

THE IMPACT OF INFLATION ON THE REAL INCOME OF THE POPULATION IN UZBEKISTAN

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Abstract: *This article examines the relationship between inflation and the real income of the population in the Republic of Uzbekistan over the period 2021-2025. Using official statistics published by the Statistics Agency under the President of the Republic of Uzbekistan, the Central Bank of Uzbekistan, and the World Bank, the study applies descriptive and comparative statistical methods to trace how consumer price growth has interacted with nominal wage growth, per-capita income, and household purchasing power. The results show that although nominal incomes in Uzbekistan grew rapidly (17-18% annually in 2024-2025), high and persistent inflation - which peaked at 12.25% in 2022 and remained above 8% through 2025 - eroded a substantial share of these nominal gains, leaving real income growth considerably lower (5.9-9.5% per year) than nominal growth. The analysis further shows that inflation has been strongly concentrated in food, utility tariffs, and medicine, categories that make up a disproportionate share of the budgets of low-income households, implying that the burden of inflation is distributed unevenly across the population. The article concludes that, despite positive real income dynamics at the aggregate level, targeted social protection measures and price stabilization policies remain necessary to protect the purchasing power of vulnerable groups.*

Keywords: *inflation, real income, nominal wage, purchasing power, consumer price index, Uzbekistan, household welfare, price stability.*

INTRODUCTION

Inflation is one of the most closely watched macroeconomic indicators because of its direct and immediate effect on household welfare. When the general price level rises faster than nominal incomes, the purchasing power of households declines even if their money incomes are growing in absolute terms. This phenomenon is particularly important for transition and developing economies such as Uzbekistan, where a large share of household expenditure is directed toward food, utilities, and other essential goods whose prices are highly sensitive to exchange-rate movements, administered tariff adjustments, and supply-side shocks.

Since the liberalization of its foreign exchange market in 2017, Uzbekistan has pursued a course of structural reform accompanied by relatively high inflation. The Central Bank of Uzbekistan adopted an inflation-targeting framework with the medium-term goal of reducing annual inflation to 5%, yet actual inflation has consistently exceeded this target, fluctuating between roughly 8.8% and 13.4% (depending on the

measure used) in 2024-2025. At the same time, the government has pursued an active social policy of raising nominal wages, pensions, and the minimum wage, and the Statistics Agency reports strong nominal income growth of 17-18% per year. The central empirical question addressed in this article is how much of this nominal income growth actually translates into an improvement in real purchasing power once inflation is taken into account, and which segments of household consumption are most affected.

The objective of this study is threefold: (1) to quantify the dynamics of inflation and nominal income growth in Uzbekistan for the period 2021-2025; (2) to estimate the resulting real income growth and assess the extent to which inflation erodes nominal income gains; and (3) to identify which components of the consumer basket contribute most to the erosion of household purchasing power, with particular attention to the welfare of low-income and vulnerable groups. The findings are intended to inform policy discussion on price stabilization and targeted social support in Uzbekistan and to provide a reference point for comparative research on inflation and welfare in Central Asian transition economies.

2. MATERIALS AND METHODS

This study relies exclusively on secondary data drawn from official and internationally recognized sources: the Statistics Agency under the President of the Republic of Uzbekistan (stat.uz), the Central Bank of the Republic of Uzbekistan, the World Bank's World Development Indicators database, and the CIA World Factbook. Data were collected for the period 2021-2025 (with partial 2026 data used where available) and cover four groups of indicators: (a) the annual consumer price index (CPI) / inflation rate; (b) the structure of inflation by major expenditure category (food, non-food goods, paid services, utility tariffs, and medicines); (c) nominal average monthly wages and nominal per-capita population income; and (d) officially reported real (inflation-adjusted) income growth rates.

The research applies a descriptive-comparative statistical method. Real income growth is examined directly from the officially published real growth indicators (which the Statistics Agency calculates by deflating nominal income growth using the CPI), and is cross-checked against a simplified Fisher-type approximation:

$$\text{Real income growth (\%)} \approx \text{Nominal income growth (\%)} - \text{Inflation rate (\%)}$$

This approximation is used only as an illustrative cross-check, since it does not fully capture compounding effects; the article relies primarily on the officially reported real growth figures for its conclusions. The study is descriptive and correlational in nature and does not attempt to establish formal econometric causality; rather, it aims to document the empirical relationship between inflation and real income dynamics using the most recent available official statistics, and to interpret this relationship in light of the structure of household consumption in Uzbekistan.

Limitations of the study include the reliance on officially published aggregate data, which may mask regional and inter-household distributional differences, and the fact that the official CPI basket may not fully reflect the actual consumption structure of the

poorest households, who tend to spend a higher share of their budget on food and utilities than the average CPI weighting assumes.

3. RESULTS

3.1. Inflation dynamics, 2021-2025

Table 1 summarizes the annual inflation rate in Uzbekistan for 2021-2025. Inflation rose sharply in 2022 (12.25%), largely reflecting exchange-rate pass-through and regional supply shocks, before gradually moderating to 8.77% in 2023 and 9.8% in 2024. According to World Bank data, consumer price inflation was 8.8% in 2025, while by mid-2026 the year-on-year rate had eased further to around 6.4%, still above the Central Bank's 5% medium-term target.

Year	Inflation rate (CPI, annual %)	Source
2021	9.98	Statistics Agency
2022	12.25	Statistics Agency
2023	8.77	Statistics Agency
2024	9.80	Statistics Agency
2025	8.80	World Bank
2026 (June, y/y)	6.40	Trading Economics / CBU

Table 1. Consumer price inflation in Uzbekistan, 2021-2026

The structure of inflation is uneven across expenditure categories. In the official CPI basket, food items account for 53.1% of the index, non-food items for 26.8%, and paid services for 20.1%. In 2024, food prices rose by 2.4% year-on-year while paid services increased by 26.7%, driven overwhelmingly by administered utility tariff reforms: gas tariffs rose 2.3-fold, electricity tariffs increased by roughly 70%, waste-disposal fees by 54.7%, heating by 36%, and hot water by 32.1%. Medicine prices increased by 26.2% over the year, including a 28.5% rise for antibiotics. Because utilities, medicines, and food together constitute the bulk of spending for lower-income households, this pattern indicates that the practical, lived inflation rate for poorer households may exceed the average headline CPI figure.

3.2. Nominal and real income growth

Nominal incomes in Uzbekistan grew rapidly over the review period. The average nominal monthly wage rose from 4.56 million UZS in 2023 to 5.36 million UZS in 2024 (a nominal increase of 17.4%), and further to approximately 5.98 million UZS in the first half of 2025 (a 17.2% year-on-year nominal increase). The minimum wage was raised to 1.155 million UZS effective October 2024. At the aggregate level, the total nominal income of the population reached 896.3 trillion UZS in 2024 (an 18.5% nominal increase over 2023) and 1,134.3 trillion UZS in 2025 (approximately 90.2 billion USD).

However, once these nominal figures are deflated by the CPI, the corresponding real growth rates are markedly lower. Table 2 compares nominal and real growth of per-capita population income for 2024 and 2025, illustrating the gap attributable to inflation.

Indicator	2024	H1 2025 / 2025
Nominal per-capita income growth, %	16.1	17.7 (H1) / n/a
Real per-capita income growth, %	5.9	7.4 (H1) / 7.2 (FY)

Indicator	2024	H1 2025 / 2025
Inflation (CPI), %	9.8	8.8
Nominal total income growth, %	18.5	n/a / n/a
Real total income growth, %	8.1	9.5 (H1) / 9.2 (FY)

Table 2. Nominal vs. real income growth in Uzbekistan, 2024-2025

The comparison shows that roughly one-third to one-half of nominal per-capita income growth was absorbed by inflation in both years: in 2024, a 16.1% nominal increase in per-capita income corresponded to only a 5.9% real increase, meaning that inflation eroded approximately 10 percentage points, or well over half, of the nominal gain. In the first half of 2025, the gap narrowed somewhat as inflation moderated, with nominal per-capita income growth of 17.7% corresponding to real growth of 7.4%. Notably, the growth rate of total real income slowed from 11.9% (H1 2024) to 9.5% (H1 2025), which the Statistics Agency attributes to a stabilizing exchange rate and softer growth in service-sector revenues, illustrating that the inflation-income relationship in Uzbekistan is also sensitive to exchange-rate dynamics, not solely to domestic price pressures.

At the same time, official data indicate that the poverty rate declined to an estimated 5.1% of the population in 2025, and the Gini coefficient stood at approximately 33.0, suggesting that aggregate real income growth has, on balance, continued to outpace inflation and has been accompanied by some reduction in extreme poverty. This aggregate improvement, however, coexists with significant regional disparities: per-capita income in Tashkent city (about 35-61 million UZS depending on the year) has remained roughly 2-2.5 times the national average, while regions such as Kashkadarya and Surkhandarya have recorded both the lowest wages and, by extension, the least capacity to absorb price shocks in essential goods.

4. DISCUSSION

The results confirm that inflation has been a persistent and economically significant drag on the growth of real household welfare in Uzbekistan, even during a period of strong nominal wage and income growth driven by continuing market reforms and rising domestic demand. The finding that inflation absorbed more than half of nominal per-capita income gains in 2024 is consistent with the broader literature on transition economies, in which price liberalization, exchange-rate pass-through, and the phased removal of energy and utility subsidies tend to generate inflationary pressure that runs ahead of the gradual adjustment of wages and pensions.

A particularly important finding is the compositional nature of Uzbekistan's inflation. Because paid services - dominated by utility tariffs - rose by 26.7% in 2024, far outpacing food inflation of 2.4%, the burden of inflation fell disproportionately on categories with low substitutability, such as gas, electricity, heating, and medicine. Poorer households, which typically allocate a larger share of their budgets to housing, utilities, and health expenditure than wealthier households, are therefore likely to experience an effective inflation rate above the national CPI average - a distributional effect that aggregate real-income statistics alone do not reveal. This is consistent with the broader policy debate in Uzbekistan around the pace of tariff liberalization, which

has been implemented gradually and accompanied by compensatory social transfers, but which nonetheless continues to place pressure on low-income and pensioner households in the short run.

The moderation of inflation from 12.25% in 2022 to roughly 6.4-8.8% by 2025-2026, combined with a narrowing gap between nominal and real income growth, suggests that macroeconomic stabilization measures - including the Central Bank's inflation-targeting regime and a more stable exchange rate - have begun to translate into tangible welfare gains. Nevertheless, inflation remains above the official 5% target, and the deceleration of real total income growth observed between H1 2024 and H1 2025 (from 11.9% to 9.5%) indicates that the pace of improvement in living standards should not be taken for granted and may be sensitive to renewed exchange-rate or commodity-price shocks.

These findings have several policy implications. First, continued efforts to bring inflation toward the 5% medium-term target would directly increase the share of nominal income growth that households retain in real terms. Second, because inflation is concentrated in utilities and medicines, targeted compensatory transfers - rather than only economy-wide wage increases - may be a more efficient tool for protecting the purchasing power of vulnerable households during the ongoing tariff-reform process. Third, regional disparities in both income levels and inflation exposure suggest that social protection measures should be differentiated across regions rather than applied uniformly at the national level.

This study has limitations that suggest directions for further research. Because it relies on officially published aggregate real-growth figures and a simplified deflation approach, it cannot capture household-level or decile-specific effects of inflation. Future research using household budget survey microdata could estimate a distribution-sensitive 'inflation rate for the poor' in Uzbekistan and test more rigorously whether inflation has a statistically significant, disproportionate effect on lower-income deciles, as well as examine the causal channels - exchange-rate pass-through, administered tariff adjustments, and monetary policy - that drive Uzbekistan's inflation dynamics.

5. CONCLUSION

This article has examined the relationship between inflation and real household income in Uzbekistan for the period 2021-2025.

The evidence shows that while nominal incomes grew rapidly (16-18% per year), persistently high inflation - peaking at 12.25% in 2022 and remaining above the Central Bank's 5% target throughout the period - substantially reduced the real purchasing power gains available to households, with inflation absorbing roughly half of nominal per-capita income growth in 2024.

Inflation has been particularly concentrated in utility tariffs and medicines, categories that weigh heavily on the budgets of low-income households, implying an uneven distribution of the inflation burden across the population despite favorable aggregate real-income trends and a declining poverty rate.

As inflation has gradually moderated toward 2025-2026, the gap between nominal and real income growth has narrowed, pointing to the effectiveness of ongoing macroeconomic stabilization efforts. Sustaining this progress will require continued disinflation policy, more targeted social protection for households exposed to utility and healthcare price increases, and further research based on household-level data to better understand the distributional impact of inflation across Uzbekistan's regions and income groups.

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