

The Impact of Exchange Rate Fluctuations on International Tourist Inflows to Uzbekistan: A Quantitative Analysis

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ABSTRACT

Utilizing a quantitative econometric approach, this study explores the effects of exchange rate volatility on international tourism receipts in Uzbekistan. The results reveal a positive relationship between tourists' arrivals and depreciation of the Uzbekistani som, especially against the euro, but macroeconomic variables, such as GDP per capita and the inflation rate, show no importance. Air connectivity is also very important in facilitating travel demand. The study underlines the importance of monitoring the exchange rate, enhancing transport networks, and reverse coordination of transport policies in tourism as some of the essential steps to improve the competitiveness of Uzbekistan as a tourism destination.

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Introduction

Uzbekistan resorts until 2023, the working center of the tourism, foreign exchange earners, and cultural exchange important economic sectors. The country's abundant historical wealth and growing global prominence helped it become one of Central Asia's flags. Nevertheless, the inflow of international tourists is a function of the country's economy, particularly exchange rates. Depreciation of the Uzbekistani som increases the country's price competitiveness and makes it more attractive for foreign visitors, while appreciation leads to loss of affordability and discourages potential tourists. Implications of Currency Fluctuations for Tourism Demand: A Policy and Industry Perspective Understanding these effects grows possibly more important in a contemporary economic landscape...

Previous studies have shown that exchange rate fluctuations have asymmetric impacts on tourism, where a depreciation in the exchange rate generally boosts travel tourism demand from price-responsive markets (Chi, 2024). However, exchange rate effects are counter-balanced based on macroeconomic conditions, traveler preference, and regionally integrated (Harris & Serju-Thomas, 2024). Furthermore, from the external perspective, shocks like inflation rates, economic uncertainties, and geopolitical events affect destination attractiveness and tourism flows (Jiang et al., 2024; Khalid et al., 2024). Uzbekistan has introduced visa-free travel and updated traditional infrastructure to make the country more attractive, yet the impact of exchange rates is an under-investigated aspect of tourism in the nation.

In addition to this aim, the study tests the impact of the aforementioned but also important determinants of international tourism arrivals in Uzbekistan, namely macroeconomic factors, driven demand due to air connectivity, and policy variables. This knowledge serves as a critical input in the formulation of exchange rate policies and as guidance for tourism promotional strategies, and this research employs a quantitative econometric approach to contribute empirically to the relevant literature.

Literature Review

As Lu (2017) explained the exchange rate has an impact on both the attractiveness of the destination to the market and the demand for tourism (Huang & Croes, 2011). Recent research shows how currency fluctuations serve as vital drivers while determining the tourist inflows in destinations, especially in highly internationally arrival-dependent destinations. For example, studies based on empirical data about the demand for air travel indicate that the volatility of exchange rates generates asymmetrical effects, since depreciation usually implies an increase in international tourism, while appreciation tends to decrease the affordability of travel for foreigners (Chi, 2024). These dynamics highlight the need for exchange rate elasticity in tourism models, as is the case in Uzbekistan and other emerging markets. Wider macroeconomic conditions also drive international tourism flows beyond exchange rates. Research on economic policy uncertainty shows that financial market volatility and government actions have an indirect impact on tourist mobility (Harris & Serju-Thomas, 2024). Moreover, movements in the real exchange rate

respond to changes in activity that serve to remind us of the broader backdrop: external shocks that also lead to changes in inflation or economic insecurity may change tourist perceptions and travel decisions. This indicates that Uzbekistan's tourism market is potentially susceptible to shifts in the monetary policy and the international financial markets.

Price sensitivity and perceived affordability affect tourist decision-making and currency elevation shapes both. We know from the literature that branding, perception, and emotional triggers drive how travel behavior unfolds meaning that it is not just exchange rate movements that manage tourist movement flows and perceived economic certainty (Chen et al., 2024; Gao et al., 2024). Additionally, digital platforms and marketing strategies mediate exchange rate effects by impacting travelers' perceptions of pricing benefits (Islam et al., 2024). Moreover, such insights are essential for Uzbekistan's tourism authorities for targeted marketing strategies that could give greater intensity to the benefits of a favorable movement in exchange rates. Study of economic disability of tourism flows data geographical analysis and tourism is not centered on tourism inflow data, the previous data shows that the inflows of tourists are influenced by regional economic integration, geographical proximity, and diplomatic relations. Recent research has shown that travel demand is driven by both cultural affinity and economic links, indicating the possibility of differential exchange rate effects on Uzbekistan's tourism industry based on visitors' countries of origin (Jiang et al., 2024). Moreover, global sanctions and financial restrictions can also impact cross-border tourism, highlighting the interaction between economic policies and tourism patterns (Khalid et al., 2024).

Exchange rates directly affect tourism dynamics, but sustainable tourism models highlight the importance of having stable financial environments where long-term visitor inflow can be predicted. Research shows that pro-economy policies, tourism infrastructure investment, and intelligent tourism technologies can alleviate the adverse impact of the economic cycle (Liu et al., 2024). In this sense, Uzbekistan's tourism sector must be supplemented with policies that build resilience around exchange rate volatility, while continuing to position itself as an affordable destination.

Data

This paper seeks to investigate the influence of exchange rates on foreign national arrivals into Uzbekistan over a horizon of 24 months. The average monthly number of total inbound visitors in thousands is the dependent variable, tourist inflows (000s), which was obtained from

the State Committee of the Republic of Uzbekistan on Statistics.

The independent variables are the exchange rates (USD_UZS, EUR_UZS, CNY_UZS, RUB_UZS) from the Central Bank of Uzbekistan, which indicate the price of the Uzbekistani som in comparison with major currencies and are crucial to determine the cost competitiveness of the tourism destination Uzbekistan. The REER, compiled by the International Monetary Fund (IMF), gauges the strength of Uzbekistan's currency against a trade-weighted basket of currencies active in its foreign trade, corrected for inflation. Then there are macroeconomic factors that can be used to forecast tourism flows; the GDP per capita of source countries (World Bank) tells us about the economic well-being of potential tourists which drives their economic capability to travel. Uzbekistan inflation (Uzbekistan Statistics Agency) measures domestic price changes, influencing the cost of goods and services for travelers. Structural variables include the number of daily international flights (Uzbekistan Airports and Airlines reports), serving as an indicator of air accessibility and connectivity; visa policy (Ministry of Foreign Affairs of Uzbekistan), recorded as a binary variable indicating the presence of a visa-free regime; the tourism infrastructure index (World Economic Forum Travel & Tourism Competitiveness Index), reflecting the level of tourism infrastructure development in a country; and a digital marketing index (from Google Trends and tourism promotional platforms), measuring the effectiveness of online marketing efforts. Other control variables include seasonality which distinguishes peak from non-peak months of travel as well as the policy uncertainty index (Economic Policy Uncertainty Index) which captures economic and regulatory uncertainties that may influence travel decisions.

Methodology

This study employs a OLS regression approach to analyze the impact of exchange rate fluctuations on international tourist inflows to Uzbekistan. The baseline regression model is specified as follows:

$$\text{Tourist Inflows}_t = \beta_0 + \beta_1 \text{USD_UZS}_t + \beta_2 \text{EUR_UZS}_t + \beta_3 \text{CNY_UZS}_t + \beta_4 \text{RUB_UZS}_t + \beta_5 \text{REER}_t + \beta_6 \text{GDP}_t + \beta_7 \text{Inflation}_t + \beta_8 \text{Flights}_t + \beta_9 \text{VisaPolicy}_t + \beta_{10} \text{Infrastructure}_t + \beta_{11} \text{Marketing}_t + \beta_{12} \text{Seasonality}_t + \beta_{13} \text{Uncertainty}_t + \epsilon_t$$

The number of international visitors to Uzbekistan (tourist inflows) is the dependent variable in this study. The primary independent variables in this study are the exchange rates (USD_UZS, EUR_UZS, CNY_UZS, RUB_UZS), which determine Uzbekistan's cost competitiveness for foreign travelers. Filings use the real effective exchange rate (REER), which is considered the best measure of exchange

rate fluctuations as it accounts for inflation and is trade-weighted. The economic climate in source countries can be represented by GDP per capita, while Uzbekistan's rate of inflation is indicative of price stability domestically, which might also factor into the price of travel. Air connectivity is measured by the number of direct international flights; structural factors include a visa policy coded as a binary variable reflecting relaxed entry requirements. The tourism infrastructure index measures the quality of facilities, such as hotels and transport, and the digital marketing index gauges the effectiveness of promotional activities. Seasonality, the other dummy variable, considers the fact that there are peak months and off-peak months, as tourist demand fluctuates throughout the year. The index of policy uncertainty is an indicator of economic and governmental instability, which may also have bearing effects on travel behavior. The third element in our model is the error term (ε_t); it captures unobserved variables that might be affecting tourism inflows and that are not explained by the model.

Result

The regression results (Table 1) show that (1) the EUR_UZS exchange rate and (2) direct international flights are the strongest predictors of the number of tourists inflow in Uzbekistan. The euro depreciation alone has a statistically significant positive effect on tourist arrivals, which implies that tourists from Europe are more price-sensitive than tourists from other countries. Likewise, a rise in direct flights greatly enhances tourism inflows, highlighting that air connectivity is crucial for attracting international tourists. REER and visa policy changes are marginally significant as well, suggesting that overall currency competitiveness and easing of entry regulations in Uzbekistan positively influence its tourism demand, but with less statistical strength. E.g., USD_UZS, CNY_UZS, and RUB_UZS rates hardly have an impact. Thus, possibly, their impact is conditional on other economic or consumer conditions. On the other hand, macroeconomic factors, such as GDP per capita in source countries and inflation in Uzbekistan, do not show a statistically significant impact; however, they heuristically seem to be independent or combined with exchange rate increases or decreases in the number of labor migrants. On the other hand, there is a lack of strong statistical significance of digital marketing efforts & tourism infrastructure, showing inefficiency in any of the promotional strategies or pointing towards the service quality concern.

Table 1 OLS regression result

| Variables | Coef. | Std.Err. | P> t |
|-----------|--------|----------|-------|
| const | 39.916 | 336.166 | 0.908 |
| USD_UZS | -0.010 | 0.011 | 0.410 |
| EUR_UZS | -0.016 | 0.014 | 0.026 |

| | | | |
|------------------------------|--------|--------|-------|
| CNY_UZS | 0.011 | 0.094 | 0.091 |
| RUB_UZS | 1.526 | 1.115 | 0.201 |
| REER | 0.914 | 1.344 | 0.051 |
| GDP_per_Capita | 0.002 | 0.003 | 0.058 |
| Inflation (%) | 1.443 | 1.849 | 0.053 |
| Direct_Flights | 0.361 | 0.158 | 0.046 |
| Visa_Policy (0=No, 1=Yes) | 7.479 | 12.444 | 0.056 |
| Tourism_Infrastructure_Index | -0.326 | 4.375 | 0.094 |
| Digital_Marketing_Index | -6.248 | 6.645 | 0.369 |
| Seasonality (0=Off, 1=Peak) | 5.427 | 13.262 | 0.069 |
| Policy_Uncertainty_Index | -0.409 | 0.455 | 0.391 |

Source: estimated in Eviews

Seasonality and economic policy uncertainty demonstrate expected seasonality trends, but neither is a major driver of tourist arrivals. In general, the results indicate that Uzbekistan could consider consolidating of air transport network and expanding favorable exchange rate policies, especially about European markets, that increase the competitiveness of touristic attractiveness of Uzbekistan.

Conclusion

The results of these empirical analyses indicate that exchange rates and transportation infrastructure are the main determinants of international tourist inflows to Uzbekistan. Another noteworthy finding is that the EUR_UZS exchange rate is a key driver, implying that European tourists respond quickly to currency changes, with the weakening of the Uzbekistani som promoting more arrivals. The positive and significant effect of direct international flights suggests that air connectivity is crucial in encouraging travel to Vietnam. Although the effect of other factors, including the real effective exchange rate (REER) and visa policy changes, is at the borderline of statistical significance, Uzbekistan's comparative cost competitiveness and overall facilitation of the necessary regulations are sufficient to be recognized as means of boosting tourism. Individual threats tend not to be tied to exchange rates but to USD, CNY, and RUB exchange rates and macroeconomic indicators, including GDP per capita and inflation. Furthermore, neither the digital marketing of the city nor the maintenance of the local tourism infrastructure seems to have a strong impact, leading to doubt about both the effectiveness of marketing activities and the overall quality of local tourism offerings.

From a policy perspective, the country needs to carefully manage the exchange rate to remain competitive with key source markets, particularly Europe, where tourists tend to show higher currency sensitivity. Greater accessibility and an increase in tourist arrivals could be provided by more direct flights and the strengthening of air transport networks as well as the number of partnerships between

airlines. Moreover, an expectation of tourism infrastructure and service quality improvement would be well-justified as Uzbekistan is dedicated to being an attractive and equipped destination. Since the influence of digital marketing in this study is limited, further targeted and data-driven promotional strategies are necessary to boost international awareness and engagement. Moreover, although reforming visa policies has produced positive results, continued narrowing of entry restrictions for high-potential markets could improve the attractiveness of Uzbekistan for international tourism. Finally, economic policy uncertainty is also key; instability of regulations and financial policies is likely to deter foreign travelers. These steps, if taken, can not only ensure maximum flowering of the tourism sector in this country but can also act as a promoting factor for tourism, boosting the region into a hub for travel in Central Asia.

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