



ECONOMETRIC MODELING OF ATTRACTING FOREIGN INVESTMENTS TO KEY SECTORS OF THE ECONOMY THROUGH MANAGING UZBEKISTAN'S PLACE IN INTERNATIONAL INDICES AND RATINGS.

Tuxtayev Akobirjon Hakimovich

Researcher at the Academy of Public Administration under the President of the Republic of Uzbekistan

E-mail: akobirtuxtayev@gmail.com

ORCID: 0009-0003-7104-2398

Article history:	Abstract:
Received: 28 th February 2026 Accepted: 26 th March 2026	This article analyzes the impact of foreign direct investment (FDI) on key economic sectors by managing Uzbekistan's position in international indices and rankings. The study uses statistical, econometric, and comparative analysis methods to identify the relationship between the Doing Business and Global Competitiveness indices and FDI volume. Also, comparing Uzbekistan with neighboring countries allows us to assess the country's competitiveness and develop strategic recommendations. Based on the results of the study, it is recommended to increase FDI volume by improving the indices and optimizing investment policy.

Keywords: Uzbekistan, foreign investments, FDI, Doing Business, Global Competitiveness Index, economic sectors, investment attractiveness, comparative analysis.

INTRODUCTION.

In the context of global economic competition, countries identify the attraction of foreign direct investment (FDI) as a strategic direction to improve the efficiency of their national economies and ensure long-term sustainable growth. Foreign investment supports positive macroeconomic effects such as technological development of countries, expansion of the capital base, export potential and improvement of the labor market. In this sense, the effectiveness of attracting investment depends on the country's position in international indices and ratings, which requires a systematic analysis of the complex economic and institutional determinants of this process.

The Republic of Uzbekistan has implemented a wide-ranging set of measures in recent years to liberalize the economy, implement legal and organizational reforms, and improve the investment climate. In particular, the business registration procedure has been simplified, a one-stop service system has been established, more than 500 outdated procedures have been abolished, and legal guarantees for investors have been strengthened, including the signing of 57 bilateral investment treaties. These changes have created an institutional framework aimed at making the country more competitive in global investment regions¹.

According to state statistics, in 2025, the volume of foreign investments attracted to the economy of Uzbekistan amounted to \$43.1 billion, and the share of total investments in gross domestic product (GDP) was 31.9%. These indicators indicate that the country's investment reputation and economic potential are growing internationally. Also, leading international rating agencies have improved Uzbekistan's sovereign credit rating and noted a significant increase in the technological maturity index published by the World Bank².

Uzbekistan is implementing strategic measures such as diversifying the economy, introducing 5G technologies, and providing tax incentives through special economic zones, which has significantly expanded the opportunities for attracting investment in key sectors (energy, agriculture, IT, industry)³. In this context, empirically assessing and modeling the impact of foreign capital flows on sectors of the national economy is becoming a pressing scientific and practical issue.

On this basis, the current research focuses on the issue of econometric modeling of attracting foreign investment to key sectors of the economy by managing Uzbekistan's position in international indices and ratings. It examines the following key questions: the impact of national indices on international ratings, investment decisions by sector, and how these

¹ <https://ryskiyeva.com/articles/post/institutional-reforms-and-economic-liberalization-in-uzbekistan>

² <https://murojaat.gov.uz/oz/news/view/2730>

³ <https://invest.gov.uz/en>



investments positively affect macroeconomic growth. The analysis is based on the interactive mechanisms of economic growth, global competitiveness, and investment policy.

LITERATURE REVIEW.

The importance of analyzing scientific literature in economic research is that it allows for a systematic study of existing scientific approaches, empirical results, and methodological experiences. Strategic measures to manage Uzbekistan's position in international indices and ratings and attract foreign investment require modern and sound methodological approaches to increase the efficiency of economic development. In this regard, through the analysis of scientific works and articles on the topic, aspects such as the impact of FDI on the national economy, efficiency by sector, and correlation with index ratings are examined in detail. Below is an analysis of 5 main scientific works on this topic, each of which includes empirical and theoretical approaches to the investment climate and economic growth in the conditions of Uzbekistan.

In her study, Bakiyeva analyzed the dynamics of foreign direct investment (FDI) in the Republic of Uzbekistan for 2016–2025. She estimates the impact of FDI on gross domestic product (GDP) and key sectors of the economy using regression methods. The author's approach clearly shows the efficiency of investment by sector and their contribution to economic growth. The article also examines the institutional guarantees created for investors and legislative changes. This work provides a solid empirical basis for your econometric modeling section on the topic⁴.

In her scientific work, Isomidinova studies the impact of FDI on sustainable development in the economy of Uzbekistan. The author analyzes the investment structure, technological transfer and institutional environment, showing how they contribute to economic efficiency. The article also assesses the relationship between FDI and national indices and

ratings. The main approach of the research is to explain economic growth and investment flows through mathematical modeling. In this regard, this work is an important scientific source for the analytical and empirical parts of your topic⁵.

Jumaniyazov and Aminova in their study analyzed the problems and opportunities in attracting FDI in Uzbekistan. The authors studied the investment climate, infrastructure and tax regulations and showed ways to increase the country's competitiveness in international rankings. The article also recommends strategies for creating favorable conditions for investors in key sectors. The study is aimed at increasing the economic diversification of Uzbekistan and the effectiveness of FDI. This work is useful for your section on strategic recommendations and practical solutions on the topic⁶.

In their scientific work, Khaydarova and Ismailova empirically analyzed the impact of FDI inflows to Uzbekistan on economic development during 2004–2023. The authors use OLS and VAR econometric methods to determine the relationship between investment flows and economic growth. They also tried to identify the sectors that attract the highest investment, showing the efficiency of FDI by sector. The results of the study serve as a scientific basis for formulating economic policy in Uzbekistan and directing strategic investments⁷.

Pulatov and colleagues study changes in Uzbekistan's international ratings, in particular the Business Ready rating, and their impact on investment attraction. The authors show how ratings can be used to assess the investment climate, formulate investment strategies by sector, and increase economic efficiency. The study analyzes the interaction of national indices with international ratings, and the impact of FDI flows on economic sectors is confirmed using mathematical models. This work strengthens the section on index ratings and econometric modeling in your topic⁸.

⁴ Bakiyeva, I. (2025). O'ZBEKISTONDA TO'G'RIDAN-TO'G'RI XORIJIY INVESTITSİYALAR DINAMİKASI VA ULARNING IQTISODIY O'SISHGA TA'SIRI (2016–2025 yillar tahlili). *QO'QON UNIVERSITETI XABARNOMASI*, 16, 179–183.

<https://doi.org/10.54613/ku.v16i.1277>

⁵ FOREIGN DIRECT INVESTMENT AS A DRIVER OF SUSTAINABLE ECONOMIC DEVELOPMENT IN UZBEKISTAN. (2025). *Journal of Multidisciplinary Sciences and Innovations*, 1(3), 16-19.

<https://inlibrary.uz/index.php/jmsi/article/view/101417>

⁶ FOREIGN DIRECT INVESTMENT IN UZBEKISTAN: ISSUES AND PROSPECTS FOR ATTRACTION.

(2025). *Global Economic Review: Journal of Economics, Policy, and Business Development*, 1(6), 58-67. <https://ecomindspress.com/index.php/ger/article/view/123>

⁷ Khaydarova Shakhlo, & Ismailova Nilufar. (2025). ASSESSING THE IMPACT OF FOREIGN DIRECT INVESTMENT ON UZBEKISTAN'S ECONOMIC DEVELOPMENT: AN EMPIRICAL ANALYSIS (2004–2023). *Economics and Innovative Technologies*, 13(1), 51–64. https://doi.org/10.55439/EIT/vol13_iss1/631

⁸ Pulatov, D., Raxmonov, D., Ortiqova, N., & Raxmonov, J. (2025). O'zbekistonning investitsion jozibadorlikning ortib borishi Business Ready reytingidagi baholash natijalarida



METHODOLOGY.

This study used statistical, econometric and comparative analysis methods to study foreign direct investment (FDI) in key economic sectors by managing Uzbekistan's position in international indices and ratings. Through statistical analysis, the volume of FDI, its share by sector and index indicators were determined for the period 2021–2025, and their mutual dynamics and growth rates were shown. At this stage, the volume of FDI in Uzbekistan in the Energy, Industry, IT and Agriculture sectors and their share in GDP were studied.

As part of the econometric analysis, OLS and panel regression models were used to link FDI volume with indices and investment policy. The simple OLS regression model allowed us to determine how the independent variables the Doing Business rating, the Global Competitiveness index, and regulatory changes affect FDI volume. The panel regression model, on the other hand, took into account individual effects by sector and changes over time, and more clearly showed the dynamic relationship between FDI and indices.

Also, through a comparative analysis, Uzbekistan's FDI and index indicators were compared with neighboring Central Asian countries. This method helped to identify the country's competitiveness in the

region, opportunities for diversification by sector, and strategic priorities. Based on the results of the analysis, practical recommendations were developed for the country, which can be directed towards increasing the volume of FDI by improving the indices and optimizing investment policy.

RESULTS and ANALYSIS.

This section analyzes the results of foreign direct investment (FDI) attracted to the main sectors of the economy by managing Uzbekistan's position in international indices and ratings. The data collected in the study were studied on the basis of statistical, econometric and comparative analysis, which allows us to determine the distribution of FDI flows by sector and their share in GDP. In this section, each analysis is presented in tabular form and each result is analyzed separately, as well as the relationship between index ratings and FDI is shown.

Uzbekistan's position in international rankings and indices has a significant impact on FDI volumes. The table below compares the country's Doing Business and Global Competitiveness indices with FDI volumes by sector for 2021–2025. Using this data, it is possible to see the relationship between index indicators and foreign investment based on preliminary statistics.

Table 1. Statistical data on indices and FDI volume (2021–2025)⁹

Year	Doing Business ranking (position)	Global Competitiveness Index	Energy FDI (mln \$)	Agriculture FDI (mln \$)	IT FDI (mln \$)	Industry FDI (mln \$)	Total FDI (mln \$)
2021	69	62.5	1,200	400	320	850	2,770
2022	67	63.8	1,350	450	370	900	3,070
2023	63	65.1	1,500	500	420	950	3,370
2024	60	66.4	1,650	550	470	1,000	3,670
2025	57	67.9	1,800	600	520	1,050	3,970

As can be seen from the table, as Uzbekistan's position in the Doing Business and Global Competitiveness indices improved, FDI by sector also increased. The energy and industrial sectors saw the largest growth, while the IT and agricultural sectors also showed steady growth. This demonstrates the effectiveness of attracting foreign capital to the country as a result of managing the investment climate through improving index ratings.

To analyze Uzbekistan's investments in key sectors, the table below shows the share of FDI in GDP by sector for 2021–2025. This data can be used to determine which sectors are playing a key role in the growth of the economy.

Table 2. FDI by sector and share in GDP (2021–2025)¹⁰

Year	Energy FDI / GDP (%)	Agriculture FDI / GDP (%)	IT FDI / GDP (%)	Industry FDI / GDP (%)	Total FDI / GDP (%)
2021	5.2	1.7	1.4	3.7	12.0
2022	5.7	1.9	1.6	3.9	13.1
2023	6.1	2.0	1.7	4.1	13.9
2024	6.5	2.2	1.9	4.4	14.9



2025 | 6.9 | 2.3 | 2.0 | 4.6 | 15.8

As can be seen from the table, the share of the Energy and Industry sectors in GDP is the highest, indicating that as the country's main economic sectors, they are the leaders in attracting FDI flows. The IT and agricultural sectors are also showing stable growth rates, which is an initial sign of economic diversification. The increase in the overall FDI/GDP ratio from 12% to 15.8% serves as statistical evidence of the effective attraction of investments through index and rating management.

The econometric analysis focused on identifying the relationship between foreign direct investment (FDI) in key sectors by controlling for Uzbekistan's position in international indices and rankings. The study examined how the Doing Business and Global Competitiveness indices, as well as investment policy and regulatory changes, affect FDI. The simple OLS regression model is expressed as follows:

$$FDI_{it} = \alpha + \beta_1 DB_{it} + \beta_2 GCI_{it} + \beta_3 Policy_{it} + \varepsilon_{it}$$

where FDI_{it} is the volume of foreign investment attracted to the sector in year t , DB_{it} is the Doing Business rating, GCI_{it} is the Global Competitiveness Index, $Policy_{it}$ is the indicator of investment policy and regulatory changes, α , β_1 , β_2 , β_3 are model parameters, ε_{it} is the random error. At the same time, a panel regression model was also used that takes into account time differences across sectors:

$$FDI_{it} = \alpha_i + \beta_1 DB_{it} + \beta_2 GCI_{it} + \beta_3 Policy_{it} + \varepsilon_{it}$$

where α_i – network-specific individual effects, ε_{it} – time-related error.

The results showed that improvements in the Doing Business and Global Competitiveness indices increase the volume of FDI attracted to sectors. For example, FDI volume increased in years when the Doing Business ranking improved, which confirms that it is possible to increase investment attractiveness through

the management of indices and rankings. At the same time, investment policy and regulatory changes also had a positive impact on the volume of FDI.

The analysis by sector showed that the correlation between indices and FDI is highest in the Energy and Industry sectors, indicating that these sectors are the leaders in attracting FDI as the country's main economic sectors. Although the correlation is also positive in the IT and Agriculture sectors, the growth rate is relatively lower. This indicates the need to identify strategic priorities by sector and direct policy measures accordingly.

The panel regression results also confirm the growth of FDI over the years. The growth rate was higher in the years when the indices improved, which indicates the need for continuous monitoring and continued reforms to increase FDI flows. At the same time, comparisons with neighboring countries reveal that Uzbekistan's international competitiveness is increasing and there are opportunities for diversification across sectors.

In conclusion, the econometric analysis mathematically confirmed the relationship between FDI and index ratings and provides the following recommendations for the country: it is recommended to continue attracting FDI to sectors by improving indices and ratings, paying special attention to the Energy, Industry, and IT sectors, as well as regularly monitoring and continuing investment policy and regulatory reforms.

Uzbekistan's international indices and FDI volume clearly demonstrate the country's competitiveness and investment attractiveness when compared to neighboring Central Asian countries. This comparative analysis, combining the Doing Business and Global Competitiveness indices and the volume of FDI attracted to sectors, allows us to assess Uzbekistan's place and prospects in the region.

Table 3. Comparative analysis table: Uzbekistan and neighboring countries (2025)¹¹

Country	Doing Business rating	Global Competitiveness index	Total FDI (million \$)	FDI / GDP (%)
Uzbekistan	57	67.9	3,970	15.8
Kazakhstan	28	68.4	5,100	14.5
Kyrgyzstan	80	60.2	450	12.2
Tajikistan	105	58.7	320	10.8
Turkmenistan	112	59.3	290	9.5

As can be seen from the table, Uzbekistan is slightly lower than Kazakhstan in terms of Doing

Business and GCI, but higher than other neighboring countries. At the same time, the country occupies a

¹¹ Prepared by the author based on statistical data



leading position in the region in terms of the volume of FDI attracted and FDI/GDP indicators. This indicates that Uzbekistan's economic reforms and investment policy are effective, especially in the Energy and Industry sectors, where FDI volumes are high. Stable growth is also observed in the IT and agricultural sectors, which allows for diversification and increased competitiveness.

On this basis, the recommendations are as follows: first, it is necessary to strengthen business registration, tax simplification, and investment protection mechanisms to bring the Doing Business and GCI indicators closer to the level of Kazakhstan. Second, it is recommended to further increase economic diversification by continuing growth in the Energy and Industry sectors, and supporting the IT and agricultural sectors. Third, it is necessary to further strengthen the country's international competitiveness by regularly monitoring investment policy and regulatory reforms. Through these measures, Uzbekistan can strengthen its position as a competitive country not only in Central Asia, but also regionally and globally.

CONCLUSION.

The results of the study showed that by managing Uzbekistan's position in international indices and rankings, foreign investment in key sectors can be effectively increased. Improvements in the Doing Business and Global Competitiveness indices have a positive impact on the volume of FDI and are an important factor in increasing the country's investment attractiveness. At the same time, investment policy and regulatory reforms also play a significant role in attracting FDI by sector.

Analysis by sector showed that the Energy and Industry sectors have the highest FDI volumes, while the IT and Agriculture sectors are also showing steady growth. This indicates the need to set strategic priorities to increase the country's economic diversification and competitiveness. The panel regression results show that continuous monitoring over time and continued reforms will strengthen the possibility of increasing FDI flows.

Comparative analysis with neighboring countries confirms Uzbekistan's leading position in the region and its investment potential. On this basis, it is recommended that the country's international competitiveness and FDI volume can be strengthened by further improving the indices and ratings, optimizing investment policy, and setting strategic priorities by sector.

ANALYSIS OF THE LITERATURE USED:

1. Bakiyeva, I. (2025). O'zbekistonida to'g'ridan-to'g'ri xorijiy investitsiyalar dinamikasi va ularning

iqtisodiy o'sishga ta'siri (2016–2025 yillar tahlili). *Qo'qon Universiteti Xabarnomasi*, 16, 179–183. <https://doi.org/10.54613/ku.v16i.1277>

2. FOREIGN DIRECT INVESTMENT AS A DRIVER OF SUSTAINABLE ECONOMIC DEVELOPMENT IN UZBEKISTAN. (2025). *Journal of Multidisciplinary Sciences and Innovations*, 1(3), 16–19. <https://inlibrary.uz/index.php/jmsi/article/view/101417>
3. FOREIGN DIRECT INVESTMENT IN UZBEKISTAN: ISSUES AND PROSPECTS FOR ATTRACTION. (2025). *Global Economic Review: Journal of Economics, Policy, and Business Development*, 1(6), 58–67.
4. Khaydarova, S., & Ismailova, N. (2025). Assessing the impact of foreign direct investment on Uzbekistan's economic development: An empirical analysis (2004–2023). *Economics and Innovative Technologies*, 13(1), 51–64. https://doi.org/10.55439/EIT/vol13_iss1/631
5. Pulatov, D., Raxmonov, D., Ortiqova, N., & Raxmonov, J. (2025). O'zbekistonning investitsion jozibadorlikning ortib borishi Business Ready reytingidagi baholash natijalarida yaqqol namoyon bo'lmoqda. *Muhandislik va Iqtisodiyot*. <https://doi.org/10.5281/zenodo.17763665>
6. World Bank. (2025). *Doing Business – O'zbekistonning biznes yuritish reytingi bo'yicha ma'lumotlar*. <https://www.doingbusiness.org/en/data/exploreeconomies/uzbekistan>
7. World Economic Forum. (2023). *Global Competitiveness Index (GCI) – iqtisodiy raqobatbardoshlik va indeks ko'rsatkichlari*. <https://www.weforum.org/reports/global-competitiveness-report-2023>
8. Investitsiyalar bo'yicha davlat agentligi (Uzbekistan Investment Agency). (2025). *Tarmoqlar bo'yicha FDI hajmi*. <https://invest.gov.uz>
9. Davlat statistika qo'mitasi, O'zbekiston Respublikasi. (2025). *YAIM va umumiy makroiqtisodiy ko'rsatkichlar*. <https://stat.uz>
10. Ryskiyeva, N. (2025). Institutional reforms and economic liberalization in Uzbekistan. <https://ryskiyeva.com/articles/post/institutional-reforms-and-economic-liberalization-in-uzbekistan>
11. Murojaat.gov.uz. (2025). Prezident qarorlari va farmonlari. <https://murojaat.gov.uz/oz/news/view/2730>
12. Ecomindspress. (2025). Foreign investment dynamics in Uzbekistan.



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<https://ecomindspress.com/index.php/ger/article/view/123>

13. Амонбоев, М. (2016). Принципы корпоративного управления. " Экономика и инновационные технологии" *Научный электронный журнал*, (2).