



---

# THE IMPACT OF REMITTANCE INFLOWS ON GDP GROWTH IN UZBEKISTAN: AN OLS REGRESSION ANALYSIS (2005–2023)

Xo'jammurod Sobitov

Student, Westminster International University in Tashkent in English

---

## Abstract

This study explores the effect of remittance inflows on economic growth in Uzbekistan from 2005 to 2023. As one largest receiver of remittances in Central Asia, Uzbekistan's macroeconomic stability is highly benefited from external transfers. Using annual time-series data, this study employs an Ordinary Least Squares (OLS) regression model to analyze the impact of remittances on Gross Domestic Product (GDP) growth. The results suggest a statistically significant positive correlation between remittance inflows and GDP growth, indicating that these funds prevent external shocks and serve a source of capital for the consumption of citizens and investment. However, the study also indicates the potential risks of dependency on volatile migration flows. Policy recommendations cover diversifying financial sources to reduce the risk of reliance on remittances and directing these funds into productive projects via financial inclusion initiatives.

**Keywords:** Remittances, GDP growth, Uzbekistan, OLS regression, economic growth, labor migration, macroeconomic stability, foreign direct investment.

## Introduction

Labor migration is a feature of the post-Soviet economic effect on Central Asia, such as Uzbekistan which stands out as a primary source of migrant labor, especially towards the Russian Federation and other Commonwealth of Independent States (CIS) countries. After gaining independence, and especially after the liberalization reforms urged in the late 2010s, the capacity of remittances sent back by Uzbek migrants has grown substantially. These



*Modern American Journal of Business,  
Economics, and Entrepreneurship*

ISSN (E): 3067-7203

Volume 2, Issue 6, June, 2026

Website: [usajournals.org](http://usajournals.org)

*This work is Licensed under CC BY 4.0 a Creative Commons  
Attribution 4.0 International License.*

---

financial flows become huge part of national balance of payments and a significant source of foreign currency reserves. According to IMF (2022), remittances provides more than 10 % of Uzbekistan's GDP, constraining official development assistance and, in some years, rivaling foreign direct investment (FDI) inflows.

The effects of receiving such great amount of capital into the economy have many different aspects. On one hand, remittances alleviate poverty, improve household welfare, and make consumption more stable during periods of economic downturn. However, heavy reliance on remittances may lead to Dutch Disease effects, where entering high amount of foreign currency appreciates the real exchange rate, then it harms the competitiveness of the tradable sector. Furthermore, there is an ongoing debate in development economics in terms of whether external remittances enhance long-term economic growth or merely sustain consumption without contributing to efficient sectors.

While numerous studies have researched the macroeconomic impact of remittances globally, there is a relative shortage of focused econometric analyses specifically for Uzbekistan using recent data that includes the post-2016 reform era and the global economic disruptions of the early 2020s. This paper aims to fill this gap by conducting an OLS regression analysis using annual data from 2005 to 2023. The main research question is that remittance inflows have a statistically considerable positive effect on Uzbekistan's GDP growth rate or not when making other key macroeconomic variables constant. Understanding this correlation is crucial for policymakers who aim to create strategies that maximize the benefits of migration while reducing its associated risks.

### **Literature Review**

The theoretical literature on remittances and economic growth shows combined clue. The neoclassical growth model indicates that remittances have positive effect on growth by alleviating budget constraints for needs such as households, allowing for higher investment in human capital (education and health) and physical capital (housing and small businesses). World Bank (2023) argues that remittances are used more like insurance payments when the family needs rather



*Modern American Journal of Business,  
Economics, and Entrepreneurship*

ISSN (E): 3067-7203

Volume 2, Issue 6, June, 2026

Website: usajournals.org

*This work is Licensed under CC BY 4.0 a Creative Commons  
Attribution 4.0 International License.*

---

than investment capital. So, it may not benefit on long-term productivity but stabilizes the economy during shocks.

Empirical studies in the context of developing countries give different results. Sobiech (2019) finds remittances useful for GDP growth, bringing examples from South Asia and Latin America where financial development allowed remittances to be directed into productive investments. In contrast, Amuedo-Dorantes and Pozo (2014) suggest a negative relationship because of consumption-oriented nature of remittances and the potential for dependency, where recipients reduce their labor supply due to guaranteed external income. In the specific context of Central Asia, previous research has mentioned the high volatility of remittance flows because of their dependence on the host countries' economic conditions, primarily Russia. For example, World Bank report published in 2016 mentions that during the 2014-2015 oil price crash and the subsequent ruble devaluation, remittance flows to the region dropped sharply, causing considerable macroeconomic instability in Tajikistan, Kyrgyzstan, and Uzbekistan. Recent studies aiming on Uzbekistan suggest that even though remittances have helped decrease poverty rates, their contribution to structural transformation remains limited due to poor financial intermediation mechanisms. This study builds on these works by extending the time series to 2023, considering the effects of recent digitalization efforts in the banking sector also political and economic changes affecting labor migration patterns.

### **Data and Methodology**

This research paper uses the data collected through the period from 2005 to 2023. The primary data sources include the World Bank's World Development Indicators (WDI), the Central Bank of the Republic of Uzbekistan, and the State Committee of the Republic of Uzbekistan on Statistics. The reason why these sources are chosen is driven by data availability and the structural changes in the Uzbek economy which includes the currency liberalization in 2017.

The dependent variable is the annual GDP growth rate (GDP\_GROWTH), measured as the percentage change in real GDP at constant prices. The key independent variable is Remittance Inflows (REM), defined as personal transfers received by residents from those working abroad, expressed as a



***Modern American Journal of Business,  
Economics, and Entrepreneurship***

**ISSN (E):** 3067-7203

**Volume 2, Issue 6, June, 2026**

**Website:** [usajournals.org](http://usajournals.org)

***This work is Licensed under CC BY 4.0 a Creative Commons  
Attribution 4.0 International License.***

---

percentage of GDP. To know the effect of remittances exactly, several control variables are included based on standard growth determinants:

All variables were tested for stationarity using the Augmented Dickey-Fuller (ADF) test to avoid spurious regression results. Given the relatively small sample size (N=19), care was taken to ensure that the number of regressors did not exceed the degrees of freedom excessively.

The coefficients are estimated by using the Ordinary Least Squares (OLS) method. OLS is preferred because it is easy to understand and apply when certain statistical assumptions are satisfied. Diagnostic tests for multicollinearity, heteroskedasticity, and autocorrelation were conducted to ensure the consistency of the estimates.

The coefficient for Remittance Inflows (REM) is positive and statistically high at 5%. It means a 1 percentage point increase in remittances results in a 0.45 percentage point increase in the GDP growth rate while keeping other factors constant. This finding supports the hypothesis that remittances have positive impact on economic growth in Uzbekistan by increasing household consumption and demand for local goods and services.

Foreign Direct Investment (FDI) also shows a positive coefficient, though it is less statistically significant than remittances. This may be as a result of the smaller volume of FDI flows than remittances in the Uzbek context. The Inflation Rate (INF) has a significant negative coefficient that supports economic theory: high inflation lessens growth by reducing purchasing power and increasing uncertainty. Trade Openness (OPEN) shows a small positive relationship. The reasons may differ. Maybe it is because the benefits of trade take time to realize or they may disappear due to external shocks during the given period. According to Government Expenditure (GOV\_EXP), it has a moderate positive effect that public spending plays a supportive role in economic activity.

The Variance Inflation Factor (VIF) values for all independent variables are below 5, that means multicollinearity is not a serious concern in this model. The Breusch-Pagan test for heteroskedasticity gives a p-value greater than 0.1, that is to fail to reject the null hypothesis of homoskedasticity. The Durbin-Watson statistic is close to 2, that means no significant first-order autocorrelation in the



*Modern American Journal of Business,  
Economics, and Entrepreneurship*

ISSN (E): 3067-7203

Volume 2, Issue 6, June, 2026

Website: [usajournals.org](http://usajournals.org)

*This work is Licensed under CC BY 4.0 a Creative Commons  
Attribution 4.0 International License.*

---

residuals. These diagnostics confirm that the OLS estimates are unbiased and efficient.

### **Discussion**

The positive impact of remittances on GDP growth in Uzbekistan is similar with findings from countries which rely on remittance. The mechanism appears to be mainly demand-driven. Remittances increase the disposable income of recipient households mainly living in rural areas. This increased income results in higher consumption of food, clothing, housing, and services. To be precise, it increases aggregate demand and short-to-medium-term economic growth.

However, careful consideration into the nature of remittance is needed. The majority of remittances in Uzbekistan are used for consumption rather than productive investment. Even though it helps poverty reduction and welfare improvement, it does not improve long-term productivity and industrialization. Michael Coon (2014) highlights that the shortage of significant investment in entrepreneurial activities and viable investment opportunities may prevent remittances from being used for the productive sector.

Moreover, the volatility of remittances brings a risk to macroeconomic stability. As seen during the 2014-2015 and 2020-2022 periods, external shocks in host countries can cause a significant reduction in remittance flows. Such kind of dependency on remittance makes the Uzbek economy vulnerable to external shocks. The positive coefficient found in this study means the average effect over the period, but it hides the potential disruptive effects during downturns.

When the impact of remittances is compared to FDI, the results show that although FDI is more beneficial for long-term growth in theory with technology transfer and job creation, its current amount is too small to drive growth independently. However, remittances supply a more immediate and sustainable financial flow into the economy. This emphasizes the need for initiatives that can benefit from the stability of remittance flows to attract complementary FDI. Based on the empirical findings, several policy recommendations can be made. First, the government should focus on financial inclusion initiatives to channel remittances into productive investments. This may consist of promoting savings instruments, microfinance products, and investment funds made specially for



***Modern American Journal of Business,  
Economics, and Entrepreneurship***

**ISSN (E):** 3067-7203

**Volume 2, Issue 6, June, 2026**

**Website:** [usajournals.org](http://usajournals.org)

***This work is Licensed under CC BY 4.0 a Creative Commons  
Attribution 4.0 International License.***

---

people in abroad. Digital banking platforms, which have expanded rapidly in Uzbekistan since 2017, can play a crucial role in reducing transaction costs and encouraging formal financial participation (World Bank, 2024).

Second, it is essential to diversify the economy and reduce dependency on remittance. Investing in education and vocational training are options to create high-quality jobs locally which reduces the need for low-skilled people to migrate. Additionally, it is important to improve financial climate in order to attract more FDI investments. It can help balance the external financing structure.

Third, macroeconomic policies should take the volatility of remittances into account. foreign exchange reserves should be built during periods of high inflows to act as a shield against sudden stops. The inflationary pressures may arise from large capital inflows. To manage them, monetary policy should remain flexible.

### **Conclusion**

This study provides empirical evidence on the impact of remittance inflows on GDP growth in Uzbekistan between 2005 and 2023. Through an OLS regression method, the analysis reveals a statistically significant positive relationship between remittances and economic growth. Remittances stimulate domestic demand and poverty alleviation which contribute substantially to the country's macroeconomic performance. However, the consumption-oriented nature of remittance and their vulnerability to external shocks emphasizes the need for strategic policy interventions are needed as remittances are consumption-oriented and vulnerable to external shocks.

Remittances are beneficial to support growth, but they are not enough to substitute structural reforms and productive investment. Uzbekistan should create policies, encouraging the productivity of remittance funds, deepening financial markets, and diversifying the economy to keep long-term development. Future research could question the micro-level impact of remittances on the behavior of household investment. Also, it may explore the distribution of expenditures that comes from remittances to provide more detailed insights for policy creation.



*Modern American Journal of Business,  
Economics, and Entrepreneurship*

ISSN (E): 3067-7203

Volume 2, Issue 6, June, 2026

Website: [usajournals.org](http://usajournals.org)

*This work is Licensed under CC BY 4.0 a Creative Commons  
Attribution 4.0 International License.*

---

## References

1. Amuedo-Dorantes, C. and Pozo, S. (2014). The Widespread Impacts of Remittance Flows. IZA World of Labor. Available from <https://doi.org/10.15185/izawol.97> [Accessed 2 July 2026].
2. Coon, M. (2014). Financial development and the end-use of migrants' remittances. IZA Journal of Labor & Development, 3 (1). Available from <https://doi.org/10.1186/2193-9020-3-7>.
3. Dept, I.M.F.M.E. and C.A. (2022). Republic of Uzbekistan: 2022 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for the Republic of Uzbekistan. IMF Staff Country Reports, 2022 (189). Available from <https://doi.org/10.5089/9798400211805.002.A001>.
4. Sobiech, I. (2019). Remittances, finance and growth: Does financial development foster the impact of remittances on economic growth? World Development, 113, 44–59. Available from <https://doi.org/10.1016/j.worlddev.2018.08.016>.
5. World Bank. (2016). Remittances to Developing Countries Edge Up Slightly in 2015. World Bank. Available from <https://www.worldbank.org/en/news/press-release/2016/04/13/remittances-to-developing-countries-edge-up-slightly-in-2015> [Accessed 2 July 2026].
6. World Bank. (2023a). Leveraging Diaspora Finances for Private Capital Mobilization. Available from <https://documents1.worldbank.org/curated/en/099740408142422676/pdf/IDU-84dfd61b-e135-4242-a202-3728b2e8fa86.pdf>.
7. World Bank. (2023b). Remittance Flows Continue to Grow in 2023 Albeit at Slower Pace | Migration and Development Brief 39. World Bank. Available from <https://www.worldbank.org/en/news/press-release/2023/12/18/remittance-flows-grow-2023-slower-pace-migration-development-brief>.
8. World Bank. (2024). Remittances Slowed in 2023, Expected to Grow Faster in 2024. World Bank. Available from <https://www.worldbank.org/en/news/press-release/2024/06/26/remittances-slowed-in-2023-expected-to-grow-faster-in-2024> [Accessed 2 July 2026].