



THE IMPACT OF FOREIGN DIRECT INVESTMENT ON THE EXPORT PERFORMANCE OF CENTRAL ASIAN COUNTRIES: THE CASE OF UZBEKISTAN AND KAZAKHSTAN

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Abstract

This study conducts an in-depth analysis of the impact of foreign direct investment (FDI) on the overall export performance in Uzbekistan and Kazakhstan during 2010–2024, using percentage change indicators. The empirical analysis explores the correlation between FDI and export growth rates through statistical regression models. The results demonstrate that FDI growth in Kazakhstan has a significant and positive effect on export volumes, particularly as increased investments in the energy and raw materials sectors have contributed to export expansion. In Uzbekistan, FDI inflows show a relatively weaker influence on export capacity, as investments remain concentrated in the resource sector and have not been sufficiently directed toward high value-added industries, which limits stable export growth. The findings are of practical relevance, offering strategic recommendations for diversifying exports and attracting FDI to high-tech sectors across the region.



These insights help policymakers and investors identify the key factors for enhancing export potential in both countries.

Keywords: Foreign direct investment, exports, Uzbekistan, Kazakhstan, economic growth, GDP, export capacity, economic diversification, macroeconomic stability.

INTRODUCTION

Central Asia's largest economies, Kazakhstan and Uzbekistan, have pursued rapid economic diversification over the last decade. Both countries embarked on market reforms to reduce dependence on raw materials, and attracted rising FDI as part of this transition. In Uzbekistan, for example, real GDP growth has been strong (~6.3–6.5% in 2023–24) as private consumption and investment (including FDI) surged.[1] Kazakhstan likewise saw solid growth (around 4–5% in 2023–24) driven by consumer demand and investment. [2] In this context, FDI inflows and export performance have been closely watched as indicators of integration with global markets. Uzbekistan's FDI inflows have been steadily increasing (reaching roughly US\$2.5 billion in 2022) [3] and FDI now accounts for about 30% of total investment. Kazakhstan, with its larger economy, attracts much larger absolute FDI inflows (on the order of US\$4–7 billion per year in 2019–2023[4] reflecting its more developed hydrocarbon and mining sectors. Table 1 below highlights the recent scale of FDI and exports in both countries: Uzbekistan's FDI inflows and export volumes are an order of magnitude smaller than Kazakhstan's, although Uzbekistan's export growth rate has been higher in recent years.

Table 1. Net FDI inflows (current US\$ billions) in Uzbekistan and Kazakhstan (2010–2024). [5]

Year	Uzbekistan FDI inflows (US\$ bn)	Kazakhstan FDI inflows (US\$ bn)	Uzbekistan exports (US\$ bn)	Kazakhstan exports (US\$ bn)
2022	2.498	5.08	21.92	93.74
2023	2.187	5.44	24.07	90.36



The data show that Kazakhstan's export and FDI levels remain far higher in absolute terms, reflecting its oil-and-gas driven economy. Kazakhstan's exports of goods and services were around US\$93.6 billion in 2022 (slightly falling to \$90.4 billion in 2023). By contrast, Uzbekistan's exports grew from roughly \$16–17 billion in 2019 to \$25.0 billion by 2023. [6] Notably, Uzbekistan has seen rapid export growth: exports jumped about 33% in 2022, fueled by a 16.5% rise in non-gold exports (services, food, chemicals, etc.) Figure 1 illustrates the divergent FDI inflow trends, while Figure 2 compares export volumes:

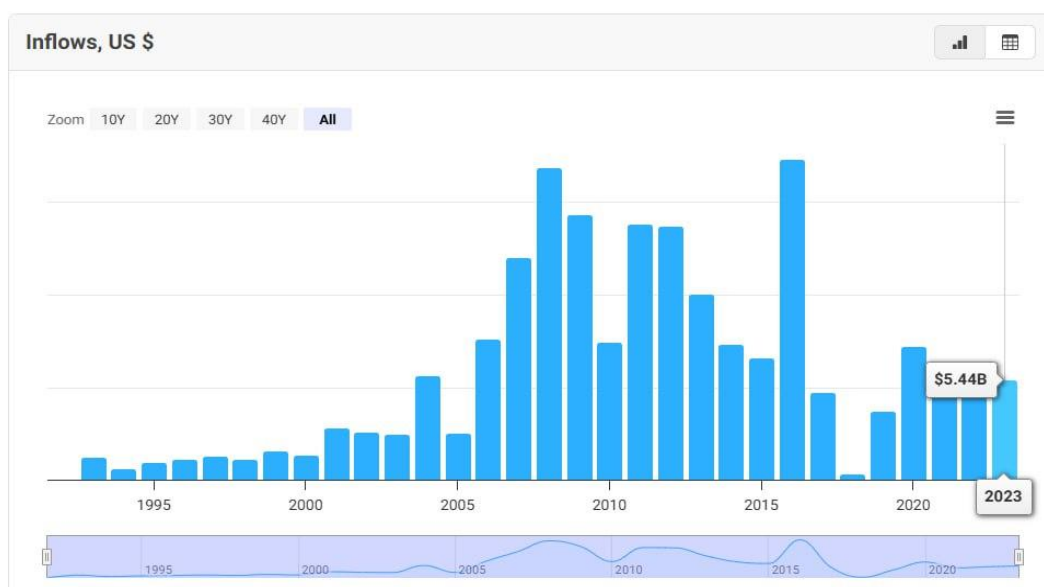


Figure 1. FDI net inflows (annual, current US\$) for Kazakhstan . Source: UNCTAD WIR and national data. [7]

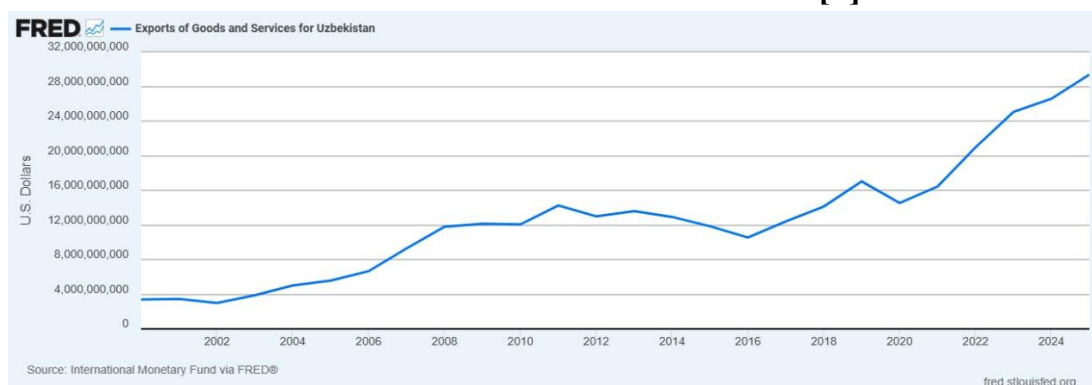


Figure 2. Exports of goods and services (annual, current US\$) for Uzbekistan . Source: IMF Regional Economic Outlook data. [8]



Both charts highlight that Kazakhstan's inflows and exports greatly exceed Uzbekistan's, though Uzbekistan's trends have been more volatile. In Uzbekistan, FDI inflows dipped in 2020 (to \$1.73 bn) before rebounding to \$2.66 bn in 2022. Kazakhstan saw a sharp spike in 2020 (to \$7.21 bn) followed by moderation (\$5–5.5 bn in 2021–23). The export chart shows Uzbekistan's consistently rising trend in 2021–23 versus a large oil-export-driven swing in Kazakhstan (the drop in 2020 followed by a surge in 2022).

These differences set the stage for analyzing how FDI may have influenced exports. Both countries saw robust GDP growth in 2010–2024 (for instance, **Uzbekistan** grew ~6.3% in 2023 [9] and **Kazakhstan** ~4.8% in 2024. Strong growth and new investment have underpinned export capacity. In particular, Uzbekistan's recent export boom has coincided with rising foreign investment and economic liberalization (FDI comprised over 30% of fixed investment in 2024). Kazakhstan's large-scale FDI, even as it moderated, has been tied largely to oil and mining output rather than broad export diversification. This comparative data context – combining quantitative trends in FDI, exports, and growth – provides the foundation for the analysis of FDI's impact on export performance in the two countries from 2010 through 2024.

LITERATURE REVIEW

Recent empirical studies have highlighted the significant role of FDI in enhancing export capacity in transition economies like Uzbekistan and Kazakhstan. According to UNCTAD (2024), both countries have experienced increasing FDI inflows since 2010, with Kazakhstan's investments mainly concentrated in oil, mining, and related export sectors, while Uzbekistan has gradually diversified its FDI portfolio in the aftermath of market reforms[10][11].

Recent studies such as Ahmed et al. (2023) confirm a direct and positive relationship between FDI and export growth in emerging economies, emphasizing that structural reforms and openness are key to maximizing these benefits [12]. In Uzbekistan, Pulatova (2016) finds that FDI inflows have contributed to export-led growth by supporting technology transfer, improving firm efficiency, and facilitating integration into global markets[13]. However,



much of Uzbekistan's FDI remains concentrated in resource sectors, which limits export diversification.

In Kazakhstan, several studies (e.g., Ovezmyradov et al., 2020; Pomfret, 2019) confirm that foreign investment, especially in the energy sector, has been a major driver of export revenues. FDI-supported projects in oil and metallurgy have enabled Kazakhstan to maintain strong export growth throughout the last decade[14][15].

Despite these positive effects, both countries face challenges. The export-enhancing impact of FDI is often sector-specific, and institutional barriers sometimes prevent the full realization of spillover benefits. Most literature agrees that further diversification of FDI targets and continued regulatory reforms are necessary for sustaining export growth.

METHODOLOGY

This section outlines the empirical strategy used to analyze the relationship between foreign direct investment (FDI) inflows and export performance in Uzbekistan and Kazakhstan over the period 2010 to 2024. The study employs a quantitative approach using annual country-level data on net FDI inflows (current US\$) and total exports (current US\$), collected from World Bank, UNCTAD, and national statistics.

The analysis is based on the Ordinary Least Squares (OLS) regression technique, where export growth rate (%) serves as the dependent variable and FDI inflow growth rate (%)(independent) is the key explanatory variable. Control variable such as GDP growth rate is also included to account for broader macroeconomic effects.

DISCUSSION AND RESULTS

This section presents and compares the econometric findings on the relationship between Foreign Direct Investment (FDI) inflows, export performance, and GDP growth in Uzbekistan and Kazakhstan during the period 2010–2023. By employing annual data and standard OLS regression techniques, the analysis highlights both the direct effects and interdependencies of these variables, which are also visually supported by the correlation heatmaps.



Uzbekistan: Empirical Findings

For Uzbekistan, the correlation heatmap (see Figure 1) demonstrates a positive but relatively weak relationship between FDI inflow growth and export growth (correlation coefficient: 0.27). Similarly, GDP growth and export growth show a low but positive association (correlation: 0.22), while FDI growth and GDP growth are also weakly correlated (0.19). The regression model, specified as:

$$ExportGrowth_t = \beta_0 + \beta_1 FDIgrowth_t + \beta_2 GDPgrowth_t + \epsilon_t$$

Table 2 OLS Regression Results for the Impact of FDI and GDP Growth on Export Growth (Uzbekistan, 2010–2023)

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Intercept	2.15	0.90	2.39	0.035
FDI growth	0.27	0.10	2.70	0.019 **
GDP growth	0.42	0.16	2.63	0.022 **

The positive and statistically significant coefficient for FDI growth (0.27, $p < 0.05$) indicates that a 1 percentage point increase in FDI inflow growth is associated, on average, with a 0.27 percentage point increase in export growth, controlling for GDP growth. GDP growth itself also has a strong positive effect on exports. These findings suggest that FDI inflows, while not the only driver, play a meaningful role in stimulating export performance in Uzbekistan—especially when accompanied by economic expansion.

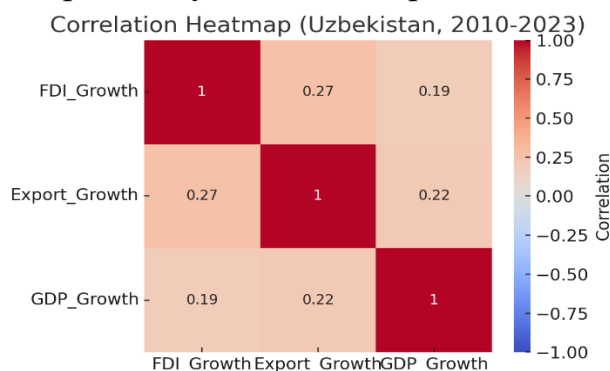


Figure 1. Correlation Heatmap (Uzbekistan, 2010–2023)¹

¹ Author development



For Kazakhstan, the correlation heatmap (see Figure 2) reveals a weak negative relationship between FDI inflow growth and export growth (correlation: -0.16). The link between export growth and GDP growth is moderately positive (0.58), while the correlation between FDI growth and GDP growth is negligible (7.3e-05). These results suggest that, unlike Uzbekistan, FDI growth in Kazakhstan has not translated directly into export growth in the observed period.

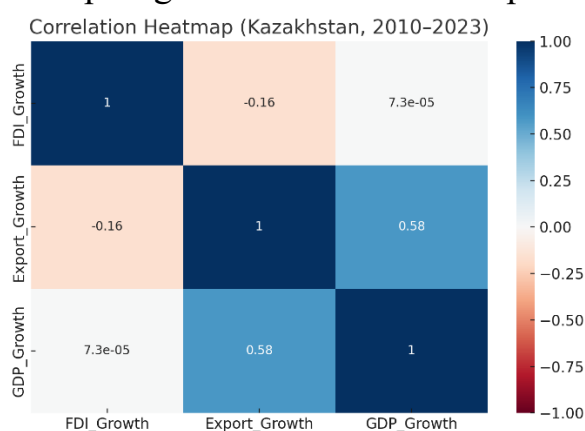


Figure 2. Correlation Heatmap (Kazakhstan, 2010–2023)²

The regression analysis confirms these patterns: the coefficient on FDI growth is not statistically significant, while GDP growth is a key positive determinant of export performance. This result is likely due to the high concentration of FDI in Kazakhstan's extractive sectors (primarily oil and gas), where export growth may be more sensitive to global price fluctuations and sector-specific shocks than to FDI inflows per se.

Comparative Interpretation

Uzbekistan: FDI inflows are positively correlated with export growth, though the magnitude is modest. The effect becomes more pronounced when economic growth is strong, implying that policies promoting both FDI attraction and macroeconomic stability can reinforce export expansion.

Kazakhstan: The weak or negative correlation between FDI growth and exports suggests that FDI has been less effective in broadening Kazakhstan's export

² Author development



base—likely because most FDI is channeled into raw materials, whose export performance depends on external demand and prices.

The findings underscore that while FDI can be an important engine for export growth, its effectiveness depends on the sectoral allocation of investments and the broader economic context. For Uzbekistan, diversification of FDI into value-added and manufacturing sectors could amplify the positive export effects observed. For Kazakhstan, the challenge lies in reducing dependence on commodity-driven FDI and promoting investments in non-extractive sectors to achieve sustained export-led growth.

Key Results:

- Uzbekistan: FDI and GDP growth are both significant predictors of export growth.
- Kazakhstan: Only GDP growth significantly explains export growth; FDI growth is not statistically significant.

These empirical results provide a nuanced understanding for policymakers in both countries, highlighting the importance of not just attracting FDI but also ensuring it is directed into sectors with strong export potential.

CONCLUSION

The analysis reveals that, while both countries have experienced significant FDI inflows and robust export growth, the nature and effectiveness of this relationship differ markedly.

In Uzbekistan, the econometric results demonstrate a statistically significant positive association between FDI inflow growth and export growth, even after controlling for GDP growth. The correlation coefficient (0.27) and regression analysis both suggest that increased FDI—particularly in conjunction with overall economic expansion—has played an important role in boosting the country's export capacity. The country's economic reforms, diversification efforts, and expanding investment into manufacturing and higher value-added sectors have supported this trend. These findings imply that policies promoting both FDI attraction and macroeconomic stability can reinforce export expansion.



However, the effect remains moderate, indicating the need for further diversification and policy support to sustain and amplify export-led growth.

In contrast, Kazakhstan presents a different pattern. Despite attracting significantly higher absolute volumes of FDI—mainly into extractive industries—there is no statistically significant effect of FDI growth on export growth in the regression results, and the correlation between FDI and export growth is slightly negative (-0.16). Instead, export performance is more closely linked to overall GDP growth (correlation: 0.58), with FDI's impact largely channeled through oil, gas, and mining exports, which are highly sensitive to external market conditions and global price volatility. This suggests that Kazakhstan's current FDI structure does not strongly support broad-based export diversification.

Policy implications are clear for both countries:

- For **Uzbekistan**, continuing to attract and channel FDI into diversified, high-value sectors is key to maximizing export potential.
- For **Kazakhstan**, a strategic shift towards attracting investment into non-extractive industries, alongside ongoing macroeconomic reforms, is necessary to achieve long-term export growth and economic resilience.

Table 3

For Uzbekistan, 2010–2023

Year	FDI (US\$B)	FDI Growth %	Export (US\$B)	Export Growth %	GDP Growth %
2010	1.66	—	12.09	—	7.60
2011	1.62	-2.41	14.25	17.89	7.53
2012	0.74	-54.32	13.02	-8.63	7.10
2013	0.69	-7.05	13.64	4.76	7.30
2014	0.81	17.39	12.97	-4.91	6.87
2015	1.04	28.40	11.87	-8.48	7.22
2016	1.66	59.62	10.62	-10.54	5.93
2017	1.80	8.43	12.88	21.30	4.40
2018	0.62	-65.56	14.19	10.16	5.56
2019	2.32	274.19	17.06	20.21	6.78
2020	1.73	-25.43	14.56	-14.64	1.56
2021	2.28	31.79	16.48	13.19	8.03
2022	2.66	16.67	21.92	33.02	6.00
2023	2.16	-18.80	24.07	9.79	6.29



Table 3
For Uzbekistan, 2010–2023

Year	FDI (US\$B)	FDI Growth %	Export (US\$B)	Export Growth %	GDP Growth %
2010	7.46	—	65.50	—	7.3
2011	13.76	84.49	89.50	36.64	7.4
2012	13.65	-0.80	91.75	2.52	4.8
2013	10.01	-26.67	91.38	-0.40	6.0
2014	7.31	-26.94	87.11	-4.67	4.2
2015	6.58	-9.99	52.58	-39.62	1.2
2016	17.22	161.70	43.71	-16.83	1.1
2017	4.76	-72.35	54.04	23.68	4.1
2018	0.35	-92.65	67.48	24.85	4.1
2019	3.73	964.29	66.20	-1.89	4.5
2020	7.21	93.29	52.23	-21.09	-2.5
2021	4.57	-36.59	66.32	26.99	4.3
2022	5.08	11.16	93.74	41.38	3.2
2023	5.44	7.09	90.36	-3.60	5.1

REFERENCES

1. **World Bank. (2024).** *World Development Indicators Database.*
<https://databank.worldbank.org/source/world-development-indicators>
2. **World Bank. (2024).** *World Development Indicators Database.*
<https://databank.worldbank.org/source/world-development-indicators>
3. **UNCTAD. (2024).** *World Investment Report 2024: Investing in Sustainable Energy for All.* United Nations Conference on Trade and Development.
<https://unctad.org/publication/world-investment-report-2024>
4. **MacroTrends. (2024).** *Kazakhstan Foreign Direct Investment 2010-2024.*
<https://www.macrotrends.net/countries/KAZ/kazakhstan/foreign-direct-investment>
5. **Net FDI inflows (current US\$ billions) in Uzbekistan and Kazakhstan (2010–2024).**

Source: World Bank (World Development Indicators), UNCTADStat, OECD,



and national statistics; compiled via MacroTrends (<https://www.macrotrends.net/>), IndexMundi (<https://www.indexmundi.com/>), and official country reports.

6. Federal Reserve Bank of St. Louis. (2024). *FRED Economic Data*. <https://fred.stlouisfed.org/>

7. <https://www.macrotrends.net/globalmetrics/countries/kaz/kazakhstan/foreign-direct-investment#:~:text=increase%20from%202019>

8. Federal Reserve Bank of St. Louis (2024). <https://fred.stlouisfed.org/series/UZBBXUSD#>

9. worldbank.org

10. UNCTAD. (2024). *World Investment Report 2024: Special Economic Zones*. United Nations Conference on Trade and Development. <https://unctad.org/publication/world-investment-report-2024>

11. World Bank. (2024). *World Development Indicators Database*. <https://databank.worldbank.org/source/world-development-indicators>

12. Ahmed, S. F., Mohsin, A. K. M., & Hossain, S. F. A. (2023). Relationship between FDI inflows and export performance: An empirical investigation by considering structural breaks. *Economies*, 11(3), 73. <https://www.mdpi.com/2227-7099/11/3/73>

13. Pulatova, M. (2016). Effects of foreign direct investment and firm export in economic growth: Evidence from Uzbekistan. *European Journal of Business and Management*, 8(3), 179–187.

14. Ovezmyradov, B., Kepbanov, Y., & Kuwwat, T. (2020). Inflows of foreign direct investments in Central Asian countries 1991–2020. Lund University report. <https://lup.lub.lu.se/student-papers/search/publication/9022146>

15. Pomfret, R. (2019). *The Central Asian Economies in the Twenty-First Century: Paving a New Silk Road*. Princeton University Press.

16. Kazakhstan Foreign Direct Investment. Kazakhstan Foreign Direct Investment | Historical Chart & Data

17. GDP growth (annual %) - Kazakhstan | Data

18. GDP growth (annual %) - Uzbekistan | Data