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THE RELATIONSHIP BETWEEN INFLATION AND REAL HOUSEHOLD INCOMES: THE CASE OF THE UZBEK ECONOMY

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Abstract. The article examines the relationship between inflation and real household incomes in Uzbekistan. The study applied dynamic analysis, the method of deflating real growth rates and an analysis of the breadth of the inflation structure, based on data from the National Statistics Committee and the Central Bank and on reports of the World Bank and the IMF. According to the results, annual inflation fell from 12.3% in 2022 to 6.2% in August 2026, and cumulative inflation in January–July 2026 amounted to 3.2% (4.0% in the same period of 2025 and 4.9% in 2024). The minimum wage rose from UZS 1,155,000 in 2025 to UZS 1,271,000 in 2026 (+10.04%); at annual inflation of 5.5–7.2%, this corresponds to a real increase of approximately 2.6–4.3%. Although inflation was high in 2025 (8.7–10.1%), private consumption grew by 9.2% in real terms and poverty declined from 8.9% to 5.8%, that is, the effect of inflation on real incomes was offset by the growth of nominal wages and remittances. The article offers proposals on the Central Bank's monetary policy, wage indexation and targeted social assistance.

Keywords: inflation, real incomes, consumer price index, minimum wage, Central Bank, poverty, Uzbekistan.

1. Introduction

Inflation is one of the most direct macroeconomic factors affecting household welfare: rising prices reduce the purchasing power of nominal income and harm most those whose incomes are fixed or indexed slowly, such as social payments, public-sector wages and savings. In Uzbekistan inflation remained high for a long time as a result of the 2017 reforms (liberalization of the currency market, gradual transition of prices and tariffs to a market basis); according to the Central Bank, annual inflation was 12.3% in 2022 [8].

In recent years inflation has been on a downward trend, and in August 2026 the annual figure fell to 6.2% [7], but it is still above the Central Bank's target level (5% by the end of 2027 [12]). In these circumstances, a scientific and practical question remains a priority: how are the decline in inflation and its relatively high level affecting household real incomes? In the existing literature, the level of inflation is usually considered from the standpoint of macroeconomic stability, while its relationship with real incomes has not been sufficiently analyzed, especially on the basis of updated official data for 2025–2026.

The aim of the study is to assess the relationship between inflation and household real incomes in Uzbekistan on the basis of official statistics. The tasks are: (1) to analyze the dynamics and structure of inflation; (2) to determine changes in real incomes from nominal growth and prices; (3) to identify the factors that offset the effect of inflation (wages, remittances, social policy); (4) to develop policy recommendations.

2. Theoretical framework and methods

The theoretical basis consists of the Fisher effect [1] and empirical studies of the relationship between inflation and growth. In a multi-country analysis, Barro found that a 10-percentage-point increase in average inflation reduces real per capita GDP growth by approximately 0.2–0.3 percentage points per year [2]; Bruno and Easterly showed that the negative effect of inflation on

growth is significant mainly in periods of high inflation (above 40% per year) [3]. This is important for Uzbekistan: the country's inflation is not at such a sharp level, so the impact is manifested mainly through the distribution and purchasing power channel.

Real income growth is calculated as follows:

$g(real) = (1 + g(nominal)) / (1 + \pi) - 1 \approx g(nominal) - \pi$

where g(nominal) is nominal income growth and π is consumer price inflation. This formula shows that the change in real income depends not on the level of inflation itself but on the difference between nominal income and inflation. Therefore, even when inflation is high, real income may grow if nominal incomes grow quickly.

Methods: (a) statistical analysis of inflation dynamics (annual and cumulative, for food, non-food and services); (b) calculation of the real change in the minimum wage by deflation; (c) analysis of the breadth (diffusion) of price increases – how many items in the CPI basket rose by less than 10% per year; (d) comparison of welfare indicators on the basis of World Bank and IMF data. Attention must be paid to the updated methodology: from January 2026 the consumer price index is calculated on the basis of 517 items (419 goods and 98 services) (510 in 2025) [4], so comparisons between years may partly include a methodological difference. Econometric estimation (for example, a VAR or ARDL model) requires monthly series of wages and incomes; this was not carried out in this article and is set as a direction for future research.

3. Results

3.1. Inflation dynamics

Table 1. Annual inflation in Uzbekistan (consumer price index, relative to the same month of the previous year, %)

Period	Annual inflation, %	Source
2022	12.3	[8]
April 2025	10.1	[9]
May 2025	8.7	[6]
August 2025	8.8	[7]
January 2026	7.2	[4]
April 2026	7.0	[9]
May 2026	5.5	[5; 6]
July 2026	6.4	[8]
August 2026	6.2	[7]

Source: compiled by the author on the basis of the sources indicated.

Table 1 shows that annual inflation fell from 12.3% in 2022 to 6.2% in August 2026, that is, by 6.1 percentage points (approximately twofold). From April 2025 to April 2026, annual inflation declined by 3.1 percentage points, and from August to August by 2.6 percentage points (from 8.8% to 6.2%) [7; 9]. At the same time, the indicator did not fall along a straight line: in May 2026 annual inflation dropped to 5.5%, then rose again to 6.4% in July. The National Statistics Committee explained the May decline mainly by the "base effect": monthly inflation was 1.5% in May 2025 and 0.2% in May 2026 [5; 6].

Table 2. Cumulative inflation for January–July (%)

Period	Total	Food	Non-food	Services
January–July 2024	4.9	–	–	–
January–July 2025	4.0	–	–	–
January–July 2026	3.2	1.5	4.2	4.6

Source: Central Bank data [8]. Data by group for 2024–2025 are not given in the source.

In January–July 2026, total cumulative inflation (3.2%) was lower than in the corresponding period of the previous two years. However, by group, the growth of food and non-food prices was higher than in the corresponding period of previous years, while the slowdown in services was explained mainly by the high base effect dropping out [8]. This means that the overall decline in inflation is not uniform across all groups.

3.2. Breadth of price increases

Table 3. Share of items with annual price growth below 10% in April 2026

Group	Number of items in the basket	Of which growth < 10%	Share, %
Food	167	151	90.4
Non-food	252	232	92.1
Services	98	71	72.4

Source: Central Bank data [10]; shares are the author's calculations.

For most price items, annual growth was below 10%: 90.4% of food items and 92.1% of non-food items. In the services segment this share is lower (72.4%), that is, service prices make up the more persistent (inertial) part of inflation [10]. Because a large part of poor households' consumption expenditure goes on food (Engel's law), the stability of food prices is especially important for protecting real incomes.

3.3. Real incomes: the example of the minimum wage

Table 4. Real change in the minimum wage (2025 → 2026)

Deflator (annual inflation)	Nominal growth, %	Real growth, %
7.2% (January 2026)	10.04	2.65
7.0% (April 2026)	10.04	2.84
5.5% (May 2026)	10.04	4.30
6.4% (July 2026)	10.04	3.42
6.2% (August 2026)	10.04	3.62

Source: minimum wage UZS 1,155,000 → 1,271,000 [13]; author's calculation: $(1 + 0.1004) / (1 + \pi) - 1$. The calculation is illustrative: the date on which the wage took effect and the period over which inflation is measured may not coincide.

The minimum wage rose from UZS 1,155,000 in 2025 to UZS 1,271,000 in 2026, that is, by 10.04% [13]. Using the deflators above, real growth is in the range of 2.6–4.3%. Thus, wage indexation has exceeded inflation; however, the rate of real growth remains limited even as inflation has declined. This indicator relates only to the minimum wage and cannot be generalized to the incomes of the entire population.

3.4. Overall welfare indicators

According to the World Bank, in 2025 real GDP grew by 7.7% and private consumption rose by 9.2% in real terms (owing to high wages and remittances); household incomes grew at a high rate and growth benefited the less well-off groups more; the national poverty rate fell from 8.9% to 5.8%, and the Gini coefficient from 34.6 to 32.7 [11]. At the same time, according to the IMF, at the end of April 2025 annual inflation was still 10.1% [12]. That is, in 2025, with inflation of 8.7–10.1%, real incomes and private consumption continued to grow.

4. Discussion

The results show that the relationship between inflation and real incomes is not mechanical but conditional. Real income growth is determined by the difference between nominal income and inflation; although inflation was high in 2025, the rapid growth of nominal wages and remittances increased real consumption [11]. This is consistent with classical theory: the effect of inflation on real income depends on the existence of compensation mechanisms. On the other hand, if the growth of nominal income (wages, remittances) slows or inflation accelerates again, real incomes may fall quickly. In April 2026 the President also stressed that if inflation continues to accelerate, economic growth will not bring a noticeable benefit to the population and business [6].

The second conclusion concerns distributional features. The stability of food prices (growth below 10% for 90.4% of items) is positive for low-income households, but the inertia of the services segment and the potential increases in non-food goods (for example, gasoline prices) and energy tariffs (the Central Bank's forecast takes into account an increase of up to 10% [6]) may put pressure on real incomes. Barro's results [2] allow us to suppose that under moderate inflation the direct negative effect on growth is relatively small, and the main risk is related to inflation volatility and expectations.

Limitations: (1) the analysis is descriptive; the causal relationship between inflation and real income has not been estimated econometrically; (2) no single continuous official series of real per capita incomes was used, so the minimum wage and World Bank indicators were taken as proxies; (3) the CPI basket was expanded from 2026 (517 items), which partly limits year-to-year comparability; (4) Table 4 is an illustrative calculation.

5. Conclusion and recommendations

In Uzbekistan, inflation fell approximately twofold in 2022–2026 (from 12.3% to 6.2%), and January–July cumulative inflation declined from 4.9% to 3.2%. The results for real incomes are positive: the minimum wage grew by 2.6–4.3% in real terms, private consumption rose by 9.2% in 2025, and poverty and inequality declined. At the same time, the fact that inflation has not yet reached the target level (5%), the pressure in the services and non-food groups, and the potential increase in tariffs remain risk factors for real incomes. Recommendations:

– Continue the Central Bank's monetary policy toward achieving the inflation target (5%) and strengthen communication policy to manage expectations and reduce inflation volatility.

– Raise energy and utility tariffs gradually, on a pre-announced schedule and with targeted compensation (for low-income households).

– Make the procedure for indexing public-sector wages, pensions and social benefits to actual inflation (taking the food basket into account) transparent.

– Publish monthly/quarterly official statistics on real incomes (median and by decile); publish changes in CPI methodology with a continuous series (link factor) for year-to-year comparison.

– Continue measures to create local jobs and raise productivity as a priority in order to reduce dependence on remittances.

Direction for future research: to estimate an ARDL or VAR model on the basis of monthly CPI, nominal wage, remittance and exchange rate series in order to determine the effect of inflation on real wages and its lags.

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