic characteristics of each region.

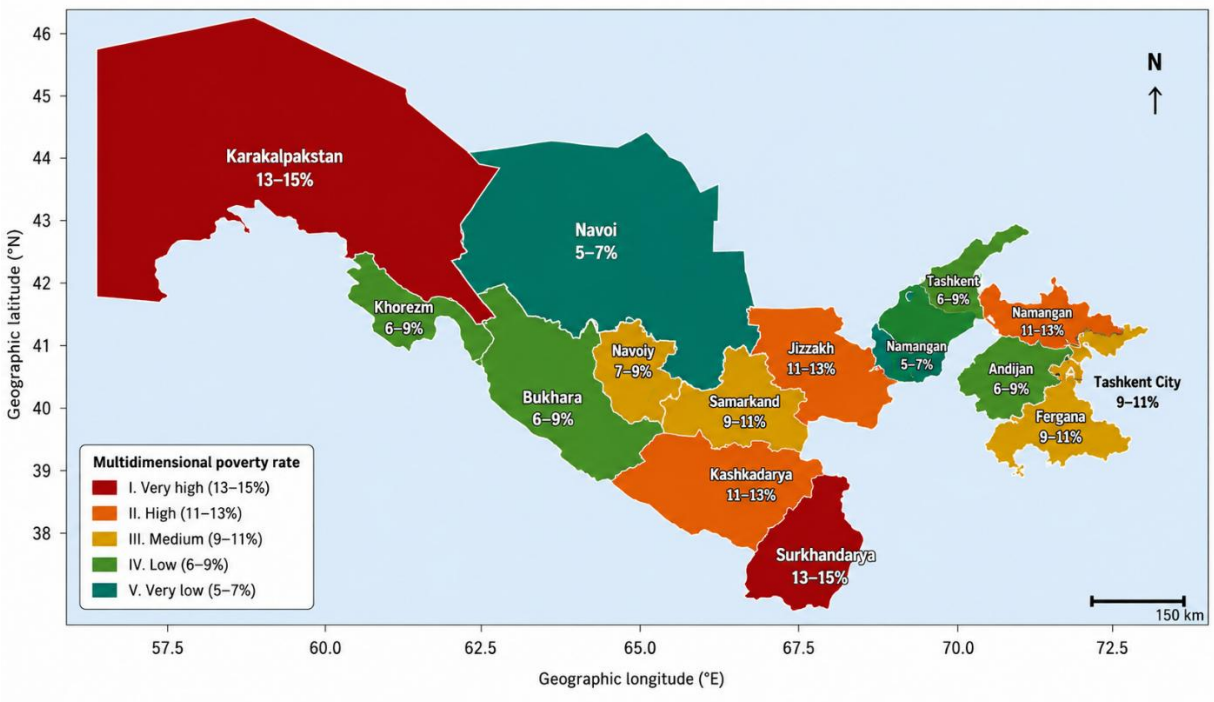


Figure 3. Poverty level groupings of regions based on MPI (as of 2024)

Source: Compiled by the author on the basis of data from the Statistics Agency of the Republic of Uzbekistan and UNDP.

As shown in Figure 1, the most severe poverty is recorded in the most critically affected regions — the Republic of Karakalpakstan (13–15%) and Surkhandarya region — where the economy relies on agrarian sectors, water and land resources are scarce, and the quality of social services is low. In Group IV, Bukhara region (8–9%) sees the services sector and industry developing in its centers, while poverty in remote districts remains persistently high[14].

Table 1. Dynamics of Poverty Rate and Related Indicators in Uzbekistan, 2021–2025

Indicator	2021	2022	2023	2024	2025*
Poverty rate, %	17.0	14.1	11.0	8.9	5.8*
Number of unemployed, thousands	1,441.8	1,332.7	1,024.1	836.0	744.9*
Average nominal wage, soums	2,662,003	3,204,301	3,799,614	4,404,168	6,087,148*
Population, thousands	34,558.9	35,271.3	36,024.9	36,799.8	36,799.8*

Source: Compiled by the author on the basis of data from the Statistics Agency of the Republic of Uzbekistan.

*Note: * — 2025 figures are based on preliminary data.*

As Table demonstrates, the nominal income of the population also increased substantially during this period: the average monthly calculated wage across the republic rose from 2,662,003 soums in 2021 to 6,087,148 soums in 2025 — a 2.28-fold increase. The number of unemployed also fell from 1,441.8 thousand to 744.9 thousand, a reduction of 696.9 thousand people. This positive shift in the employment structure directly contributed to the reduction of poverty.

Nonetheless, in assessing the true weight of poverty, the dynamics of consumer price growth and real income must be considered alongside nominal indicators. In 2025, the average real income per capita across the republic amounted to 29,935.5 thousand soums. Compared to 15,773.9 thousand soums in 2021, this represents a 1.9-fold increase, confirming that the decline in poverty is attributable not only to nominal increases but also to genuine improvements in living standards[15].

Given that national average indicators do not fully reflect the real socio-economic picture, a regional cross-sectional analysis is of particular importance. Panel data indicate that during 2021–2025, the inter-regional variation in poverty rates was extremely large, with the gap between regions reaching nearly eight-fold: in 2021, the poverty rate in Syrdarya region was 30.5 percent, while in Fergana region it stood at only 3.9 percent.

Table 2. Dynamics of Poverty Rate by Regions of Uzbekistan, 2021–2025 (in percent*)

Region	2021	2022	2023	2024	2025*	Change (pp)
Republic of Karakalpakstan	20.8	19.9	13.6	10.8	6.6	−14.2
Andijan	19.3	17.4	11.9	9.5	6.1	−13.2

Region	2021	2022	2023	2024	2025*	Change (pp)
Bukhara	14.5	11.9	11.8	8.7	6.0	−8.5
Jizzakh	21.1	16.1	14.2	11.8	5.8	−15.3
Kashkadarya	17.9	12.7	11.5	9.6	6.5	−11.4
Navoi	4.7	9.2	7.6	6.7	4.2	−0.5
Namangan	14.1	12.8	10.4	7.6	5.5	−8.6
Samarkand	18.2	14.0	10.5	7.5	6.1	−12.1
Surkhandarya	13.3	13.7	10.6	9.3	6.1	−7.2
Syrdarya	30.5	19.5	13.8	11.3	6.2	−24.3
Tashkent region	22.7	14.5	10.2	8.0	5.3	−17.4
Fergana	3.9	11.6	10.1	8.6	5.7	+1.8
Khorezm	19.9	19.1	14.1	11.9	6.7	−13.2
Tashkent city	8.1	8.5	7.9	7.3	3.5	−4.6
Uzbekistan (average)	**17.0**	**14.1**	**11.0**	**8.9**	**5.8**	**−11.2**

Source: Compiled by the author on the basis of data from the Statistics Agency of the Republic of Uzbekistan.

*Note: * — 2025 figures are based on preliminary data; pp — percentage points.*

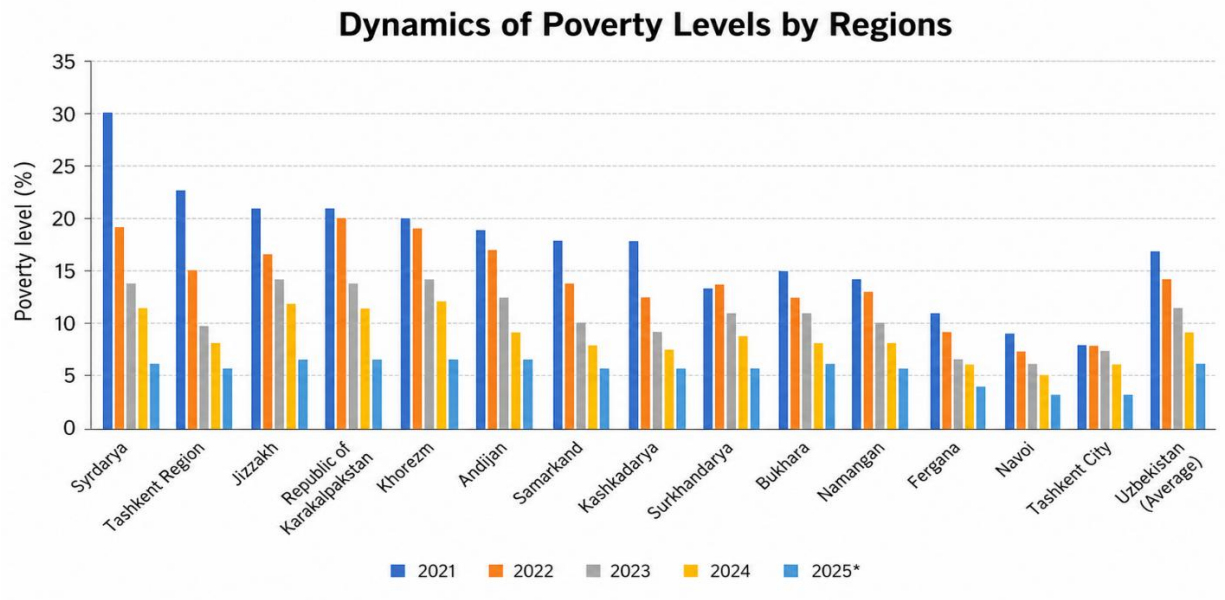


Figure 4. Dynamics of poverty rate by regions of Uzbekistan*

Source: Compiled by the author on the basis of data from the Statistics Agency of the Republic of Uzbekistan. * — 2025 figures are based on preliminary data.

According to the analysis in Table 2 , the regions that reduced poverty most rapidly include Syrdarya region (−24.3 pp), Tashkent region (−17.4 pp), and Jizzakh region (−15.3 pp). The rapid decline in poverty in these regions is explained by the particularly high baseline figures recorded in 2021 — that is, by a base effect.

Fergana region merits special attention as an exception: it rose from a rate of 3.9 percent in 2021 — the lowest in the republic — to 5.7 percent in 2025 (+1.8 pp). This situation may indicate that structural changes occurred in the labor market or sectoral composition of Fergana region after 2021, and requires additional research[16,17].

By 2025, inter-regional disparities had relatively narrowed: the highest poverty rates were recorded in Khorezm region (6.7 percent) and the Republic of Karakalpakstan (6.6 percent), while the lowest were observed in Tashkent city (3.5 percent) and Navoi region (4.2 percent). A consistent pattern is observable in the geographic distribution of poverty: regions with a large share of agriculture and a weakly developed industrial structure persistently maintain poverty rates above the national average.

The wage level is recognized as one of the central factors shaping poverty, not only in income theory but also in the practical aspects of economic analysis. Panel data show that a rising trend in nominal wages was observed in all regions during 2021–2025; however, the pace of growth and the distance between regions were not uniform.

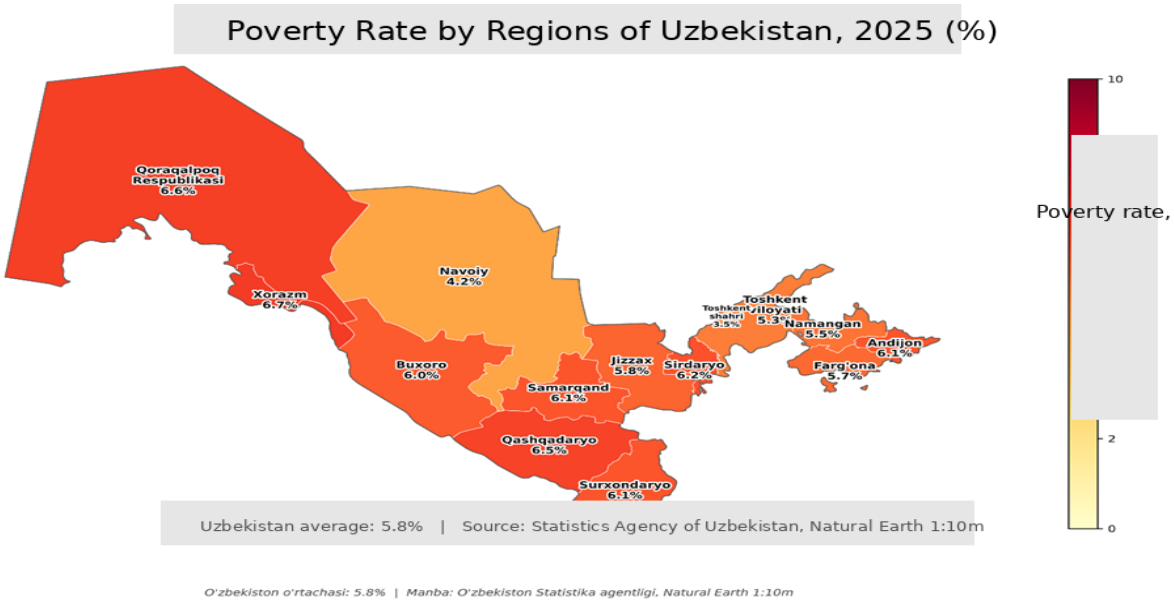


Figure 5. Poverty rate by regions of Uzbekistan based on 2025 national indicators*

* Compiled by the author on the basis of data from the Statistics Agency of the Republic of Uzbekistan.

In 2025, Tashkent city maintains the highest wage level at 10,289,659 soums — 1.69 times higher than the national average (6,087,148 soums). Navoi region ranks second with 7,576,098 soums. Kashkadarya (4,247,642 soums) and Surkhandarya (4,325,940 soums) stand out as regions with the lowest nominal wages. The gap between Tashkent city and Kashkadarya region amounts to 2.43 times.

Analysis of the tabular data shows an inverse correlational relationship between nominal wage dynamics and poverty dynamics: in regions where wages grew faster, the poverty rate also declined more rapidly. However, this relationship did not manifest with equal force across all regions. For instance, although nominal wages in the Republic of Karakalpakstan have nearly doubled since 2021 (from 2,378,722 soums to 4,833,421 soums), the poverty rate fell by 14.2 percentage points. While this figure exceeds the national average reduction (11.2 pp), it is not proportional to the pace of wage growth — indicating that poverty in Karakalpakstan is not solely dependent on wage increases, and that structural and geographic factors also play an important role[18].

Discussion

The results obtained confirm that poverty in Uzbekistan is a multifaceted and regionally specific problem. First, the sharp reduction in monetary poverty (from 17.0 to 5.8 percent) demonstrates the effectiveness of social policy; however, this outcome has been achieved primarily through wage growth and improvement of pension policy. Second, multidimensional poverty (18.4 percent) is considerably higher than the monetary indicator, demonstrating that poverty must be understood not merely as income insufficiency, but as a broad restriction of human capabilities.

The Bukhara region (M_0 = 0.095; monetary poverty — 6.0%) falls into Group IV — that is, among regions classified as depressed yet possessing growth potential. The main challenges in the region are low educational attainment, food insecurity, and the widespread prevalence of informal employment. These problems are closely interrelated: limited access to quality education reduces competitiveness in the formal labor market and channels workers toward informal employment; in turn, informal employment leads to exclusion from the social protection system and increases the risk of poverty.

The growing inequality (Gini: 0.31 → 0.35) stands out as a distinct concern. Should this trend continue, the poverty-reducing impact of economic growth (i.e., the "inclusiveness of growth") may diminish further. This underscores the need to address poverty not solely through macroeconomic growth, but through redistributive policy, targeted social transfers, and investment in human capital.

Regional analysis shows that the geographic structure of poverty is intrinsically linked to economic specialization. Navoi region, specialized in mining and metallurgy, and Tashkent city, with its developed services sector, consistently maintain the lowest poverty rates. Conversely, regions relying on agricultural specialization with weakly developed industrial structures — Karakalpakstan, Khorezm, Surkhandarya — consistently exhibit poverty rates above the national average[19,20]. This structural problem cannot be resolved through short-term measures and requires a long-term strategy of diversification and infrastructure development.

Conclusion

The comprehensive analysis carried out in this section leads to the following principal conclusions.

First conclusion: Poverty in Uzbekistan and the Bukhara region declined substantially during 2021–2025; however, the poverty rate as assessed through multidimensional measurement methods remains 2–3 times higher than the monetary indicator. This substantiates the need to address poverty through comprehensive mechanisms.

Second conclusion: Inter-regional disparities are associated with structural factors. In the Bukhara region, poverty falls within Group IV, indicating the existence of economic potential; however, challenges in remote districts and in the informal labor market are intensifying intra-regional differentiation.

Third conclusion: Although wage growth is the primary mechanism for reducing poverty, it is not the sole instrument. Informal employment, educational deprivation, and low financial inclusion are manifesting as structural factors of poverty. These factors provide an empirical basis for formulating multi-dimensional intervention directions within the poverty reduction mechanism.

Fourth conclusion: The growing inequality (the increase of the Gini coefficient from 0.31 to 0.35) calls for directing greater attention toward an inclusive growth strategy and strengthening redistribution mechanisms in the fight against poverty.

The results of the empirical analysis presented in this section substantiate the territorial-structural characteristics of poverty in the Bukhara region.

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