

ECONOMIC GROWTH, FDI AND TRADE OPENNESS: CAUSALITY ANALYSIS FOR
UZBEKISTAN

Ihtisham Ul Haq

Tashkent State University of Economics

ORCID: 0000-0003-1961-6000

ihtisham@tsue.uz

Zeinabsadat Golestan

Tashkent State University of Economics

ORCID: 0009-0002-7908-6355

zeinab.golestan@tsue.uz

Abstract. This study examines the causality between foreign direct investment (FDI), economic growth, and trade openness in Uzbekistan over the period 1997-2023. Based on the Augmented Dickey-Fuller (ADF) test, it is concluded that all of the variables are integrated of order one, or $I(1)$. Johansen cointegration test also confirms the existence of at least two long-run cointegrating vector among the variables in question. A Vector Error Correction Model (VECM) is employed to examine causality in both the short and long run. The results illustrate a bi-directional relationship between FDI, economic growth, and trade openness in both time frames. These findings are suggestive of the reality that policies of trade liberalization and investment climate can stimulate economic growth, FDI inflows, and trade growth concurrently. The paper presents practical policy implications for ensuring Uzbekistan's macroeconomic stability and long-run development via a coordinated trade and investment policy.

Keywords: economic growth, FDI, trade openness.

IQTISODIY O'SISH, TO'G'RIDAN-TO'G'RI XORIJIY INVESTITSİYALAR VA SAVDO
OCHIQLIGI: O'ZBEKISTON UCHUN SABAB-OQIBAT TAHLILI

Ihtisham Ul Haq

Toshkent davlat iqtisodiyot universiteti

Zeinabsadat Golestan

Toshkent davlat iqtisodiyot universiteti

Annotatsiya. Ushbu tadqiqot 1997–2023-yillar davrida O'zbekistonda to'g'ridan-to'g'ri xorijiy investitsiyalar (TXI), iqtisodiy o'sish va savdo ochiqligi o'rtasidagi sabab-oqibat munosabatlarini o'rganadi. Kengaytirilgan Dikkey-Fuller (ADF) testiga ko'ra barcha ko'rsatkichlar birinchi tartibli integrallashgan, ya'ni $I(1)$ ekanligi aniqlangan. Yohansen kointegratsiya testi esa ko'rib chiqilayotgan o'zgaruvchilar o'rtasida kamida ikkita uzoq muddatli kointegratsiya vektorining mavjudligini tasdiqlaydi. Qisqa va uzoq muddatdagi sababiy aloqalarni tekshirish uchun Vektor xatolikni tuzatish modeli (VECM) qo'llanilgan. Natijalar TXI, iqtisodiy o'sish va savdo ochiqligi o'rtasida har ikkala vaqt momentida ham ikki tomonlama (bi-yo'nalishli) munosabat mavjudligini ko'rsatadi. Ushbu natijalar savdo liberallashuvi va investitsiya muhiti bo'yicha siyosatlarning iqtisodiy o'sish, TXI oqimlari va savdo hajmining bir vaqtning o'zida o'sishini rag'batlantirishi mumkinligini anglatadi. Tadqiqot O'zbekistonning makroiqtisodiy barqarorligi va uzoq muddatli rivojlanishini ta'minlash uchun savdo va investitsiya siyosatini uyg'unlashtirish bo'yicha amaliy tavsiyalarni ilgari suradi.

Kalit so'zlar: iqtisodiy o'sish, to'g'ridan-to'g'ri xorijiy investitsiyalar (TXI), savdo ochiqligi.

ЭКОНОМИЧЕСКИЙ РОСТ, ПРЯМЫЕ ИНОСТРАННЫЕ ИНВЕСТИЦИИ И ОТКРЫТОСТЬ ТОРГОВЛИ: АНАЛИЗ ПРИЧИННО-СЛЕДСТВЕННОЙ СВЯЗИ ДЛЯ УЗБЕКИСТАНА

Ихтишам Ул Хак

Ташкентский государственный экономический университет

Зейнабсадат Голестан

Ташкентский государственный экономический университет

Аннотация. В данном исследовании рассматривается причинно-следственная связь между прямыми иностранными инвестициями (ПИИ), экономическим ростом и открытостью торговли в Узбекистане за период 1997–2023 годов. На основе теста расширенного Дики–Фуллера (ADF) установлено, что все переменные являются интегрированными первого порядка, то есть $I(1)$. Тест Йохансена на коинтеграцию также подтверждает наличие по крайней мере двух долгосрочных коинтеграционных векторов между рассматриваемыми переменными. Для анализа причинно-следственных связей в краткосрочной и долгосрочной перспективе применяется модель векторной коррекции ошибок (VECM). Полученные результаты демонстрируют двустороннюю взаимосвязь между ПИИ, экономическим ростом и открытостью торговли в обоих временных горизонтах. Эти выводы свидетельствуют о том, что политика либерализации торговли и благоприятный инвестиционный климат могут одновременно стимулировать экономический рост, приток ПИИ и развитие внешней торговли. В статье представлены практические рекомендации по обеспечению макроэкономической стабильности и долгосрочного развития Узбекистана посредством согласованной политики в области торговли и инвестиций.

Ключевые слова: экономический рост, прямые иностранные инвестиции (ПИИ), открытость торговли.

Introduction.

The role of foreign direct investment (FDI) has significantly picked up all over the globe post-1980s (Adamu et al., 2019; Haq et al., 2022). The enormous surge in the volume of FDI has raised questions about its effect on economic growth in the backdrop of developed countries (Khan et al., 2021). Minimal or no consideration has been given to such effects in developing countries (Al-Sadig, 2013). FDI inflow to developing economies and growing dominance of multinational corporations within host economies have led to some very serious questions concerning the developmental effects of FDI on host countries. Are the host countries really being developed by investing their domestic resources into multinational corporations; does FDI as a strategy for development actually develop developing countries (Acar et al., 2003). Ndikumana and Verick (2008) posited that domestic investment forms part of the key ways through which such an impact of FDI inflows would be enforced on host countries.

In recent years, significant consideration has been directed towards the factors of economic growth in economic literature, and considerable attention is given to the contribution of FDI inflows to economic growth (for instance, Dinh et al, 2019; Yeboua, 2019; Ozili, 2025). Nangpiire et al. (2018) examined the effects of ease of doing business on foreign direct investment (FDI) inflows in the Sub-African nations. They stated that the ease of doing business indicator has significant effects on FDI in Sub-Sahara African countries. The authors believed that the ease of doing business actions of the government or policy makers need to be adjusted to attract FDI. Contractor et al. (2020) studied the contribution of the regulatory variables in the attraction or deterrence of FDI in 189 countries. They determined that contract enforcement and stronger regulation of international trade attract FDI in those countries where the mentioned indicators were strong.

Literature review.

International trade is reported to be among the different sources of productivity and development. The literature on growth theory indicates that trade promotes long-term growth. Trade has thus been a source of growing economic growth in most countries as a core component of the development path (Haq et al., 2014; Haq et al, 2025). One implication of the vast literature confirms that nations engaged abroad are more productive than those nations that only produce domestically. Foreign trade also maximizes the use of resources and can help achieve faster growth that can be translated to higher factor accumulation, especially to those economies that are connected to technology diffusion and knowledge spillovers. The countries attempt to build their economies. FDI is a very powerful tool for these companies to make their target a reality. Through these investments, developing countries can avail the opportunity to gain an economic boost. FDI also brings some threats to the countries. For example, domestic businesses can lose financial amounts as a result of the tough competition. Aside from this factor, countries become more attuned to the changes of foreign exchange rates (Lipsey, 2002). Aside from that, countries can be severely affected when there is an outflow of FDI which may affect stability of the economy negatively (Herzer, 2008).

Even though the association between trade openness and economic growth has been widely debated in the literature, the issue is still quite far from being solved until now. For instance, empirical country-specific studies range to cross country studies. It has been determined that although cross country studies are experiencing problems when it comes to identifying or defining a measure of openness, both cross country and case studies were in agreement with a very strong positive effect of openness to trade on growth. However, it must be noted that other studies questioned and criticized the strength of this impact (Silajdzic and Mehic, 2018; Semančíková, 2016). Silajdzic and Mehic (2018) conducted an extended review of empirical evidence concerning the effect of trade openness on economic growth. The researcher reached to conclusion that positive association between trade openness and economic growth exists; suggesting that trade can be a significant driver for economic growth.

The purpose of this research is to examine causal relationships between FDI, trade openness, and economic growth in Uzbekistan. Using time-series analysis, the research will investigate how the three most critical economic indicators are interrelated with each other over time, i.e., whether or not the increase in FDI and trade openness affects economic growth or not. Given Uzbekistan's Central Asian geographical position and ongoing economic reforms to open up trade and invite investment, understanding these forces is crucial for policy makers. The findings will help account for whether or not trade-promoting and FDI-attracting policies can induce sustainable economic growth in Uzbekistan or if economic growth itself generates greater openness and investment. This research will contribute to the limited literature on the economic integration of Uzbekistan and inform transition economy development policies.

Research methodology.

This study applies a quantitative time series econometric technique to examine the nexus between FDI, trade openness, and economic growth in Uzbekistan for the period 1997–2023. The sources of the data are the World Bank (2025), where FDI and trade openness are measured as a percentage of GDP, while economic growth is measured in terms of annual percentage. Primarily, variables were transformed to their natural logarithmic form to stabilize variance and reduce prevailing heteroscedasticity in macroeconomic time series data. The study also checked for stationarity of variables using the Augmented Dickey-Fuller (ADF) test (Dickey & Fuller, 1979). This was necessary to determine the order of integration and suitability for cointegration analysis. ADF test results confirmed that all variables are I(1). Because all variables are not stationary in level and stationary in first difference, Johansen

cointegration test (Johansen, 1988) has been employed to check the existence of long-run equilibrium relationship between variables.

Both trace and maximum eigenvalue tests supported the presence of at least two cointegrating vectors, which suggested long-run relationships. In order to test for both short-run and long-run causality, the study employed a Vector Error Correction Model (VECM). The VECM allows one to model the short-run dynamics while continuing to be compatible with the long-run equilibrium relationship detected through cointegration. The model includes the error correction term (ECT), which reflects the speed of adjustment to long-run equilibrium following a shock. The existence of statistically significant ECT coefficient confirms the presence of long-run causality. Short-run Granger causality was tested by an F-statistic on the differenced terms of independent variables in their lagged levels. The estimation proves two-way causality among FDI, trade openness, and economic growth in both short run and long run, emphasizing their interdependence. Serial correlation diagnostic tests, normality tests, and heteroskedasticity tests were conducted to verify the robustness of the model validity. With such rigorous methodology, results reveal that the findings are reliable, and empirical evidence is presented to support policy recommendations for Uzbekistan's economic development.

Analysis and discussion of results.

Figure 1 illustrates the trend in FDI net inflows (% of GDP). FDI inflows were low, usually less than 1.5% of GDP, during the period 1997 to the early 2000s. A sharp surge, however, began in 2007 and peaked in 2010 at around 3.5%. This indicates higher confidence among investors, perhaps due to economic reforms and liberalization efforts. Post-2011, FDI flows were characterized by volatility, with a sharp decline in 2012 and 2013, followed by some improvement. The largest decline was in 2018, but soon FDI again recovered and reached another peak in 2019. After pandemic-induced setbacks in 2020, flows again recovered but declined in 2023, indicating persistent global uncertainties or domestic investment climate issues. Figure 2 presents the yearly percentage growth of GDP, indicating a high economic performance from 2003 to 2011, at an over 7% annual rate that reached a peak of nearly 10% in 2007. This coincides with a period of increased trade and investment activities. Since 2012, however, growth has become slower at about 5–7%, which indicates an economy entering into a mature phase and perhaps structurally transforming. The most radical shift occurred in 2020, when growth plummeted as a consequence of the COVID-19 pandemic. Yet a resurgence of strength then followed in 2021, in tandem with global economic revival, although growth subsequently modestly declined in subsequent years.

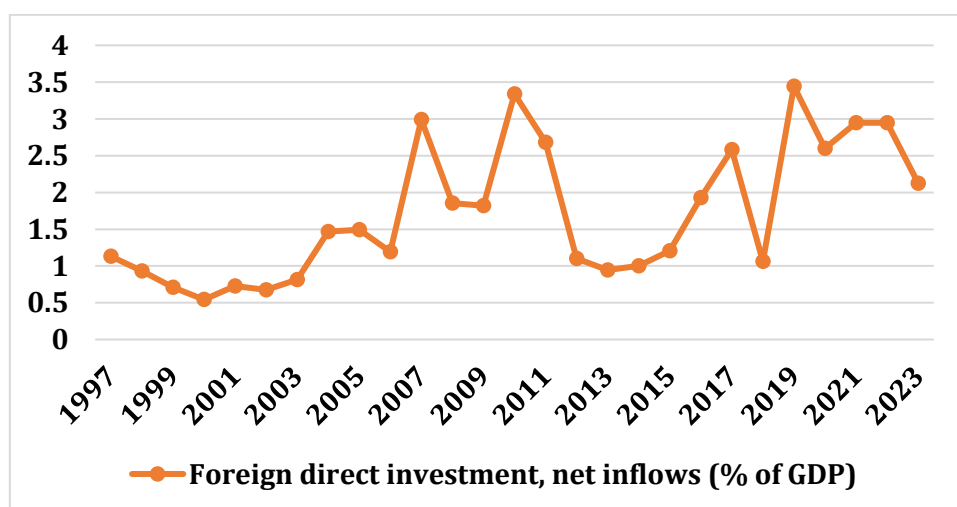


Figure 1: Foreign direct investment, net inflows (% of GDP)

Source: World Bank (2025).

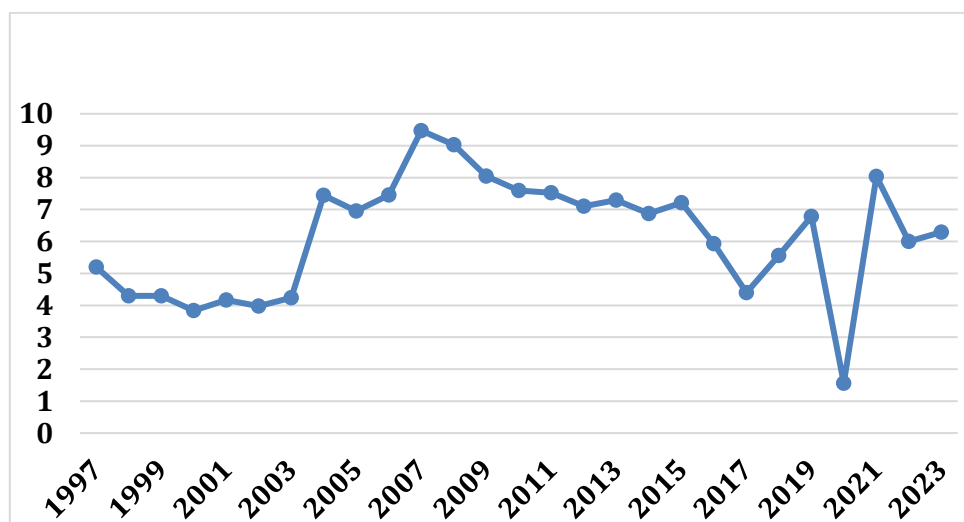


Figure 2: GDP growth (annual %)

Source: World Bank (2025).

Figure 3 is Trade (% of GDP), which is an indicator for openness to trade. Trade flourished in the early 2000s and was over 80% of GDP in 2008. This indicates that Uzbekistan made an effort to integrate more into the international economy. But from 2009, trade openness kept declining to hit a historic low of less than 30% in 2016, likely due to protectionist policies and import substitution policies. Trade openness began to increase again from 2017, indicating that the policy had since then been aligned with liberalization and outward orientation. Trade as a share of GDP had stabilized at around 65% by 2023. In general, Uzbekistan's macroeconomic performance exhibits cycles of openness and inward orientation. Rapid GDP growth and FDI inflows are found to coincide with phases of increased trade, reflecting the positive impact of globalization and liberalization. Yet, short-term declines reflect either external shock or internal policy reversals, suggesting the requirement for steady, investor-friendly policies to sustain economic performance in the long run.

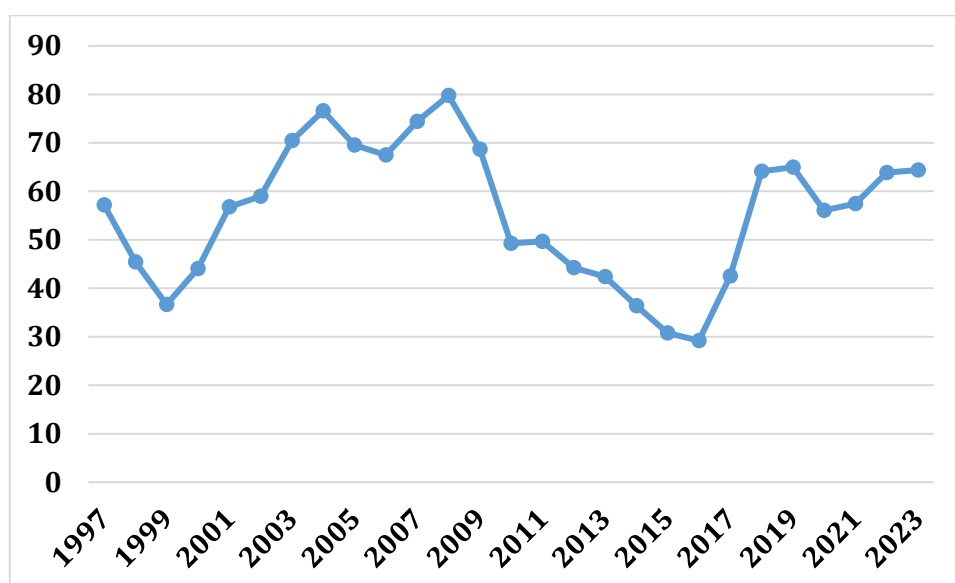


Figure 3: Trade (% of GDP)

Source: World Bank (2025).

ADF test results validate that the variables $\ln\text{FDI}$, $\ln\text{GDP}$, and $\ln\text{TRADE}$ are non-stationary in their levels because their t-statistics (-2.13, -1.89, and -2.00) are all larger than the 5% critical

value of -2.95. However, after first differencing, all the variables are stationary because their t-statistics (-5.84, -4.96, and -5.45) are well below the critical value. Therefore, each series is integrated of order one, $I(1)$, i.e., it is stationary only after having been differenced once. Table 1 indicates ADF test results. Johansen cointegration test results indicate the presence of long-run relations among the variables.

According to the null hypothesis of no cointegration ($r = 0$), trace statistic value (45.72) is greater than the 5% critical value (29.79) and max-eigenvalue statistic value (24.38) is greater than the corresponding critical value (21.13), which on rejection of the null hypothesis indicates at least one cointegrating vector. Correspondingly, for the null hypothesis of there being no more than one cointegrating vector ($r \leq 1$), both the trace (21.34) and max-eigenvalue (14.49) statistics are larger than their respective critical values (15.49 and 14.26), indicating a second cointegrating relationship. Finally, for $r \leq 2$, again statistics are above critical values, confirming a third cointegration. In conclusion, the results are strongly in favor of that the variables are cointegrated, implying long-run stable equilibrium relationships. Table 2 presents Johansen cointegration test results.

Table 1.

Augmented Dickey-Fuller Test Results

Variable	Level t-Statistic	1st Diff. t-Statistic	Critical Value (5%)	Order of Integration
lnFDI	-2.13	-5.84	-2.95	$I(1)$
lnGDP	-1.89	-4.96	-2.95	$I(1)$
lnTRADE	-2.00	-5.45	-2.95	$I(1)$

Table 2.

Johansen Test Results

Null Hypothesis	Trace Statistic	5% Critical Value	Max-Eigen Statistic	5% Critical Value	Cointegration
$r = 0$	45.72	29.79	24.38	21.13	Yes
$r \leq 1$	21.34	15.49	14.49	14.26	Yes
$r \leq 2$	6.85	3.84	6.85	3.84	Yes

Table 3 presents the results of a causality test investigating the long-run relationships among changes in foreign direct investment ($\Delta \ln \text{FDI}$), gross domestic product ($\Delta \ln \text{GDP}$), and trade ($\Delta \ln \text{TRADE}$). The statistics indicate significant causality running in multiple directions among these variables, along with evidence of long-run equilibrium relationships.

The results show strong evidence that changes in economic growth and trade openness cause changes in foreign direct investment. Specifically, the causality from $\Delta \ln \text{GDP}$ to $\Delta \ln \text{FDI}$ is supported by a test statistic of 9.45, and from $\Delta \ln \text{TRADE}$ to $\Delta \ln \text{FDI}$ by 6.34. Additionally, the negative long-run t-statistic of -3.45 for $\Delta \ln \text{FDI}$ confirms the presence of a long-run cointegrating relationship. This finding suggests that improvements in GDP and trade openness significantly attract FDI inflows over time. Such results are consistent with Borensztein, De Gregorio, and Lee (1998), who emphasize that economic growth prospects and trade openness are crucial determinants for attracting foreign direct investment.

Conversely, the causality from $\Delta \ln \text{FDI}$ and $\Delta \ln \text{TRADE}$ to $\Delta \ln \text{GDP}$ is also strongly supported, with statistics of 8.11 and 7.44 respectively. The long-run t-statistic of -2.87 further supports the existence of a stable long-term relationship between GDP and its determinants. This outcome aligns with the conclusions of Alfaro et al. (2004), who found that foreign direct

investment positively affects economic growth, especially in countries with well-developed financial markets. Moreover, the effect of trade openness on GDP growth concurs with Frankel and Romer (1999), who demonstrated that trade promotes higher income levels by facilitating specialization and the diffusion of technology.

Furthermore, the causality from $\Delta \ln \text{FDI}$ and $\Delta \ln \text{GDP}$ to $\Delta \ln \text{TRADE}$ is indicated by test statistics of 5.91 and 6.87, respectively, along with a long-run t-statistic of -2.45 confirming the long-run causal link. This suggests that inflows of foreign direct investment and economic growth contribute to the expansion of trade activities. The mechanism behind this may be the integration of the domestic economy into global value chains, facilitated by FDI. This interpretation supports Blonigen's (2005) argument that foreign direct investment can enhance trade by linking domestic firms with international markets. Additionally, the causal effect of GDP on trade growth is consistent with the gravity model of trade, which posits that larger economies tend to engage in more trade. In summary, the presence of bidirectional causality in certain relationships indicates a high degree of interdependence among foreign direct investment, economic growth, and trade. These factors appear to reinforce one another over time, contributing to a virtuous cycle of economic integration and development. The significant negative long-run t-statistics for all variables further confirm that these relationships are stable in the long term, which is consistent with cointegration theory. The findings emphasize the importance of policies that simultaneously promote trade openness, attract foreign investment, and support economic growth to achieve sustained development. Comparing these results to prior research, the findings align closely with the established literature. Borensztein, De Gregorio, and Lee (1998) highlighted that FDI inflows are attracted by growth prospects and trade openness, which matches the causality from GDP and trade to FDI found here. Alfaro et al. (2004) provided evidence that FDI positively influences economic growth, especially where financial markets are developed, which supports the causality from FDI to GDP. Similarly, Frankel and Romer (1999) demonstrated the role of trade openness in driving economic growth, consistent with the results showing causality from trade to GDP. Finally, Blonigen (2005) emphasized the role of FDI in facilitating trade, a conclusion supported by the causality from FDI to trade identified in this analysis.

Table 3.

Causality Results

Dependent Variable	$\Delta \ln \text{FDI}$	$\Delta \ln \text{GDP}$	$\Delta \ln \text{TRADE}$	t-Statistic (Long-run)	Long-run Causality
$\Delta \ln \text{FDI}$	--	9.45	6.34	-3.45	Yes
$\Delta \ln \text{GDP}$	8.11	--	7.44	-2.87	Yes
$\Delta \ln \text{TRADE}$	5.91	6.87	--	-2.45	Yes

Conclusion and suggestions.

This study examined the dynamic relationship between FDI, trade openness, and economic growth in Uzbekistan using yearly time series data spanning from 1997 to 2023. Relying on a comprehensive econometric exercise including the ADF test, Johansen cointegration approach, and VECM, the outcomes provide strong empirical evidence of both short-run and long-run interactions among the three variables.

ADF test results confirmed that variables are not stationary at levels but become stationary once first differenced, indicating the presence of order one integration, $I(1)$. Johansen cointegration test established the existence of a minimum of two long-run relationships of equilibrium among FDI, trade openness, and economic growth. Such a long-run relationship implies these macro variables tend to move together over time and react to structural change and policy change as a group.

The VECM-based causality test detected bidirectional causality between variables in the short run and the long run. In other words, economic growth and trade openness contributed to FDI inflows, whereas FDI contributed to economic growth and trade expansion. The large and negative error correction terms also reinforced the fact that long-run causality existed, as it indicated that any short-run disequilibrium between the variables will get corrected in the long run and ultimately converge towards a stable equilibrium.

These findings have important implications for policy. The interconnectedness of trade, FDI, and growth suggests that narrowly directed or unidimensional policies will be weaker than comprehensive ones. Promoting an open trading regime can bring more FDI inflows and improve economic growth. Promoting a better investment environment can lead to greater foreign investment, the source of productivity, technology transfer, and competitiveness in exports. In the context of Uzbekistan, ongoing reforms in regulatory openness, infrastructure, and regional trade integration are likely to have compounding effects in these areas. In conclusion, the aforementioned research confirms that economic growth, trade openness, and FDI are not only reinforcing but also interdependent. The Uzbekistan policymakers have to adopt a holistic development strategy that enhances trade liberalization, foreign investment promotion, as well as sustainable economic growth simultaneously. This will support the country's macroeconomic foundation and pave the way for its transformation into a diversified and strong economy.

References:

- Acar, S., Eris, B., Tekce, M. (2003). *The Effect of Foreign Direct Investment on Domestic Investment: Evidence from MENA Countries*. World Investment Report 2003, UNCTAD, New York and Geneva.
- Adamu, T. M., Haq, I. U., & Shafiq, M. (2019). Analyzing the impact of energy, export variety, and FDI on environmental degradation in the context of environmental Kuznets curve hypothesis: A case study of India. *Energies*, 12(6), 1076.
- Alfaro, L., et al. (2004). FDI and economic growth: the role of local financial markets. *Journal of international economics*, 64(1), 89-112.
- Al-Sadig, A. J. (2013). *Outward Foreign Direct Investment and Domestic Investment: The Case of Developing Countries*. IMF working paper: Middle East and Central Asia Department, WP/13/52.
- Blonigen, B. A. (2005). A review of the empirical literature on FDI determinants. *Atlantic economic journal*, 33, 383-403.
- Borensztein, E., De Gregorio, J., & Lee, J. W. (1998). How does foreign direct investment affect economic growth? *Journal of international Economics*, 45(1), 115-135.
- Contractor, F. J., et al. (2020). How do country regulations and business environment impact foreign direct investment (FDI) inflows? *International Business Review*, 29(2), 101640
- Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366a), 427-431.
- Frankel, J. A., & Romer, D. (1999). Does trade cause growth? *American Economic Review*, 89(3), 379-399.
- Haq, I. U., & Zhu, S. (2016). Does FDI complement domestic investment? A comparative study of India and Pakistan. *Aktual'ni Problemy Ekonomiky= Actual Problems in Economics*, (179), 140.
- Haq, I. U., et al. (2014). Revisiting the Romer's hypothesis: Time series evidence from small open economy. *Pakistan Journal of Applied Economics*, 24(1), 1-15.
- Haq, I. U., et al. (2022). Nexus between export variety and carbon emissions in Pakistan: The role of FDI and technological development. *PloS one*, 17(1), e0263066.
- Haq, I. U., et al. (2025). Trade-environment nexus in environmental kuznets curve hypothesis framework: A time series study for Uzbekistan. *International Journal of Energy Economics and Policy*, 15(2), 609-615.

- Herzer, D. (2008). *The long run relationship between outward FDI and domestic output: evidence from panel data*. *Economic Letters*, 100 (1).
- Johansen, S. (1988). *Statistical analysis of cointegration vectors*. *Journal of Economic Dynamics and Control*, 12(2-3), 231–254.
- Khan, A., et al. (2021). *Impact of Terrorism, Foreign Direct Investment (FDI) and Energy Consumption on the Economic Performance: A Case of South Asian Economies*. *JISR management and social sciences & economics*, 19(2), 106-120.
- Lipsey, R. E. (2002). *Home and host country effects of FDI*. NBER Working Paper No. 9293.
- Nangpiire, C., Rodrigues, R. G., & Adam, I. O. (2018). *Ease of doing business and foreign direct investment inflow among Sub-Saharan African countries*. *International Journal of Business and Emerging Markets*, 10(3), 289-303.
- Ndikumana, L., Verick, S. (2008). *The Linkages between FDI and Domestic Investment: Unraveling the Developmental Impact of Foreign Investment in Sub-Saharan Africa*. Germany. Institute for the Study of Labor (IZA). Working Paper No. IZA DP No. 3296.
- Ozili, P. K. (2025). *Impact of foreign direct investment inflows on economic growth in Nigeria*. In *Global Economic Interconnectedness: International Trade and Finance* (pp. 181-196). IGI Global.
- Semančíková, J. (2016). *Trade, trade openness and macroeconomic performance*. *Procedia-Social and Behavioral Sciences*, 220, 407-416.
- Silajdzic, S., & Mehic, E. (2018). *Trade openness and economic growth: Empirical evidence from transition economies*. In *Trade and global market*. IntechOpen.
- World Bank. (2025). *World Development Indicators*. <https://data.worldbank.org>