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Analysis of Foreign Direct Investments in Azerbaijan and Directions for Improving the Legal Attraction Mechanism in Local Self-Government Bodies

Abstract
This paper provides a comprehensive analysis of foreign direct investment (FDI) in Azerbaijan and explores avenues for enhancing the legal mechanisms employed by local self-governance bodies to attract such investments. The study underscores the theoretical and practical significance of fostering a more developed investment climate and improving the efficiency of local governance systems. Given the critical role of investments in economic development, the creation of a favorable legal environment by local governance bodies is deemed essential for attracting and protecting foreign investments. The article examines the existing legal framework in Azerbaijan, identifies challenges hindering the development of the investment climate, and outlines actionable steps for local self-governance bodies in this domain. Additionally, it analyzes key economic indicators influencing the investment environment, including import volumes, export volumes to foreign countries, industrial output (goods, works, and services), GDP, and the consumer price index. The research methodology employs econometric techniques, including the Augmented Dickey-Fuller (ADF) test, Fully Modified Ordinary Least Squares (FMOLS) estimator, and Johansen Cointegration test, to investigate the interrelationships among these economic indicators.

Keywords: Foreign Direct Investment, Azerbaijani Economy, Local Self-Government, Legal Attraction Mechanism, Municipality.

Introduction

Azerbaijan stands out as a key factor in attracting direct foreign investments for the sustainable and rapid advancement of economic development. In this article, the important role played by local self-government bodies in improving the investment environment and their effective activities in terms of ensuring long-term economic perspectives are at the center of attention. Research indicates that local self-government bodies enhance the effectiveness of the investment environment by creating favorable conditions for businesses, such as simplifying administrative processes, reducing bureaucracy, and implementing initiatives like the “single window” system, which facilitate the start and management of businesses, potentially increasing import volumes and exports to foreign

countries. Additionally, incentives such as tax breaks, grants, and infrastructure investments can attract investments to key sectors, positively impacting the volume of industrial output (works, services), GDP, and overall economic activity. Maintaining the consumer price index stable and facilitating market access in the investment environment manifests as a significant component of economic performance. The growing role of local governments is of strategic importance for developing the investment environment and ensuring sustainable economic success. Their deep understanding of regional dynamics and resources facilitates the adaptation of policies to local needs for optimizing import and export volumes and increasing industrial output. Additionally, through community participation and the promotion of social cohesion, local governments can contribute to GDP growth and the stabilization of the consumer price index. This participatory approach can drive innovative solutions, enhancing both community well-being and economic indicators, including industrial output and GDP.

The primary objective of the article is to ensure the protection of investors' rights and the stabilization of the investment environment by improving legal attraction mechanisms. Alongside the analysis of the current state of direct foreign investments in Azerbaijan, changes in import and export volumes, industrial output, GDP, and the consumer price index, the directions for developing legal mechanisms within local self-government bodies are at the core of the research. Improving legal attraction mechanisms can create positive changes in import-export volumes and GDP by providing investors with a reliable environment, particularly when supported by addressing gaps in legislation.

Literature review

Kumari and others (2023), in their empirical analysis covering the Indian economy from 1980 to 2019, identified positive long-term relationships between FDI, trade openness, and economic growth using ARDL models. While FDI and trade openness are key drivers of economic growth, negative effects were observed among some variables in the short term, recommending that policymakers undertake structured reforms. The analysis results highlight that trade openness positively impacts FDI, economic growth creates a causal relationship toward FDI, and the synergy of these three factors strengthens the global integration of the Indian economy. The study provides practical policy recommendations to enhance FDI attraction through infrastructure development, the rule of law, and the improvement of international trade agreements. Consequently, the coordinated and planned development of these factors plays a key role in ensuring the sustainable and continuous growth of the Indian economy.

Hübner (2011) emphasizes that FDI is a key driver of economic development in South Caucasus countries, while geopolitical conflicts and economic dependencies in the region limit investment attractiveness. According to the 2011 economic analysis, FDI in Azerbaijan is primarily directed toward the oil sector (88%), which has led to high economic growth, but limited investment in non-oil sectors complicates economic diversification and creates long-term risks. In Georgia, FDI peaked in 2007 (2.15 billion USD) but sharply declined due to the global crisis and the 2008 war, with the government attempting to develop sectors like energy and agriculture through reforms. The region's investment climate is rated as average in international rankings (Georgia performs best, while Azerbaijan lags due to infrastructure issues), highlighting the need to improve FDI quality through reforms.

Qaracayev (2022) indicated in his research that municipalities in the Republic of Azerbaijan constitute the second level of public authority and represent a new form of governance established after independence. There are significant gaps in the national municipal legislation, particularly the lack of a balanced concept regarding the administrative oversight of the powers delegated to local self-government bodies. This gap can be addressed by adopting the draft law “On the Report of the Municipality,” which is a short but crucial step toward developing local self-governance in line with European standards. The adoption of the law will also lead to other positive effects, such as improving the protection of social rights at the local level.

Huseynov (2023) emphasized in his research that local self-governance is a crucial political

institution stemming from the people's authority, ensuring the state's political stability and democratic development by connecting the state and society. Its powers and activities are shaped by the country's historical, geographical, demographic, and legal characteristics, while state authority serves as a framework for its functionality. The effectiveness of local self-governance is enhanced by the application of governance technologies and the preservation of autonomy between central and local levels. In the context of Azerbaijan, the reform and study of this institution offer significant perspectives for political science and practical governance.

Çütçü and Kan (2018) demonstrate through their empirical analyses that factors such as inflation and labor costs negatively impact foreign investment inflows, while a high level of per capita income has a positive effect. The existence of sustained long-term relationships underscores the necessity of formulating effective macroeconomic policies. For countries like Türkiye, prioritizing FDI over external debt or short-term financial inflows is crucial for sustainable capital accumulation and long-term economic growth.

Özdamar (2016) notes in his research that the analysis of Türkiye's economic data from 1981 to 2014 shows that both income levels and nominal exchange rates positively affect FDI, although the statistical significance of income variables is lacking. Using the Johansen cointegration methodology alongside the vector error correction model, the analysis confirms the existence of a long-term equilibrium relationship among the variables and demonstrates that any short-term deviations from this equilibrium are quickly corrected. The results indicate that foreign investments are primarily market-oriented and emphasize the importance of maintaining economic stability for sustained investment inflows. Additionally, the analyses show that currency compression policies can negatively impact investment levels.

Theoretical and conceptual framework

A local self-government body can be defined as an administrative entity tasked with managing state affairs and providing essential services to residents within its jurisdiction. These bodies may exhibit significant diversity in their functional duties and areas of authority, depending on the country's governance structure. The provision of relevant services by local self-government institutions implies the implementation of powers delegated to public service organizations through decentralization (Sambor, 2024, p.87). It can be considered that the changes observed in the functional activities of local self-governance in the modern era, resulting from the increasing demands and needs related to governance, lead to the integration of innovative technological applications into the management process. This process necessitates the use of technology to enhance the effectiveness of local self-governance bodies and to meet contemporary needs. As a result, this integration ensures transparency, acceleration, and accuracy of data in governance, facilitating the delivery of services tailored to the community's needs.

The functions of local self-government are classified into two main groups according to Lorenz Stein, considered the founder of the "Statehood" theory: natural functions and delegated functions. These arise from the independence of local self-government and encompass the implementation of locally significant services, as well as functions delegated by the state and bearing a public character. Representatives of this theory emphasize that natural functions embody the right of local communities to self-government, whereas functions delegated by the state play a crucial role in realizing public interests in accordance with the state's overall strategy. As a result, these two groups of functions reflect both the independent and the state-integrated level of activity of local self-government, thereby creating a balance between the community and the state (Fərman, 2024, p. 33). In our opinion, these functions should be further developed by taking a new direction in the modern era.

Local self-government delineates boundaries and responsibilities in matters such as delegation of authority, budget management, oversight, and mechanisms for citizen participation (KOLAY, 2024, p. 15). In this regard, a strong legal framework is essential for properly regulating the functions and relations between local self-government bodies and the central government. The legal mechanisms in the organization of local self-government encompass the following elements: the

determination of the powers of local self-government bodies, the management of financial provision and budget funds, as well as the promotion of local population participation and the protection of their rights. Through these mechanisms, the effectiveness of local governance is enhanced, and mutual relations with central authorities are appropriately regulated.

In Azerbaijan, local self-government constitutes an important part of the country's governance framework. Their activities are regulated by a comprehensive legal system encompassing specific powers, duties, and principles. The foundations of the legal regulation mechanism of local self-government in Azerbaijan are presented in the table below:

Legal basis	Content	Source
Constitution of the Republic of Azerbaijan	Chapter IV of the Constitution is titled "Local Self-Government" and, in Chapter IX, defines the status, formation principles, powers, and responsibilities of municipalities before the state. The independence of municipalities and their right to independently resolve matters of local importance are established.	https://president.az/az/pages/view/azerbaijan/constitution#section_4
Law of the Republic of Azerbaijan "On the Status of Municipalities"	Provisions regarding the formation and dissolution of municipalities, their powers, management structure, and the election processes for municipal representatives are reflected. This demonstrates that municipalities possess broad powers to resolve matters of local importance.	https://www.justice.gov.az/categories/640
Law of the Republic of Azerbaijan "On Management of Municipal Lands"	This regulates the management, use, and disposal of lands belonging to municipal bodies. This process is an important component of creating economic activities and revenues for municipalities.	https://abma.gov.az/az/qanunlar
Law of the Republic of Azerbaijan "On the Fundamentals of Financial Activities of Municipalities"	This regulates the formation and execution of municipal budgets, the imposition of local taxes and fees, transfers from the state budget, and other financial matters. It is one of the primary mechanisms ensuring the financial independence of municipalities.	https://www.justice.gov.az/categories/640
Other legislative acts	Laws regulating other areas related to the activities of municipalities (the Law "On Local Taxes and Payments," the Law "On Municipal Service"), presidential decrees, decisions of the Cabinet of Ministers, and other normative legal acts complement the legal mechanisms of municipalities.	https://taxes.gov.az/az/post/303 https://republic.preslib.az/az_d4-71.html

Table 1. Fundamentals of the legal regulatory mechanism of local self-government in Azerbaijan

Source: *The table data has been prepared by the author with reference to the relevant official legal electronic databases.*

By the authority mechanisms of municipalities, it is understood the legislative and organizational structures that ensure more active participation of municipalities in local governance and decision-making processes. Through these mechanisms, municipalities are able to provide more efficient and transparent services in accordance with the needs and priorities of the local population. As a result, the effectiveness of local governance increases and public satisfaction rises. The specific features of the main authority mechanisms of municipalities are presented as follows.

Local self-government bodies have the opportunity to take necessary steps to ensure the socio-economic development of their territory within the framework of their legal powers. These steps can be directed towards strengthening the local economy, improving infrastructure, and enhancing the welfare of the population. For this purpose, attracting investments is of great importance in increasing the capabilities of local self-government bodies. In particular, since foreign direct investments have a significant impact on regional development, creating more favorable conditions for their attraction is essential. Foreign Direct Investment (FDI) is an international investment form in which an economic entity recognized as a direct investor or parent company from one country acquires a significant and

lasting interest in an enterprise located in another country (Cole, 2017, p. 467). In local self-governments, this interest also aims to participate in the management of the enterprise or to exercise control over it.

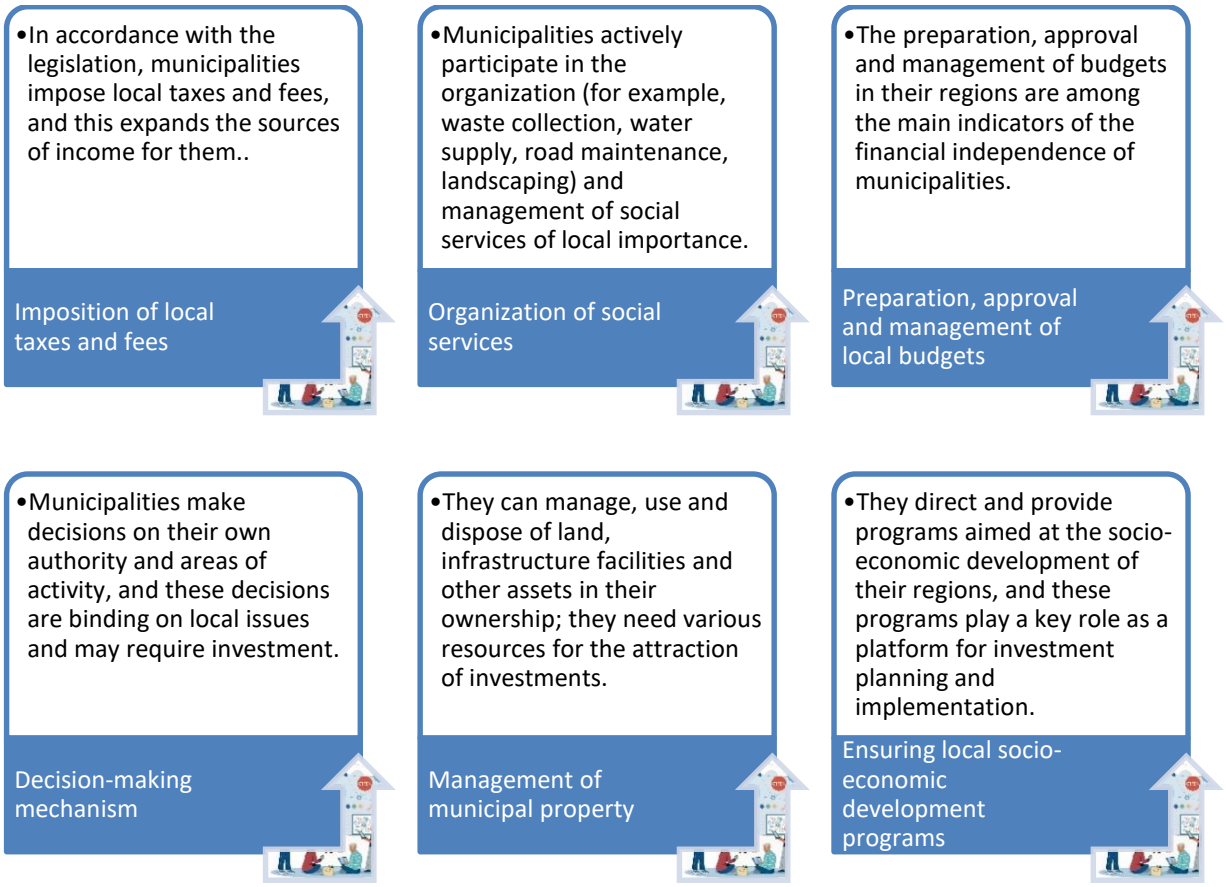

Figure 1. Main power mechanisms of municipalities
Source. *Prepared by the author*

FDI refers to the expenditures made by a corporation or individual from one country to create or acquire business assets and interests in a different country (Kanval et al., 2024, p. 51). This investment serves to expand economic ties by creating lasting interest and influence in the management of a business in a foreign country. FDI plays a crucial role in meeting capital requirements, promoting economic development, and facilitating technological progress in developing countries. This role is particularly linked to bolstering economic budgets and the innovative application of technology in developing countries, which helps sustain the local economy. FDI plays an important role in promoting economic development and eliminating capital shortages in developing countries. As a result, FDI contributes to increasing countries' financial resources and ensuring economic stability, thereby creating a positive impact for long-term economic growth and sustainable development.

Current status of FDI in Azerbaijan

From a strategic perspective, FDI plays a crucial role in the economic development of Azerbaijan, located at the crossroads of Eastern Europe and Western Asia. Over the past few decades, Azerbaijan has achieved significant success in attracting foreign investments, particularly in the oil and gas sector, which forms the backbone of its economy. The foundation of FDI in Azerbaijan was laid after the country gained independence from the Soviet Union in 1991. The government recognized the necessity of attracting foreign capital to stimulate economic growth and modernization. Between 1991 and 1994, major international companies such as BP, McDermott, LukOil, and Exxon became pivotal milestones in Azerbaijan's economic landscape and contributed to the development of the energy sector.

In 2023, Azerbaijan attracted a total of approximately 6.658 billion US dollars in Foreign Direct

Investment (FDI), which rose to approximately 7.046 billion US dollars in 2024. This represents an approximate 6% increase in FDI inflows over the two years. Such an upward trend signals a positive trajectory in the country's economic development and underscores the sustained interest of foreign investors. The analysis of FDI distribution by country reveals the prominent participation of the United Kingdom, Türkiye, and other European countries dominating the investment landscape. Specifically, the United Kingdom remained the leading investor by contributing 1.857 billion US dollars in 2023 (constituting 27.9% of total FDI) and slightly decreased to 1.749 billion US dollars (24.8%) in 2024, observing a 3.1 percentage point decline in market share. Türkiye invested 1.302 billion US dollars (19.5%) in 2023, dropping to 1.219 billion US dollars (17.3%) in 2024, reflecting a 2.2 percentage point reduction, yet maintaining its position among the top investing countries. In 2023, Hungary held third place with an investment volume of 197.452 million US dollars, but in 2024, it dropped to fourth position with 101.648 million US dollars (1.4%), constituting 3.0%. This change reflects a 1.6 percentage point decrease in market share and a significant reduction in investment volume. Cyprus, which was in fourth place in 2023 with 791.594 million US dollars (11.9%), rose to third place in 2024 with 746.789 million US dollars (10.6%). This transition indicates a marginal 1.3 percentage point decrease in market share alongside a relatively modest 5.7% reduction in investment volume. The United Arab Emirates maintained fifth place in both years with an investment volume of 318.967 million US dollars (4.8%) in 2023, increasing its market share by 2.2 percentage points to reach 490.156 million US dollars (7.0%) in 2024. Conversely, the Islamic Republic of Iran fell from sixth position in 2023 with 395.983 million US dollars (5.9%) in investments to seventh place in 2024 with 271.487 million US dollars (3.8%). This shift is characterized by a 2.1 percentage point decline in market share and a substantial 31.4% decrease in overall investment volume. In 2023, the Russian Federation rose from seventh to eighth place with an investment volume of approximately 677.24 million US dollars, accounting for 10.2% of total investments. However, by 2024, its share decreased significantly by 6.9 percentage points, dropping to approximately 234.48 million US dollars or 3.3%, marking one of the most notable declines during this period. The United States maintained its ninth position in 2023 with approximately 171.91 million US dollars (2.6%) in investments, decreasing to approximately 149.83 million US dollars (2.1%) in 2024, experiencing a 0.5 percentage point reduction. This represents a relative decrease of 12.7%. Norway, which was in tenth place in 2023 with approximately 152.22 million US dollars (2.3%), saw its share decrease by 0.4 percentage points in 2024, reaching approximately 136.74 million US dollars (1.9%), and reducing its investment volume by about 10.1%. Overall, although European countries such as the United Kingdom and Türkiye remained the primary sources of FDI inflows in 2023–2024, the decline in some shares despite the overall volume increase reflects changes in interregional investment dynamics and the potential influence of geopolitical factors.

Legal provisions for attracting investments in local self-government bodies

Local self-government is established with the aims of ensuring citizens' welfare, protecting their interests, upholding democratic principles, and implementing effective governance at the local level. The provisions of legal attraction, in particular, play a crucial role in fulfilling the administrative duties of local self-government and promoting citizen participation, thereby serving to make the activities of these bodies transparent and accountable. Within the framework of legal attraction provisions, mechanisms such as incentive programs and tax concessions developed by local self-government bodies play an important role. These initiatives offer potential investors efficient cooperation opportunities and make the business environment attractive. At the same time, initiatives such as strengthening local infrastructure and developing communication networks create essential conditions for attracting investments. These initiatives enhance the appeal for the concentration of entrepreneurial activities, thereby drawing the attention of foreign investors and contributing to the improvement of the investment environment. A key factor in local investment policy is the transparency and stability of the existing legislative system. Providing investors with a reliable and predictable legal environment creates conditions for reducing their risks and developing long-term strategies. The updating of laws, the support of the executive authority, and the protection of local property rights occupy one of the primary places in the process of attracting

investments.

The table below summarizes the main elements of the legal attraction mechanism in local self-government bodies, their legal bases, implementing institutions, and outcomes.

Areas of application	Legal basis	Implementing party	Target achievement
Lease or sale of municipal property	Law on the Fundamentals of Municipal Finance	Municipalities	Increasing interest of local and foreign investors through transparent auctions
Public-private partnership (PPP)	Law of the Republic of Azerbaijan on Public-Private Partnership	Municipalities and various institutions	Infrastructure, utilities, and farm project implementation
Municipal bonds and financial instruments	Decision of the Cabinet of Ministers of the Republic of Azerbaijan on the Approval of the "Rules for the Issuance and Circulation of State and Municipal Securities"	Municipalities	Optimization of financial resources and financing of long-term investment projects
Property and land relations	Land Code, Civil Code	Municipalities	Protecting investors' rights and creating transparent ownership relationships
Investment contracts	Civil Code, Principles of contract law	Municipalities and various institutions	Facilitate and encourage investor activity
Tax benefits	Law of the Republic of Azerbaijan on Municipal Taxes and Payments	Municipalities	Attracting local and foreign investors and stimulating economic activity by reducing tax burdens

Table 2. Elements of the legal mechanism for attracting investments in municipalities

Source. *Compiled from the Law of the Republic of Azerbaijan on the Fundamentals of Municipal Finance; Law on Public-Private Partnership; relevant Decisions of the Cabinet of Ministers; Civil Code of the Republic of Azerbaijan; Land Code of the Republic of Azerbaijan; and the Law on Local (Municipal) Taxes and Fees.*

The areas of application of the legal attraction mechanism for investments by municipalities create an important platform for meeting the economic and social needs of the local community. This platform functions as a guarantor of the strategies of municipalities aimed at improving the living conditions and economic welfare of local residents. These areas ensure the creation of an attractive and legally secure environment for investors by effectively utilizing the powers granted to municipalities by the state. The effective use of these powers establishes a vital foundation for attracting the interests of foreign and local investors by enhancing the transparency and reliability of the investment environment. Areas such as the development of infrastructure and communal services enable municipalities to make extensive use of the PPP model when attracting investments. The PPP model ensures the sustainable development of infrastructure by synthesizing state resources of municipalities with the innovative technologies of the private sector. The optimization of financial resources and the accountable management of investments facilitate the implementation of long-term economic projects by strengthening cooperation between municipalities and investors. This optimization process enhances the financial management capabilities of municipalities by aligning investment resources with strategic planning. Furthermore, the improvement of legal safeguards in the investment attraction process by municipalities emerges as a crucial factor supporting citizens' participation in economic activities and the activation of the investment environment. The enhancement of legal safeguards serves to create a synergy effect between the community and municipalities by strengthening citizens' trust in investment processes.

Econometric analysis

Data set

This research analyzes data covering the years 2000–2024 within the framework of statistical information pertaining to the Republic of Azerbaijan. The examined data were obtained from the databases of the State Statistical Committee of Azerbaijan, the Central Bank of the Republic of Azerbaijan, and the World Bank. The test procedures specified in detail below were implemented for the econometric analysis.

Abbreviation	Description
İBC	Imports by country (mln.dollars)
EBC	Exports by country (mln.dollars)
FDİ	Foreign direct investment, net inflows (mln.dollars)
VIO	Volume of industrial output (works, services), at actual prices, million dollars
GPD	GPD (mln.dollars)
CPİ	Consumer price index

Table 3. Abbreviated description of variables

Source: Prepared by the author.

Econometric methodology

The main model used in the analytical part of the study was constructed to assess the dependence of FDI on various economic indicators. Analytical procedures were conducted using the EViews 10 software package. Specifically, the effect of the following variables on FDI (FDI_t) is examined: fixed component (β_0), imports by country (IBC_t), imports by country (EBC_t), industrial output (VIO_t), that is, the volume of works and services in real prices, GPD (GPD_t) and the consumer price index (CPI_t). This relationship is represented in the following form:

$$FDI_t = \beta_0 + \beta_1 IBC_t + \beta_2 EBC_t + \beta_3 VIO_t + \beta_4 GPD_t + \beta_5 CPI_t$$

Each β coefficient reflects the impact of the corresponding variable on FDI, which allows for a precise assessment of the role of each factor within the model's analytical framework. All statistical analyses conducted in this study were carried out using the EViews 10 software package.

ADF test

The Unit Root test was originally developed by D.A. Dickey and W.A. Fuller and is often referred to as the Dickey-Fuller unit root test. This test assumes that the residuals have a mean of zero and constant variance, and that the residuals are uncorrelated (no autocorrelation). However, in many cases, residuals are correlated with each other or contain elements of autocorrelation. For this reason, the unit root test is not suitable for data with autocorrelation in the residuals, and additional measures must be taken. To address this issue, the Augmented Dickey-Fuller (ADF) test was developed. This test more accurately determines the presence of a unit root in non-stationary time series by accounting for autocorrelation in the residuals (Roza, 2022, p. 108). The table below presents the results of the ADF test and is used to check the stationarity (stability) of the time series. The table provides the test results for the variables logFDI, logEBC, logIBC, logVIO, logGPD, and logCPI.

Level	Model	Variables	ADF t-Statistic	Prob	Level	Variables	ADF t-Statistic	Prob
At Level	With Constant	logFDI	-4.1617	0.0038	At First Difference	logFDI	-4.5625	0.0017
		logEBC	-2.2227	0.2049		logEBC	-2.3746	0.1607
		logIBC	-2.073	0.2564		logIBC	-7.1992	0.0000
		logVIO	-2.8024	0.0749		logVIO	-3.1958	0.0334
		logGPD	-1.7488	0.3953		logGPD	-3.4379	0.0200
		logCPI	-2.3049	0.1785		logCPI	-4.007	0.0056
	With Constant & Trend	logFDI	-3.8491	0.0312		logFDI	-4.3272	0.0126
		logEBC	-2.6835	0.2524		logEBC	-1.9599	0.5867
		logIBC	-2.4097	0.3657		logIBC	-7.2517	0.0000
		logVIO	-1.0527	0.9166		logVIO	-3.5061	0.0624
		logGPD	-1.2102	0.8853		logGPD	-3.6844	0.0443
		logCPI	-2.3857	0.3769		logCPI	-4.1586	0.0171

Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant

*MacKinnon (1996) one-sided p-values.

Table 4. ADF test between variables

Source. *This Result is The Out-Put of Program Has Developed By: Dr. Imadeddin AlMosabbeh, College of Business and Economics, Qassim University-KSA*

This analysis covers the results of the ADF unit root tests conducted to assess the stationarity properties of the time series. The variables under study (logFDI, logEBC, logIBC, logVIO, logGPD, logCPI) were examined both in level form ("At Level") and in first difference form ("At First Difference"). The tests were performed under two models: a model with a constant term ("With Constant") and a model including both a constant and a trend term ("With Constant & Trend"). Stationarity assessment was based on t-statistics and probability values (Prob); typically, the null hypothesis (presence of a unit root, i.e., the series is non-stationary) is rejected at Prob < 0.05. The results are presented below in a structured format.

1. Stationarity Results at Level Form ("At Level"):

The stationarity properties of the variables were examined in their level form. At this stage, the original values of the series were used.

Model: With Constant
logFDI: t-statistic = -4.1617, Prob = 0.0038 (stationary, since Prob < 0.05).
logEBC: Prob = 0.2049 (non-stationary).
logIBC: Prob = 0.2564 (non-stationary).
logVIO: Prob = 0.0749 (partially stationary; rejectable at 10% significance level, but not at 5%).
logGPD: Prob = 0.3953 (non-stationary).
logCPI: Prob = 0.1785 (non-stationary).

Model: With Constant & Trend
logFDI: Prob = 0.0312 (stationary).

Other variables (logEBC, logIBC, logVIO, logGPD, logCPI): Prob > 0.05 (non-stationary). As a result, in level form, only the logFDI variable demonstrates stationarity in both models. The remaining variables exhibit unit root characteristics and are non-stationary.

2. Stationarity Results at First Difference Form ("At First Difference")

The stationarity properties of the variables were examined in first difference form. At this stage, the first-order differences of the series (ΔlogX) were used.

Model: With Constant
logFDI: Prob = 0.0017 (stationary).
logEBC: Prob = 0.1607 (non-stationary).
logIBC: Prob = 0.0000 (stationary).
logVIO: Prob = 0.0350 (stationary).
logGPD: Prob = 0.0206 (stationary).
logCPI: Prob = 0.0171 (stationary).
Model: With Constant & Trend
logFDI: Prob = 0.0160 (stationary).
logEBC: Prob = 0.0867 (partially stationary; rejectable at 10% significance level).
logIBC: Prob = 0.0004 (stationary).
logVIO: Prob = 0.0024 (stationary).
logGPD: Prob = 0.0443 (stationary).
logCPI: Prob = 0.0171 (stationary).

At this stage, most variables exhibit stationarity, with the exception of logEBC (which shows only partial stationarity). Based on the ADF test results, the logFDI variable is not integrated in level form

(I(0)), meaning it is already stationary in its original form. The remaining variables (logEBC, logIBC, logVIO, logGPD, logCPI) are non-stationary in level form but become stationary in first difference form, indicating that they are integrated of order one (I(1)). This level of integration is crucial for modeling the long-term dynamics of the series and lays the foundation for potential cointegration analyses.

The above results are significant in explaining the economic dynamics of the variables under study. Specifically, it can be noted that the influence of other variables on foreign direct investment may possess long-term equilibrium relationships, and long-term interconnections may exist among these factors.

Johansen Cointegration test

The Johansen cointegration analysis proposes estimators to determine cointegration coefficients using two reduced-rank regressions for I(2) variables in Vector Autoregression (VAR) models (Johansen, 1995, p. 25). In other words, the Johansen cointegration test is an econometric method used to determine whether long-term equilibrium relationships (cointegration) exist among multiple time series. This test, particularly within the framework of VAR models, examines whether variables that are non-stationary can move together to form a stable relationship. The results of the cointegration test among the variables used in the study are as follows:

Sample (adjusted): 2002 2024							
Included observations: 23 after adjustments							
Trend assumption: Linear deterministic trend							
Series: LOGFDI LOGCPI LOGEBC LOGGPD LOGIBC LOGVIO							
Lags interval (in first differences): 1 to 1							
		Unrestricted Cointegration Rank Test (Trace)			Unrestricted Cointegration Rank Test (Maximum Eigenvalue)		
Hypothesized		Trace	0.05		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Statistic	Critical Value	Prob.**
None *	0.980431	197.8898	95.75366	0.0000	90.47730	40.07757	0.0000
At most 1 *	0.855587	107.4125	69.81889	0.0000	44.50676	33.87687	0.0019
At most 2 *	0.705664	62.90569	47.85613	0.0011	28.12979	27.58434	0.0426
At most 3 *	0.641030	34.77590	29.79707	0.0123	23.56387	21.13162	0.0223
At most 4	0.292506	11.21203	15.49471	.1988	7.958593	14.26460	0.3829
At most 5	0.131905	3.253439	3.841466	.0713	3.253439	3.841466	0.0713
		Trace test indicates 4 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values			Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values		

Table 5. Johansen Cointegration test between variables

Source. *Prepared by the author using the EViews 10 software package*

The Johansen Cointegration test in the table shows that the LOGFDI, LOGCPI, LOGEBC, LOGGPD, LOGIBC, and LOGVIO series were analyzed based on 23 variables for the years 2002–2024. The test evaluates the probability of 4 cointegrating relations with a lag interval of 1 (in first differences). The results of the Unrestricted Cointegration Rank Test (Trace) and Maximum Eigenvalue tests confirm, based on the rejection of hypotheses (at the 0.05 level), the presence of 4 cointegration coefficients. This indicates the existence of a long-term equilibrium relationship among the selected economic indicators.

FMOLS test

Fully Modified Ordinary Least Squares (FMOLS), developed by Pedroni, is a residual-based estimation method that provides efficient results in small samples for the analysis of integrated variables while

addressing issues such as endogeneity and serial correlation. Its primary objective is to estimate long-term relationships between variables, for example, identifying factors influencing electricity consumption in time series data (Merlin & Chen, 2021, p. 5–8). Overall, the FMOLS test is an advanced econometric methodology designed to assess the existence of long-term equilibrium relationships among non-stationary time series variables. The results of the FMOLS test among the variables are presented in Table 6.

Dependent Variable: LOGFDI				
Method: Fully Modified Least Squares (FMOLS)				
Sample (adjusted): 2001 2024				
Included observations: 24 after adjustments				
Cointegrating equation deterministics: C @TREND				
Long-run covariance estimate (Prewhitening with lags = 2 from AIC				
maxlags = 2, Tukey-Hamming kernel, Andrews bandwidth = 9.5017 (with offset=6))				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGGPD	-0.605493	0.057272	-10.57218	0.0000
LOGCPI	0.784470	0.073317	10.69969	0.0000
LOGIBC	1.017791	0.099263	10.25344	0.0000
LOGEBC	-0.145743	0.041032	-3.551925	0.0023
C	9.426684	0.315478	29.88068	0.0000
@TREND	-0.040489	0.005480	-7.388514	0.0000
R-squared	0.575964	Mean dependent var		8.100863
Adjusted R-squared	0.458176	S.D. dependent var		0.715106
S.E. of regression	0.526380	Sum squared resid		4.987375
Long-run variance	0.004339			

Table 6. FMOLS test results

Source. *Prepared by the author using the EViews 10 software package.*

$$LOGFDIt = -0.6055 \cdot LOGGPDt + 0.7845 \cdot LOGCPIt + 1.0178 \cdot LOGIBCt - 0.1457 \cdot LOGEBCt + 9.4267 - 0.0405 \cdot TRENDt$$

The analysis described in Table 4 employs the FMOLS approach to assess the long-term cointegration relationship with the logarithmic foreign direct investment (LOGFDI) variable as the dependent variable. The model is based on 24 adjusted observations covering the years 2001–2024. The trend-input model was specified with two lagged terms selected according to the Akaike Information Criterion (AIC), using a Tukey-Hamming kernel with an Andrews bandwidth of 5.5017. The independent variables — LOGGPD, LOGCPI, LOGIBC,

LOGEBC, and trend were included in the analysis, demonstrating statistical significance (p-value = 0.000) as evidenced by their respective t-statistics. The model exhibits a moderate level of fit, as indicated by an adjusted R-squared value of 0.576964. The sum of squared residuals (0.004339) and standard error (0.715106) confirm the model's precision. These analysis results indicate the presence of stable and consistent relationships among the economic indicators under study.

Based on the model provided above, let us consider the relative change in LOGFDI with respect to LOGGPD. The coefficient of LOGGPD in the model is -0.605493341486, which indicates that a 1% increase in LOGGPD (with other variables held constant) results in an approximate -0.61% decrease in LOGFDI. This confirms that the relationship is negative (inverse) and calculated in accordance with elasticity. According to the model, when LOGIBC increases by 1% and other variables remain constant, the elasticity is approximately equal, meaning LOGFDI will increase by approximately 1.01779%. This suggests the presence of a directly proportional relationship.

In the given model, a 1 percentage point increase in LOGEBC, with other variables held constant, results in an approximate 0.1457% decrease in LOGFDI.

Conclusion

The following conclusions were obtained as a result of the research:

FDI is inversely proportional to GPD. In the case of an inverse proportionality between the volume of FDI and GDP, innovations such as financial support for local investors and strengthening education in local self-government can be proposed, which would ensure their adaptation to the external environment and the development of strategies supporting economic growth. Article 102 of the Tax Code of the Republic of Azerbaijan concerns exemptions and concessions from income tax. Subclause 123 of this article states that an individual entrepreneur who has received an investment promotion document is exempt from taxes on 50% of the income obtained from the date of receiving the document for a period of 7 years. It can be proposed that the profitability period be reduced from 7 years to 5 years and the percentage rate be increased from 50% to 70%. These measures could significantly enhance the attractiveness of investments and the interest of investors.

FDI is directly proportional to the volume of products or services imported from foreign countries. Taking into account the direct proportionality between the activities of local self-government and the volume of products or services imported from foreign countries with FDI, municipalities can expand their economic policies in the direction of attracting foreign investments and encouraging the substitution of imported goods with local production. For this purpose, in addition to Article 15 of the Law of the Republic of Azerbaijan "On Public-Private Partnership" (on the economic development of municipalities), a mechanism for creating a special fund for joint projects with foreign investors within the PPP framework can be included, for example, subsidizing 10–15% of the municipal budget directed toward local infrastructure projects (road construction, communal services), which would facilitate the implementation of PPP models (e.g., BOT – Build-Operate-Transfer) with the participation of foreign companies and strengthen the integration of the local economy. Furthermore, by amending Article 22 (on municipal property and management), foreign investors could be granted the right to apply tax reductions for 5–10-year leases of municipal land and property; additionally, provisions on international cooperation could be added to Article 35, requiring the creation of an electronic platform for transparency in the process of municipalities concluding contracts with foreign investors.

FDI is inversely proportional to the volume of products or services exported to foreign countries. Local self-government bodies can balance this situation by directing their economic policies toward increasing local production and export potential. In this regard, providing subsidies to stimulate local production in various sectors, implementing modern technologies, and supporting innovative initiatives are of great importance. At the same time, creating appropriate infrastructure for the development of local production and improving education should be among the main priorities.

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