INVESTMENT ATTRACTIVENESS AND ECONOMIC SECURITY IN UZBEKISTAN: INSTITUTIONAL DETERMINANTS AND STRATEGIC CHALLENGES

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Abstract

Uzbekistan has made foreign capital a central goal of its economic strategy, but more investment does not automatically mean a safer economy. This article looks at two questions: how institutional quality is related to foreign direct investment (FDI), and whether the country's growing appeal to investors has come with new external vulnerabilities. I use public data on investment, governance and the external balance, and apply trend comparison, regression analysis and a simple vulnerability index. Better governance, regulatory quality above all, goes together with higher FDI, though this is a long-run co-movement and cannot be read as proven causation. Over the same years, reliance on external debt and remittances has also grown. The article proposes stronger contract enforcement, a broader investment base and closer management of external liabilities. In my view, the harder task now is making that capital durable.

Keywords: foreign direct investment, institutional quality, economic security, Uzbekistan, external vulnerability

Introduction

Foreign direct investment (FDI) is often used as a kind of scoreboard for developing economies: the more capital arrives, the better the country must be doing. I think that reading is too narrow. If capital comes in without secure property rights, predictable contracts or a stable external position, the economy may look richer while actually becoming more exposed to shocks. This is why I study two things side by side: investment attractiveness, meaning how appealing a country looks to outside investors, and economic security, meaning the ability of an economy to keep growing when external shocks hit. Uzbekistan makes a useful case. In 2016, exports and imports together amounted to only 25.7 per cent of GDP, down from almost 80 per cent in 2008 [1]. After 2017 the country liberalised its foreign exchange regime, adopted modern investment legislation and carried out judicial and e-government reforms [2]. Net FDI inflows rose from USD 0.07 billion in 2000 to a record USD 4.4 billion in 2025 [1], and the government aims to reach upper middle-income status by 2030 [2]. That target will require a great deal of investment, so the topic is of real practical importance as well as being timely.

Several things pushed me toward this topic. Institutions are still weakest exactly where investors feel it most: in 2023 Uzbekistan ranked 156th among 205 economies on both rule of law and control of corruption [3]. Investment is also volatile and concentrated, and the OECD describes FDI to the country as not widely diversified by sector or by country of origin [2]. On top of that, external exposure has

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grown. External debt reached 60.5 per cent of GNI in 2024, and remittances reached 14.3 per cent of GDP in 2025 [1]. So the country looks more attractive than before, but what that attractiveness rests on is not yet equally solid. The article therefore asks three questions. (1) How have FDI and institutional quality changed since 2000, and is there a visible change around 2017? (2) Is better institutional quality associated with larger FDI inflows once growth and openness are controlled for? (3) What does the economic security profile look like, and has it moved together with investment attractiveness? Two hypotheses guide the work. H1: institutional quality is positively associated with FDI relative to GDP. H2: investment attractiveness and external vulnerability have risen together. Because the sample is short and the design is observational, I treat the findings as patterns and arguments, not as estimates of policy impact.

Literature Review

The institutional view of investment starts with North [4], who defines institutions as the rules of the game in a society and argues that they shape economic performance by affecting the costs and uncertainty of exchange. For a foreign investor this has a concrete meaning: a plant, once built, cannot be moved if a dispute goes badly, so a court that enforces contracts is in effect part of the asset. Dunning [5] approaches the same decision from the firm's side. In his eclectic paradigm a company produces abroad when it holds ownership advantages and finds both location and internalisation advantages abroad. Location advantages describe the host country, and I treat institutional quality as one of them.

Empirical work supports this link. Asiedu [6], using panel data for African countries, found that less corruption, a reliable legal system and political stability were associated with higher FDI, alongside market size and natural resources. Busse and Hefeker [7] used data for 83 developing countries over 1984–2003 and reported that government stability, the absence of internal conflict and ethnic tensions, basic democratic rights and law and order were highly significant determinants of FDI inflows. The Worldwide Governance Indicators, which I use as the measure of institutional quality, were designed to make such comparisons possible across countries and years [8].

Several researchers based in Uzbekistan have looked at the same question. Abdullaeva, Turlibekova, Khasanova and Sadibekova [9] built a composite economic freedom index from ten indicators and combined it with provincial data for 2012–2023, using system GMM. They found that economic freedom has a significant positive effect on FDI, and that official development assistance strengthens this effect. In their reading, inflows rise when institutions and policies protect private property rights effectively, and they recommend stronger contract enforcement and fewer administrative barriers. Hojiyeva [10] looked at the other side of the relationship. Using OLS and VAR models for 2013–2023, she found that gross capital formation and portfolio investment largely drive economic performance, while FDI supports technology transfer and competitiveness but shows declining returns over time. She recommends diversification and regulatory overhaul. These studies agree that institutions matter and that investment needs to be diversified. Among the studies I reviewed, however, none connects investment attractiveness with the external vulnerabilities that accompany it, such as rising external debt and dependence on remittances. This article tries to fill that gap, with the data limits described below.

Methodology

All series are annual and publicly available. FDI, trade openness, external debt, reserves, inflation and remittances come from the World Bank's World Development Indicators and International Debt Statistics [1]. Real GDP growth comes from the IMF's World Economic Outlook [11]. Institutional

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quality comes from the Worldwide Governance Indicators [3], which summarise perceptions of governance on a scale from about −2.5 to +2.5, with the global average at zero. I did not use Central Bank microdata. Central Bank figures reported in the press [12] are not directly comparable with the World Bank's balance-of-payments series, probably because direct investment can be defined more broadly, so I use the World Bank series throughout to keep definitions consistent across years. The data were retrieved from public mirrors of these databases in October 2026, and the latest observations may be revised. Table 1 lists the variables.

Table 1. Variables, definitions and sources[1]

Variable	Definition	Source	Coverage
FDI net inflows (USD)	Net direct-investment equity inflows, balance of payments, current USD	World Bank WDI	2000–2025
FDI net inflows (% GDP)	Same series divided by GDP	World Bank WDI	2000–2025
Institutional index	Mean of four WGI estimates: rule of law, control of corruption, regulatory quality, government effectiveness (−2.5 to +2.5)	World Bank WGI	2000, 2002–2023
Real GDP growth (%)	Annual change in real GDP	IMF WEO	2000–2025
Trade openness (% GDP)	Exports plus imports of goods and services	World Bank WDI	2000–2025
External debt (% GNI)	Total external debt stock relative to gross national income	World Bank IDS	2000–2024
Reserves (USD bn)	Total reserves including gold	World Bank WDI	2013–2024
CPI inflation (%)	Annual change in consumer prices	World Bank WDI	2011–2025
Remittances (% GDP)	Personal remittances received	World Bank WDI	2005–2025

The outcome is net FDI inflows as a share of GDP; log dollar inflows are used as a robustness check. Institutional quality (INST) is the mean of four WGI dimensions most relevant to investors: rule of law, control of corruption, regulatory quality and government effectiveness. The main model relates FDI to institutions, growth and trade openness:

$$FDI_t = \beta_0 + \beta_1 INST_t + \beta_2 GROWTH_t + \beta_3 TRADE_t + \varepsilon_t$$

To test whether 2017 marks a break, I estimate a segmented regression with a time trend, a level shift and a change in slope, where D equals 1 from 2017 onwards:

$$FDI_t = \alpha_0 + \alpha_1 t + \alpha_2 D_t + \alpha_3 (t - 2017) D_t + u_t$$

Because both series trend upward, I also estimate the main model in first differences:

$$\Delta FDI_t = \gamma_0 + \gamma_1 \Delta INST_t + \gamma_2 \Delta GROWTH_t + \gamma_3 \Delta TRADE_t + e_t$$

[1] Source: Done by author.

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Economic security is measured with an external vulnerability index (EVI) for 2013–2024, the years in which all components are available. It averages three min–max rescaled indicators, x1 to x3 (external debt as a share of GNI, CPI inflation and remittances as a share of GDP), so that 0 is the lowest and 1 the highest value in the window:

$$EVI_t = (1/3)\ \Sigma_{i=1}\hat{}\{3\}\ (x_{i,t} - \min x_i) / (\max x_i - \min x_i)$$

Mean values before and after 2017 are compared with Welch's t-test and a Mann–Whitney U test. The break year is chosen in advance on institutional grounds, not searched for in the data. Models are estimated by OLS with Newey–West standard errors (two lags) [13], which allow for serial correlation. Model M3 lags the institutional index by one year; M4 enters the four WGI dimensions separately; M5 is equation . Multicollinearity is checked with variance inflation factors, heteroskedasticity with the Breusch–Pagan test and normality of residuals with the Jarque–Bera test. All calculations were done in Python (pandas, SciPy, statsmodels [14]) and the figures with matplotlib. With only 21 to 23 observations, the standard errors are likely to be somewhat optimistic, so the results are interpreted conservatively.

Results and Analysis

Net FDI inflows rose from USD 0.07 billion in 2000 to USD 4.40 billion in 2025, a compound annual growth rate of 17.7 per cent in nominal terms, though from a very low base (Figure 1). The growth was uneven. Inflows jumped in 2007 and 2010, fell sharply in 2012, dropped to USD 0.62 billion in 2018 and climbed to USD 2.32 billion in 2019. FDI stayed between 0.5 and 3.3 per cent of GDP, and its coefficient of variation is 0.49, which suggests that single large projects can move the annual figure considerably.

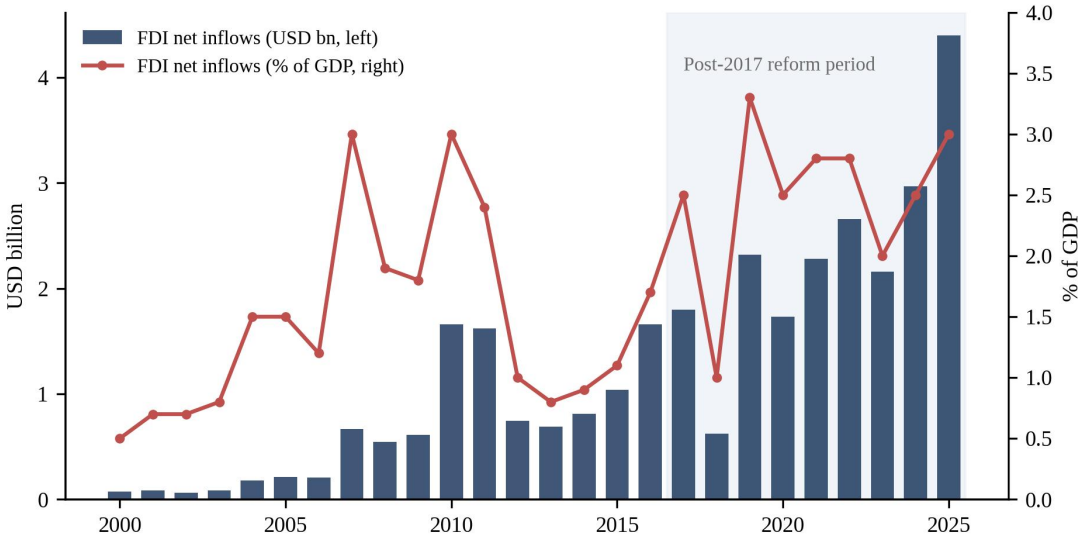


Figure 1. Net FDI inflows to Uzbekistan, 2000–2025.

Mean annual inflows were USD 644 million in 2000–2016 and USD 2,327 million in 2017–2025, roughly 3.6 times higher. Relative to GDP, the average moved from 1.44 to 2.49 per cent. The difference is statistically significant (Welch t = 3.59, p = 0.002; Mann–Whitney p = 0.003) and stronger still for log dollar inflows (t = 5.08, p < 0.001). Table 2 gives descriptive statistics.

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Table 2. Descriptive statistics

Variable	Period	N	Mean	SD	Min	Max
FDI net inflows (USD bn)	2000-2025	26	1.23	1.10	0.07	4.40
FDI net inflows (% of GDP)	2000-2025	26	1.80	0.89	0.50	3.30
Real GDP growth (%)	2000-2025	26	6.61	1.86	1.60	9.50
Trade openness (% of GDP)	2000-2025	26	54.92	15.11	25.70	79.70
Institutional quality index (WGI mean)	2000-2023	23	-1.12	0.23	-1.39	-0.62
Remittances (% of GDP)	2005-2025	21	9.68	3.22	5.00	16.50
CPI inflation (%)	2011-2025	15	11.63	2.65	8.10	17.50
External debt (% of GNI)	2000-2024	25	33.46	17.66	12.50	60.50

The composite institutional index improved from −1.39 in 2000 to −1.16 in 2016 and −0.63 in 2023 (Figure 2). Its mean was −1.25 in 2000–2016 and −0.84 in 2017–2023, a clearly significant difference (Welch t = 5.52, p = 0.001). The improvement was uneven. Between 2016 and 2023 regulatory quality gained 1.06 points (from −1.64 to −0.58), while control of corruption, government effectiveness and rule of law rose by 0.39, 0.38 and 0.30 points. Most of the movement came in 2021, when all four dimensions improved together.

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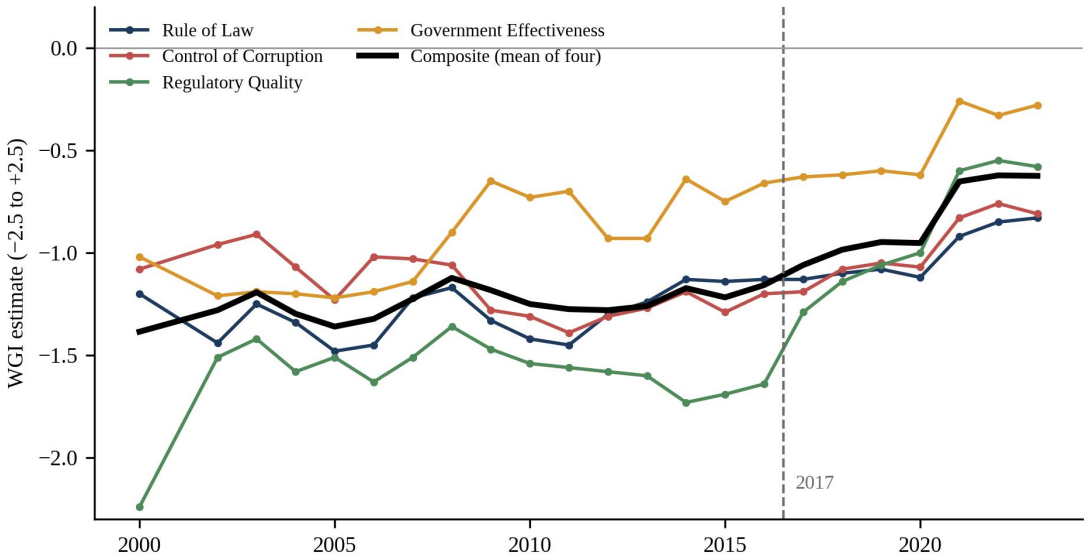


Figure 2. Worldwide Governance Indicators for Uzbekistan, 2000–2023.

Better does not mean good, though. All four estimates are still below zero, the global average, and in 2023 Uzbekistan ranked 156th of 205 economies on rule of law and control of corruption, 139th on regulatory quality and 120th on government effectiveness [3]. The state has clearly got better at writing and administering rules for business. It has been slower to make courts and anti-corruption bodies credible to people who have no connections.The segmented regression is less striking than the simple averages. It gives a pre-2017 trend of 0.041 percentage points of GDP per year ($p = 0.31$), a post-2017 level shift of 0.40 points (standard error 0.55, $p = 0.47$) and a slope change of 0.029 points per year ($p = 0.62$); R^2 is 0.38 (Figure 3). Neither the jump nor the slope change can be told apart from zero. That does not contradict the mean comparison. With a rising trend, noisy annual data and only 26 observations, it is hard to credit the higher post-2017 average to a clean break. A gradual build-up fits the data about as well as a sudden change does.

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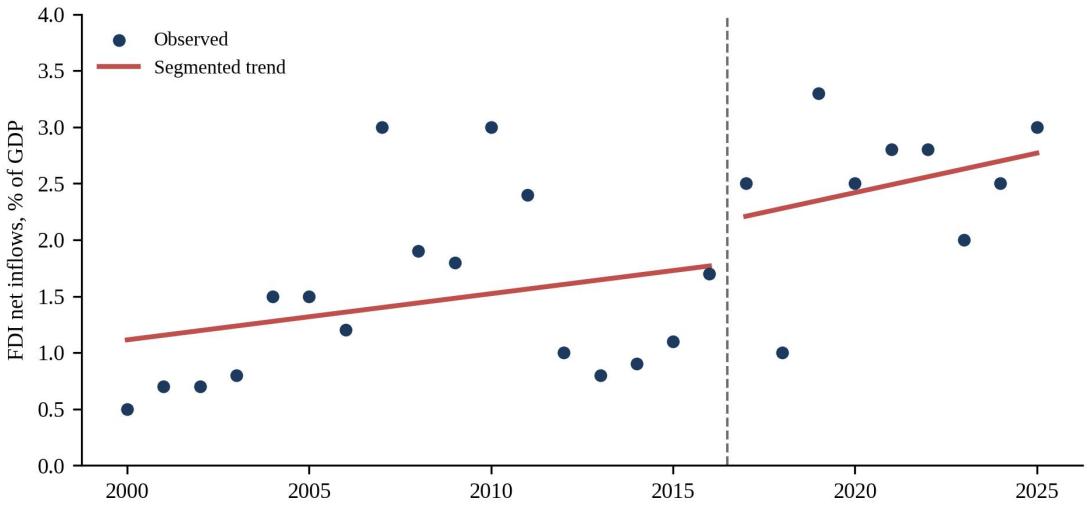


Figure 3. Segmented regression of FDI/GDP around 2017.

Across 2000–2023 the institutional index correlates with FDI/GDP at r = 0.51 (p = 0.012; Spearman ρ = 0.54, p = 0.008) and with log dollar FDI at r = 0.64. GDP growth (r = 0.20) and trade openness (r = 0.18) are only weakly related to FDI/GDP and almost uncorrelated with institutions (Figure 4a).

Table 3 reports the regressions. In M1 the institutional coefficient is 2.02 (HAC standard error 0.48, p < 0.001): a 0.1-point improvement in the governance index goes with FDI about 0.2 percentage points of GDP higher. The standardised coefficient is 0.53 with a 95 per cent interval of 0.28 to 0.78 (Figure 5b). Growth and openness have positive signs but are not statistically distinguishable from zero. The model explains 34 per cent of the variance (adjusted 24 per cent). Variance inflation factors are all close to 1.0, the Breusch–Pagan test (p = 0.92) and the Jarque–Bera test (p = 0.33) raise no concerns, and the Durbin–Watson statistic is 1.77.

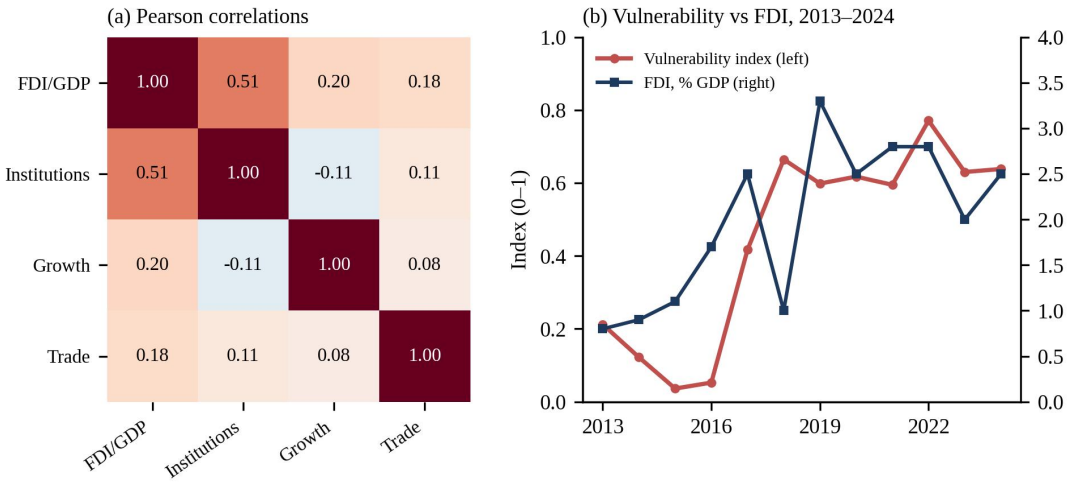


Figure 4. Correlations among the main variables and the vulnerability index.

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Table 3. Regression results: institutions and FDI

	(M1)	(M2)	(M3)	(M4)	(M5)
Dependent variable	FDI/GDP	ln FDI (USD)	FDI/GDP	FDI/GDP	Δ FDI/GDP
Institutional index	2.021*** (0.478)	3.757*** (0.663)			-0.002 (1.744)
Institutional index (t−1)			1.949*** (0.710)		
Rule of law				-1.348 (2.175)	
Control of corruption				-0.860 (1.422)	
Regulatory quality				1.465*** (0.386)	
Government effectiveness				0.827 (1.381)	
Real GDP growth	0.116 (0.088)	0.222 (0.137)	0.078 (0.082)		0.130* (0.076)
Trade openness	0.006 (0.009)	−0.032*** (0.006)	0.006 (0.010)		-0.019 (0.017)
Constant	2.959*** (0.830)	11.003*** (0.842)	3.243*** (1.016)	1.882** (0.852)	0.051 (0.148)
Observations	23	23	21	23	21
R^2	0.342	0.710	0.228	0.422	0.099
Adjusted R^2	0.239	0.664	0.092	0.294	-0.060
Durbin–Watson	1.77	1.21	1.78	2.09	2.63

The robustness checks complicate the picture a little. Lagging the index by a year (M3) leaves the coefficient almost unchanged at 1.95 ($p = 0.006$). With log dollar FDI (M2) the institutional coefficient is larger, but that model also has a negative and significant trade coefficient and a Durbin–Watson statistic of 1.21, which points to leftover autocorrelation. The negative trade sign most likely comes from timing: trade was at its highest in the mid-2000s, when FDI was still small. When the four components enter separately (M4), only regulatory quality has a clear effect (1.47, $p < 0.001$), which is what one would expect when four correlated measures compete for the same variation. The first-difference model (M5) matters most here, and it finds no relationship between year-to-year changes in institutions and in FDI (coefficient -0.002, standard error 1.74). So the association shows up in levels and in the long-run drift, not in annual changes. It is consistent with H1, but I cannot rule out that both series simply trend upward together for reasons that have little to do with each other.

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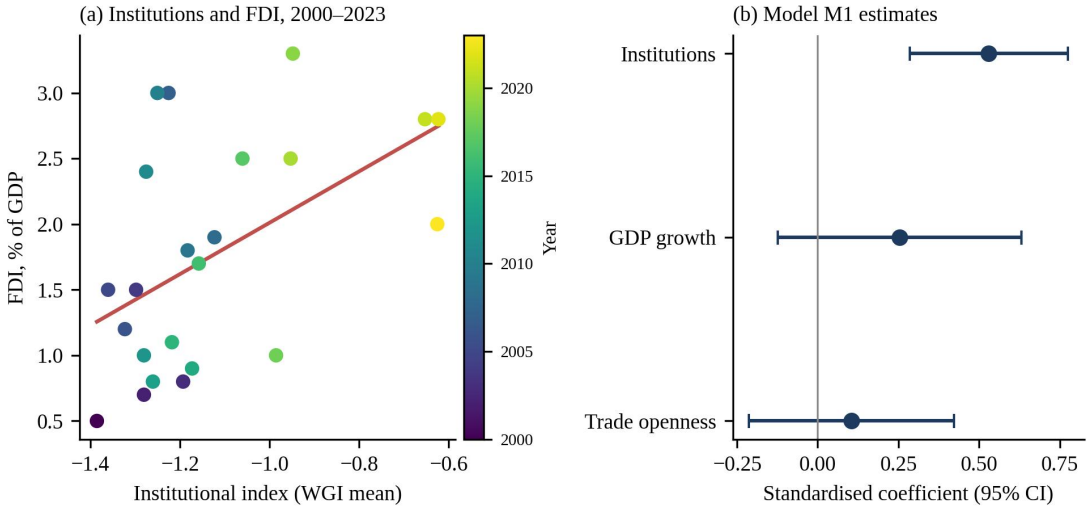


Figure 5. Institutions and FDI: scatter plot and standardised coefficients.

The security picture (Figure 6) is mixed. On the stabilising side, reserves almost doubled from USD 22.5 billion in 2013 to USD 41.2 billion in 2024, equivalent to 10.3 months of imports, and inflation has fallen from its 2018 peak of 17.5 per cent to 8.8 per cent in 2025 [1]. IMF projections put general government gross debt at 27.5 per cent of GDP in 2026, a modest level [11]. On the exposed side, external debt rose from a low of 12.5 per cent of GNI in 2012 to 60.5 per cent in 2024, or USD 70.3 billion, and the 2024 reserves cover about 59 per cent of that stock. The current account deficit was 3.9 per cent of GDP (USD 5.8 billion) in 2025, and the external balance on goods and services stood at −13.3 per cent of GDP [1].

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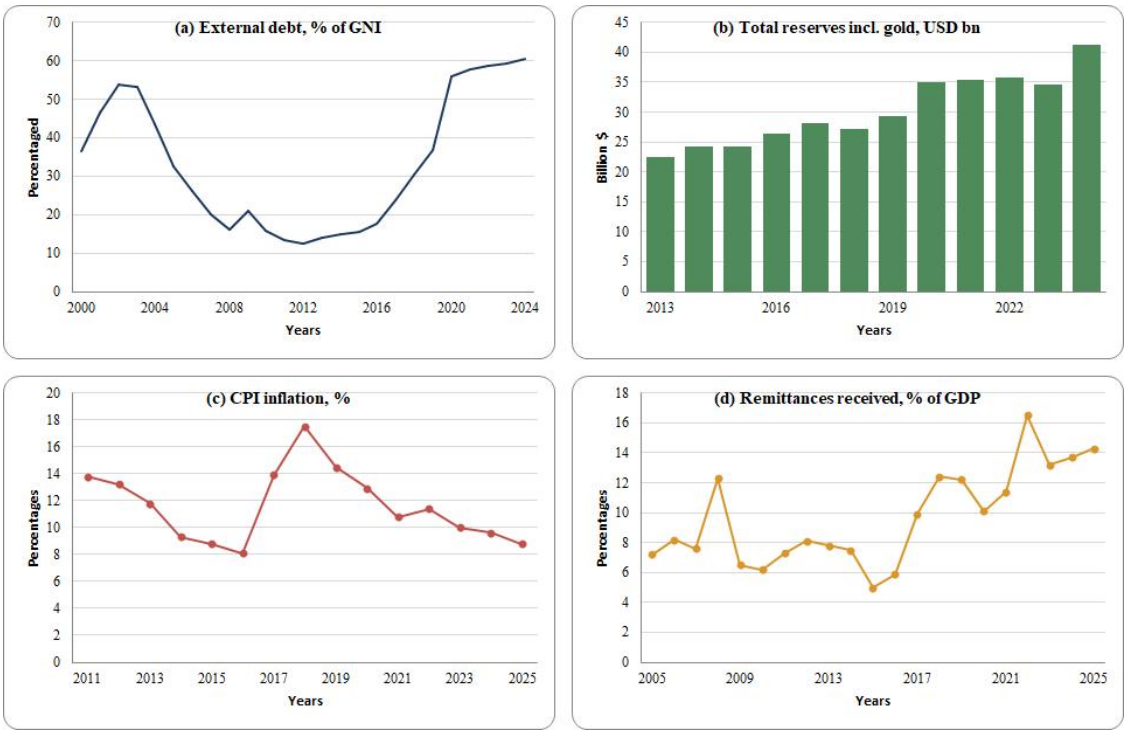


Figure 6. Selected economic security indicators.

Remittances deserve particular attention. They were worth 5.0 per cent of GDP in 2015, reached 16.5 per cent in 2022 and were 14.3 per cent (USD 21.0 billion) in 2025, nearly five times the USD 4.4 billion of net FDI in the same year [1]. The Central Bank has linked the slowdown in transfers in late 2024 to the volatility of the Russian rouble [12], which shows how much household income depends on a single partner economy. The vulnerability index rises from 0.21 in 2013 to 0.64 in 2024, with a peak of 0.77 in 2022 (Figure 4b). Its Pearson correlation with FDI/GDP over the twelve years is 0.65, although the rank correlation is weaker and not significant ($\rho = 0.43$, $p = 0.16$). With twelve observations, this shows two series that rose over the same period; it does not show that one drives the other. Still, it is the pattern H2 predicted: the years in which Uzbekistan became more attractive to investors were also the years in which its external exposure grew.

The most visible problem is an enforcement gap. Regulatory quality has improved most, yet rule of law and control of corruption still sit in roughly the bottom quarter of the global distribution [3]. For a long-lived investment, what matters is whether a dispute will be settled predictably years later; registration is the easy part. Resources should therefore go into enforcement: courts with credible independence, predictable dispute resolution and a clear mechanism for determining and compensating damage to investors. This also matches the recommendations of Abdullaeva et al. [9]. Concentration is a second concern. FDI is not widely diversified by sector or origin [2], and resource rents were about 20.5 per cent of GDP in 2021, with natural gas accounting for 11.0 points [1]. High-technology goods made up only 1.7 per cent of manufactured exports in 2024, and research spending was about 0.1 per cent of GDP [1]. Investment tied to resources adds capacity but does less for technology transfer and export

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diversification. What would help is targeting tradable sectors and building links with local suppliers, in line with Hojiyeva's call for diversification [10].

The external balance sheet is the third concern. External debt has more than quadrupled relative to GNI in just over a decade, and debt service absorbed 9.4 per cent of GNI in 2024 [1]. Reserves and low government debt provide a cushion, but set against the full external debt stock it is thinner than the headline reserve figure suggests. I would suggest reporting external liabilities by currency, maturity and borrower type alongside FDI, continuing to build buffers and steering remittances into productive local investment. Deeper financial markets would help too: stock market trading was close to zero per cent of GDP in 2025, only 85 domestic companies were listed, and just 22.6 per cent of firms used banks to finance investment [1].

Discussion

I set out to see whether Uzbekistan's investment story since 2017 shows up in the data, and what it may have cost in terms of economic security. FDI inflows and institutional quality both improved markedly, and across the full period better institutions, especially better regulatory quality, go together with higher FDI relative to GDP. This supports H1 and agrees with the international evidence on institutions and FDI [4, 6, 7] and with the Uzbek studies reviewed above [9, 10]. The evidence does not support anything stronger, though. The association is clearest in levels, disappears in first differences, and the break in 2017 cannot be separated from the underlying trend. Reverse causation is also possible: a country that attracts more foreign firms may come under pressure to improve the rules that govern them.

Economic security is the other half of the question. In the same years, external debt, dependence on remittances and the gap between regulatory quality and rule of law have all become more prominent, which supports H2. The problems identified above are an enforcement gap, a narrow investment base and a heavier external balance sheet. The proposed responses are credible courts and dispute resolution, diversification toward tradable sectors, and transparent management of external liabilities. My own view is that the first stage of reform, opening the economy and simplifying procedures, is largely done and its results are visible. The second stage will be harder and slower, since it depends on courts, civil-service habits and anti-corruption practice rather than on decrees. If it succeeds, rising attractiveness and rising security can reinforce each other, and FDI can reduce the economy's reliance on remittances and resource rents. If it fails, the two may keep drifting apart. For that reason I believe the country's main challenge now is to make the capital it attracts last.

There are limits to what this study can show. It covers one country, annual data and only 21 to 23 usable observations in the main models. The WGI are perception-based and end in 2023, so they cannot yet reflect the latest reforms. The vulnerability index is a simple equal-weighted construction with no formal thresholds, and the FDI series differs from broader direct-investment statistics. Future work could place Uzbekistan in a panel with other Central Asian and transition economies, use sector- and source-country-level FDI data, add firm-level survey evidence on contract enforcement, and apply cointegration or ARDL methods once a longer series is available.

References

1. World Bank, World Development Indicators and International Debt Statistics [Database], 2026. [Online]. Available: https://data.worldbank.org

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2. OECD, "Trends and impacts of FDI in Uzbekistan," in Roadmap for Sustainable Investment Policy Reforms in Uzbekistan. Paris, France: OECD Publishing, 2025. [Online]. Available: https://www.oecd.org/en/publications/roadmap-for-sustainable-investment-policy-reforms-in-uzbekistan_20865f29-en/full-report/trends-and-impacts-of-fdi-in-uzbekistan_1794e285.html
3. World Bank, Worldwide Governance Indicators [Database], 2026. [Online]. Available: https://www.govindicators.org
4. D. C. North, Institutions, Institutional Change and Economic Performance. Cambridge, U.K.: Cambridge Univ. Press, 1990.
5. J. H. Dunning, Multinational Enterprises and the Global Economy. Reading, MA, USA: Addison-Wesley, 1993.
6. E. Asiedu, "Foreign direct investment in Africa: The role of natural resources, market size, government policy, institutions and political instability," The World Economy, vol. 29, no. 1, pp. 63–77, 2006.
7. M. Busse and C. Hefeker, "Political risk, institutions and foreign direct investment," European Journal of Political Economy, vol. 23, no. 2, pp. 397–415, 2007.
8. D. Kaufmann, A. Kraay, and M. Mastruzzi, "The Worldwide Governance Indicators: Methodology and analytical issues," World Bank, Washington, DC, USA, Policy Research Working Paper 5430, 2010, doi: 10.1596/1813-9450-5430.
9. G. Abdullaeva, O. Turlibekova, S. Khasanova, and B. Sadibekova, "The role of economic freedom and development aid in attracting foreign direct investment in Uzbekistan," Open Journal of Business and Management, vol. 13, no. 2, pp. 968–984, 2025, doi: 10.4236/ojbm.2025.132052.
10. D. Hojiyeva, "Impact of direct investment on economic growth of Uzbekistan," Medzinárodné vzťahy – Slovak Journal of International Relations, vol. 23, no. 1, pp. 24–49, 2025, doi: 10.53465/SJIR.1339-2751.2025.1.24-49.
11. International Monetary Fund, World Economic Outlook [Database], 2026. [Online]. Available: https://www.imf.org/en/Publications/WEO
12. Kun.uz, "Foreign direct investment in Uzbekistan increased by over 50% in 2024," Feb. 1, 2025. [Online]. Available: https://wap.kun.uz/en/news/2025/02/01/foreign-direct-investment-in-uzbekistan-increased-by-over-50-in-2024
13. W. K. Newey and K. D. West, "A simple, positive semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix," Econometrica, vol. 55, no. 3, pp. 703–708, 1987.
14. S. Seabold and J. Perktold, "Statsmodels: Econometric and statistical modeling with Python," in Proc. 9th Python in Science Conf., 2010, pp. 92–96.

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