

MACROECONOMICS: FORECASTING INFLATION TRENDS IN UZBEKISTAN FOR 2024

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Abstract: Inflation, the persistent rise in the general price level of goods and services in an economy, is a crucial economic indicator affecting individuals, businesses, and governments alike. In Uzbekistan, a Central Asian nation with a rapidly evolving economy, forecasting inflation trends is paramount for informed decision-making and policy formulation. As we approach 2024, understanding the factors driving inflation becomes essential for individuals across various sectors, such as consumer spending, business investment and employment rates to government programs, tax policies, and interest rates. This article aims to analyze the predictors of inflation in Uzbekistan for the end of 2024.

Keywords: Inflation, economy, gross domestic product, consumer price index, monetary policy, fiscal policy, exchange rates.

Аннотация: Инфляция, постоянный рост общего уровня цен на товары и услуги в экономике, является важнейшим экономическим индикатором, затрагивающим как отдельных лиц, предприятия, так и правительства. В Узбекистане, стране Центральной Азии с быстро развивающейся экономикой, прогнозирование тенденций инфляции имеет первостепенное значение для принятия обоснованных решений и формулирования политики. По мере приближения к 2024 году понимание факторов, способствующих инфляции, становится важным для людей в различных секторах, таких как потребительские расходы, бизнес-инвестиции и уровень занятости, государственные программы, налоговая политика и процентные ставки. Целью данной статьи является анализ факторов инфляции в Узбекистане на конец 2024 года.

Ключевые слова: Инфляция, экономика, валовой внутренний продукт, индекс потребительских цен, денежно-кредитная политика, фискальная политика, валютные курсы.

Inflation is a sustained increase in the general price level of goods and services over a period of time. It is one of the major macroeconomic problems faced by countries around the world [1-20].

The main problems of combating inflation.ifficulty in determining the causes of inflation. Inflation can have various causes such as increase in cost of production, increase in money supply, increase in demand for goods and services. Determining the exact cause of inflation is necessary to develop an effective strategy to combat it.

Delay between taking action and its outcome. Measures to combat inflation usually do not have an immediate effect. It may take months or even years before they begin to affect the price level [21-34].

Social and political costs. Anti-inflation measures, such as raising interest rates or cutting government spending, can have negative social and political consequences. These measures can lead to higher unemployment, lower living standards and social unrest.

Modern methods of controlling inflation. Monetary policy. Central banks can use various tools such as interest rate changes, open market operations and reserve requirements to control inflation [35-56].

Fiscal policy. The government can use fiscal policy, such as increasing taxes or reducing spending, to reduce aggregate demand and combat inflation.

Current Economic Landscape: Before delving into the forecast for 2024, it's crucial to examine Uzbekistan's current economic landscape. Over recent years, Uzbekistan has undergone considerable economic reforms, aiming to liberalize its economy, attract foreign investment, promote national entrepreneurs and diversify its industries. These reforms have led to notable improvements in economic indicators, including GDP growth: in accordance with the preliminary assessment, in 2023 the GDP of the Republic of Uzbekistan in current prices amounted to 1 066 569,0 billion soums and, compared to 2022, increased in real terms by 6,0 %. The GDP deflator index, in relation to 2022 prices, amounted to 112,2 % while the consolidated CPI – consumer price index measures the rate at which the prices of consumer goods and services are changing over time – for the Republic of Uzbekistan for 2023 amounted to 108.8%, becoming the lowest annual rate since 2019, meaning that a falling CPI indicates lower inflation, or even deflation. However, they have also posed challenges, such as managing inflationary pressures arising from structural transformations and external factors.

Factors Influencing Inflation in Uzbekistan [56-62]:

Several factors contribute to inflation in Uzbekistan, ranging from domestic policies to global economic dynamics. Understanding these factors is key to forecasting inflation accurately:

1. Monetary Policy: The Central Bank of Uzbekistan plays a pivotal role in controlling inflation through its monetary policy instruments. Interest rates, money supply, and exchange rate management directly impact inflationary pressures.

2. Fiscal Policy: Government spending and taxation policies influence aggregate demand, thereby affecting inflationary pressures. Expansionary fiscal policies may lead to demand-pull inflation if not balanced effectively.

3. Exchange Rates: Given Uzbekistan's reliance on imports for certain goods and services, exchange rate fluctuations can influence domestic prices. Depreciation of the national currency may lead to higher import costs and contribute to cost-push inflation.

4. Supply Chain Disruptions: Global supply chain disruptions, as witnessed during the COVID-19 pandemic, can disrupt the flow of goods and services, leading to supply shortages and price hikes.

5. Energy Prices: Uzbekistan heavily relies on energy imports, particularly for natural gas. Fluctuations in energy prices can have cascading effects on production costs and consumer prices.

6. Agricultural Output: Agriculture plays a significant role in Uzbekistan's economy. Crop failures, adverse weather conditions, or disruptions in the agricultural supply chain can lead to food price inflation.

Forecasting Inflation for 2024:

Dynamics of the consolidated CPI (Inflation) and of Products and Services by December of the previous year, %

Years	2019	2020	2021	2022	2023	2024
Inflation(%)	115,2	111,1	110,0	112,3	108,8	
Products(%)	115,2	112,4	110,7	113,4	108,8	

Services(%)	115,2	107,1	107,7	108,4	108,7	
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x_1 – Products and x_2 – Services

There is a specific formula for making a model that can help to find an approximate rates for CPI (Inflation) :

$$y = a_0 + a_1x_1 + a_2x_2 + \varepsilon$$

Here: a_0, a_1, a_2 - coefficient and ε - random value

$$\left. \begin{aligned} na_0 + a_1 \sum_{i=1}^n (x_1)_i + a_2 \sum_{i=1}^n (x_2)_i &= \sum_{i=1}^n y_i \\ a_0 \sum_{i=1}^n (x_1)_i + a_1 \sum_{i=1}^n (x_1)_i^2 + a_2 \sum_{i=1}^n (x_1)_i(x_2)_i &= \sum_{i=1}^n (x_1)_i y_i \\ a_0 \sum_{i=1}^n (x_2)_i + a_1 \sum_{i=1}^n (x_1)_i(x_2)_i + a_2 \sum_{i=1}^n (x_2)_i^2 &= \sum_{i=1}^n (x_2)_i y_i \end{aligned} \right\}$$

According to the table above, the equation, which is below-mentioned, is made up :

$$\left. \begin{aligned} 5a_0 + a_1 60,5 + a_2 47,1 &= 57,4 \\ a_0 60,5 + a_1 756,3 + a_2 590,6 &= 717,9 \\ a_0 47,1 + a_1 590,6 + a_2 486,99 &= 566,7 \end{aligned} \right\}$$

Through the equation, it can be found :

$$a_2 \approx 0,2$$

$$a_1 \approx 0,8$$

$$a_0 \approx -0,1$$

As a result, the above-mentioned formula looks like this :

$$y = -0,1 + 0,8x_1 + 0,2x_2 + \varepsilon$$

The final thing to complete the formula is to find ε . After using the table and the formula, an average rate of ε equals to -0,012, so if -0,012 is put on formula instead of ε , the formula looks like this :

$$y = -0,112 + 0,8x_1 + 0,2x_2$$

Through the formula, if the percentages of Products and Services account for 105,8% and 105,7%, respectively in 2024, the rate of Inflation might be 105,7%, meaning 5,7% growth which can be more optimal comparing to previous years, according to estimates below :

$$y = -0,112 + 0,8 * 5,8 + 0,2 * 5,7 = 5,668 \approx 5,7$$

It means that both Products and Services are pivotal factors – link to the consolidated CPI (Inflation) – while Inflation could be influenced by the factors for the positive or negative development. In fact, above-mentioned factors, such as mainly Monetary Policy, Fiscal Policy and Exchange Rates, possess tight bonds and effects on the cost of Products and Services, and if the factors influence correctly on Products and Services to balance Inflation in Uzbekistan, so it might be likely to lead the economy for the bright future with no economic challenges.

Conclusion: Forecasting inflation in Uzbekistan for 2024 requires a nuanced understanding of both domestic and global economic dynamics. While economic reforms have bolstered Uzbekistan's growth prospects, managing inflation remains a critical challenge. Policymakers must adopt a proactive approach, balancing growth objectives with price stability to ensure sustainable economic development. Additionally, businesses and investors should remain vigilant, incorporating inflation forecasts into their strategic planning processes to mitigate risks and capitalize on emerging opportunities in Uzbekistan's evolving economy.

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