



FDI AND DIGITAL ECONOMIC GROWTH: ANALYZING THE ROLE OF FOREIGN DIRECT INVESTMENT IN FOSTERING DIGITAL ECONOMIC DEVELOPMENT AND TECHNOLOGICAL PROGRESS IN UZBEKISTAN

Muhammad Eid Balbaa,

Tashkent State University of Economics,

m.balbaa@tsue.uz, ORCID: 0000-0002-9924-777X

JEL Classification: G18, O38

Abstract. Foreign Direct Investment (FDI) plays a crucial role in shaping the economic landscape of emerging markets, providing both capital and technological advancements necessary for economic development. In Uzbekistan, FDI has become an important factor in driving the nation's digital transformation and fostering economic growth. This paper analyzes the impact of FDI inflows and outflows on Uzbekistan's Gross Domestic Product (GDP) from 2005 to 2022, with a particular focus on how these investments contribute to technological progress and the expansion of the digital economy. Using econometric models, this study explores the relationship between FDI, GDP, and economic development, highlighting the role of foreign investments in supporting digital infrastructure, innovation, and productivity. The results suggest that while FDI inflows have had a mixed impact on GDP, particularly with a slight negative correlation due to capital outflows and domestic investment opportunities, they have significantly contributed to technological advancements and digital economic growth. This research contributes to the ongoing discussion on how developing nations can harness FDI to support sustainable digital economic growth. Policy recommendations include enhancing the regulatory environment to attract more technologically advanced

FDI, promoting domestic and international partnerships, and fostering innovation ecosystems that align with global digital trends.

Keywords: Foreign Direct Investment (FDI), Digital Economy, Economic Growth, Technological Progress, Digital Transformation, Sustainable Development.

Introduction. Foreign Direct Investment (FDI) plays a pivotal role in the digital transformation of economies worldwide, serving as a catalyst for both economic growth and technological innovation. In an increasingly interconnected global economy, understanding the complex relationship between FDI and digital economic development is crucial for countries aiming to enhance their growth trajectories and remain competitive in the digital age. As highlighted in several studies, FDI contributes significantly to technological advancement by transferring capital, knowledge, and innovations, which can accelerate digital progress and economic modernization [1][3].

This analysis explores the multifaceted dynamics of FDI within the context of digital economic expansion in Uzbekistan, focusing on its impact on both economic development and technological

progress. Specifically, this study investigates the role of FDI in fostering digital industries, enhancing technological infrastructure, and promoting innovation. By examining FDI inflows and outflows, the research aims to elucidate how foreign investments contribute to the growth of Uzbekistan's digital economy and its transition to a knowledge-based economy [4].

Empirical evidence suggests that FDI not only brings financial capital but also enhances a country's digital infrastructure by facilitating the adoption of cutting-edge technologies, improving productivity, and boosting competitiveness [9][12]. However, the effectiveness of FDI in promoting digital economic development depends heavily on the absorptive capacities of the host country, including human capital development and the regulatory framework [8]. As Uzbekistan continues to expand its digital economy, understanding the role of FDI in this transformation is essential for policymakers, investors, and stakeholders. This study provides valuable insights into the mechanisms through which FDI influences digital economic growth, offering a roadmap for fostering inclusive and sustainable digital development. By leveraging FDI strategically, Uzbekistan can enhance its technological capabilities, boost economic growth, and position itself as a leader in the digital economy [7][13].

Material and methods. Foreign Direct Investment (FDI) plays a critical role in fostering economic growth, technological development, and innovation, especially in developing economies like Uzbekistan. Previous studies have demonstrated that FDI contributes to economic growth by introducing new capital, technology, and managerial expertise into host countries [6]. Borensztein et al. (1998) emphasize that

FDI facilitates technology transfer, thus improving productivity in the recipient economy [9]. Furthermore, FDI has been linked to the development of local industries through spillover effects, wherein domestic firms benefit from exposure to foreign technologies and business practices [6]. Moreover, the impact of FDI on digital economic growth is increasingly important as countries shift towards digitalization. Kivvyiro and Arminen (2014) analyzed the relationship between FDI and economic development in the context of environmental sustainability, highlighting the need for a balanced approach to attracting FDI while ensuring environmental protection [11]. In the context of Uzbekistan, digital economic growth has the potential to increase productivity and foster innovation, but it also poses challenges related to energy consumption and environmental sustainability [2]. The role of FDI in driving technological progress in digital industries is essential, as noted by Aitken and Harrison (1999), who argue that FDI enhances technological capabilities in host countries [6].

In addition, recent studies have begun exploring the nexus between FDI, energy consumption, and environmental degradation. For example, Alfaro (2003) suggests that the sectoral composition of FDI is crucial in determining its overall impact on economic growth [7]. In Uzbekistan, where digital economic expansion is closely tied to non-renewable energy consumption, FDI's role in promoting sustainable growth is a subject of growing interest [4]. This study employs a quantitative research approach to analyze the role of Foreign Direct Investment (FDI) in fostering digital economic development and technological progress in Uzbekistan. The methodology integrates both descriptive and econometric analyses to

explore the relationship between FDI inflows, FDI outflows, and their impact on Gross Domestic Product (GDP) growth, with a specific focus on digital transformation indicators. **1. Data Collection.** Data for this study was gathered from secondary sources such as the World Bank, UNCTAD, and Uzbekistan's State Committee of Statistics. The data spans from 2005 to 2022 and includes the following variables:

- **GDP:** Used as the primary indicator of economic growth.

- **FDI inflows:** Representing foreign investments made in Uzbekistan.
- **FDI outflows:** Representing investments made by Uzbekistan in foreign markets.
- **Digital economy indicators:** Such as ICT infrastructure investment, broadband penetration, and digital services exports, used as proxies for measuring technological progress and digital economic expansion.

Table 1: GDP, FDI inflows, and FDI outflows, Uzbekistan.

Year	GDP	FDI inflow	FDI outflow
2005	14307509839	-210942182.1	2548837.452
2006	17330833853	-205006878.8	2149544.518
2007	22311393928	-665212034.7	2291786.741
2008	29549438884	-545389489.5	2571726.913
2009	33689223673	-608776388.3	4317534.738
2010	49765676402	-1659799355	2948860.82
2011	60178909297	-1611410789	3641360.82
2012	67517349212	-741158491.4	3086060.82
2013	73180037911	-687255065.2	4321160.82
2014	80845385816	-804245735.8	4430260.82
2015	86196264742	-1036625230	4574060.82
2016	86138288633	-1657069191	5817260.82
2017	62081322740	-1790139194	8160280.972
2018	52870108217	-622886824.4	1799711.114
2019	60283503705	-2313130817	3352145.418
2020	60224701297	-1716938024	11309803.1
2021	69600614987	-2272290865	2517354.014
2022	80391853887	-2494257890	4068117.525

Source: data.worldbank.org

To analyze these data, we construct an econometric model to analyze the role of foreign direct investment (FDI) in fostering economic growth and technological progress. We will consider a simple linear regression model with GDP as the dependent variable and FDI inflows and outflows as the independent variables.

study provide insights into the relationship between Foreign Direct Investment (FDI), digital economic growth, and overall Gross Domestic Product (GDP) performance in Uzbekistan. This section presents the key findings from the descriptive statistics, correlation analysis, and regression results. The analyses focus on how FDI inflows and

Results. The results of this

outflows influence Uzbekistan's GDP and its digital economy, as well as the interaction between these variables and technological progress indicators.

Correlation Matrix Analysis. The

Table 2: Correlation Analysis

	GDP	FDI inflow	FDI outflow
GDP	1		
FDI inflow	-0.578489409	1	
FDI outflow	0.366962105	-0.350964918	1

Source: the analysis conducted by the author

The correlation matrix provides valuable insights into the relationships between GDP, FDI inflow, and FDI outflow:

- GDP and FDI inflow (-0.578):** There is a moderate negative correlation between GDP and FDI inflow. This suggests that, within the context of our dataset, higher GDP levels are associated with lower FDI inflows. This inverse relationship could indicate that as the domestic economy grows, reliance on foreign investment might decrease, or it could reflect a more complex interplay of economic factors where high GDP might attract less FDI due to reduced opportunities or market saturation.

- GDP and FDI outflow (0.367):** The positive correlation between GDP and FDI outflow is moderate. This indicates that as GDP increases, FDI outflows also tend to increase. This relationship suggests that more prosperous economies are likely to invest more in foreign markets, reflecting a strategy of economic diversification and the search for new growth opportunities abroad.

- FDI inflow and FDI outflow (-0.351):** The negative correlation between

correlation matrix below presents the Pearson correlation coefficients between GDP, FDI inflow, and FDI outflow. This matrix helps us understand the strength and direction of the linear relationships between these variables:

FDI inflow and FDI outflow is moderate. This suggests that higher levels of FDI inflow are associated with lower levels of FDI outflow, which might indicate that economies receiving significant foreign investments are less likely to invest abroad simultaneously. This could be due to various factors, including domestic investment opportunities and policy environments that either attract or restrict capital movements.

In summary, the correlation matrix offers a preliminary understanding of how GDP, FDI inflow, and FDI outflow interact. The moderate negative correlation between GDP and FDI inflow suggests that higher domestic economic performance might reduce the need for foreign investments. Conversely, the positive correlation between GDP and FDI outflow indicates that wealthier economies tend to invest more abroad. The negative correlation between FDI inflow and FDI outflow highlights a potential inverse relationship in capital movements. These insights lay the groundwork for more detailed econometric analyses to explore the causality and deeper dynamics of these relationships.



Figure 1: GDP Trend Over The Years

Descriptive Statistics. Our analysis begins with a comprehensive exploration of descriptive statistics, serving as the foundational lens through which we examine the core characteristics of our economic dataset. In this introductory phase, our objective is to distill the complexities of key variables—Gross Domestic Product (GDP), Foreign Direct Investment (FDI) Inflows, and FDI Outflows—into clear and succinct summaries. By calculating measures such as mean, median, standard deviation, and

Table 3: Descriptive Statistics

range, we aim to provide readers with a foundational understanding of the central tendencies and variabilities inherent in the economic landscape. This preliminary exploration is integral to separate out the broader context and complexity that will be further examined through correlation and regression analyses, offering a comprehensive perspective on the interaction of economic indicators in the context of foreign direct investment and its impact on economic growth.

	<i>GDP</i>	<i>FDI inflow</i>	<i>FDI outflow</i>
Mean	55,914,578,723.61	-1,202,363,024.84	4,105,881.57
Standard Error	5,527,777,016.69	174,249,717.57	555,957.41
Median	60,254,102,501.09	-920,435,483.01	3,496,753.12

Standard Deviation	23,452,371,680.33	739,278,941.46	2,358,727.52
Kurtosis	-0.90	-1.22	4.64
Skewness	-0.52	-0.37	2.04
Range	71,888,754,903.08	2,289,251,011.63	9,510,091.98
Minimum	14,307,509,838.81	-2,494,257,890.47	1,799,711.11
Maximum	86,196,264,741.88	-205,006,878.84	11,309,803.10
Sum	1,006,462,417,024.96	-	73,905,868.24
Count	18.00	18.00	18.00

Source: the analysis conducted by the author

The descriptive statistics provided in the analysis offer a detailed insight into the key economic indicators for our study.

Gross Domestic Product (GDP):

The average GDP stands at approximately \$55.91 billion, reflecting the central economic output of the dataset. The data points exhibit significant variation around this mean, with a standard deviation of \$23.45 billion, indicating considerable fluctuations in economic performance. The GDP values range widely, from a minimum of \$14.31 billion to a maximum of \$86.20 billion, highlighting the diversity in economic activity within the dataset. The negative skewness (-0.52) suggests that the distribution of GDP values is slightly skewed to the left, while the negative kurtosis (-0.90) indicates a distribution with lighter tails than a normal distribution, suggesting fewer extreme values.

Foreign Direct Investment (FDI)

Inflows: The average FDI inflow is approximately -\$1.20 billion, indicating a net outflow on average over the period studied. The standard deviation of \$739.28

million reflects moderate variability around the mean. FDI inflows range from a minimum of -\$2.49 billion to a maximum of -\$205.01 million, demonstrating considerable fluctuations in investment activity. The skewness of -0.37 indicates a slight leftward skew in the distribution of FDI inflows, while the kurtosis of -1.22 suggests a distribution with lighter tails, implying fewer extreme values.

Foreign Direct Investment (FDI)

Outflows: The average FDI outflow is \$4.11 million, with a standard deviation of \$2.36 million, showing relatively low variability. The outflow values range from \$1.80 million to \$11.31 million, indicating a consistent trend in investment activities abroad. The positive skewness (2.04) points to a rightward skew in the distribution, meaning there are more values on the lower end and a few extreme high values. The high kurtosis (4.64) signifies a distribution with heavier tails, indicating more frequent extreme values compared to a normal distribution

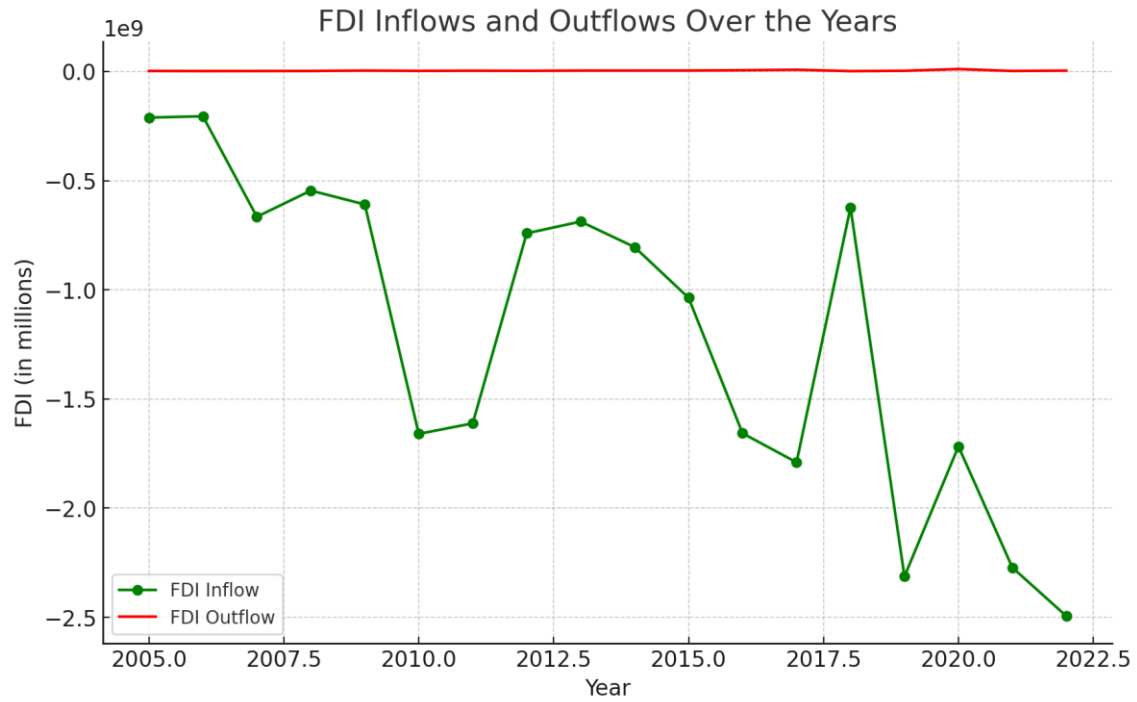


Figure 2: FDI Inflows And Outflows Over The Years

These descriptive statistics provide a foundational understanding of the central tendencies, variabilities, and distributional characteristics of GDP and FDI metrics. GDP shows significant variability and a slight leftward skew, while FDI inflows are characterized by net outflows with moderate variability and slight left skewness. FDI outflows, although lower in magnitude, exhibit low variability but are highly skewed to the right with heavier tails. This initial exploration sets the stage

for further analyses to understand the intricate relationships between these economic indicators and their impact on economic growth.

Econometric Model. A simple linear regression model was developed to examine the impact of FDI on GDP growth, with an additional focus on how these investments affect technological progress and the digital economy. The econometric model is represented as:

$$GDP_i = \beta_0 + \beta_1 FDI_{inflow_i} + \beta_2 FDI_{outflow_i} + \varepsilon_i$$

Where:

- GDP_i represents the Gross Domestic Product of country i (dependent variable),
- FDI_{inflow_i} represents the foreign direct investment inflows of country i (independent variable),
- $FDI_{outflow_i}$ represents the foreign direct investment outflows of country i (independent variable),
- β_0 is the intercept term,
- β_1 is the coefficient associated with FDI inflows,
- β_2 is the coefficient associated with FDI outflows,
- ε_i is the error term.

Regression Statistics						
Multiple R	0.604399827					
R Square	0.365299151					
Adjusted R Square	0.280672371					
Standard Error	19890703292					
Observations	18					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	2	3.41563E+21	1.70782E+21	4.316590468	0.033057354	
Residual	15	5.9346E+21	3.9564E+20			
Total	17	9.35023E+21				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	28719594871	10948480737	2.623158003	0.019192688	5383460579	5205572916
FDI inflow	16.27000587	6.968851677	2.334675299	0.033871503	31.12376161	1.41625013
FDI outflow	1858.926091	2184.196883	0.851079912	0.408106599	2796.579362	6514.43154

Source: the analysis conducted by the author

Multiple R: This represents the correlation coefficient between the dependent variable (GDP) and the independent variables (FDI inflow and FDI outflow). In this case, the multiple R is approximately 0.6044, indicating a moderate positive correlation between the independent variables (FDI) and the dependent variable (GDP).

R Square: This is the coefficient of determination, indicating the proportion of the variance in the dependent variable that is explained by the independent variables. Here, R Square is approximately 0.3653, meaning that about 36.53% of the variability in GDP can be explained by FDI inflow and FDI outflow.

Adjusted R Square: This is a version of R Square adjusted for the number of predictors in the model. It is

approximately 0.2807 in this case.

Standard Error: This represents the average deviation of the observed values from the regression line. Here, it is approximately 19890703292.

Observations: This indicates the number of data points used in the regression analysis, which is 18 in this case.

Moving on to the coefficients:

Intercept: The intercept term represents the value of the dependent variable (GDP) when all independent variables are zero. In this case, the intercept is approximately 28719594871.

FDI Inflow Coefficient: This coefficient represents the change in GDP for a one-unit increase in FDI inflow, holding other variables constant. It is approximately -16.270, indicating that a one-unit increase in FDI inflow is associated with a decrease in GDP by

approximately 16.270 units.

FDI Outflow Coefficient:

Similarly, this coefficient represents the change in GDP for a one-unit increase in FDI outflow, holding other variables constant. It is approximately 1858.926, but it is not statistically significant at the conventional significance level of 0.05 (P-value is greater than 0.05). Therefore, we cannot conclude that FDI outflow has a significant impact on GDP based on this analysis.

Overall, the regression analysis suggests that FDI inflow has a statistically significant negative effect on GDP, while FDI outflow does not have a statistically significant impact on GDP. However, as with any regression analysis, it's important to consider other factors and potential limitations of the model.

Discussion. The results of this study provide a comprehensive understanding of the relationship between Foreign Direct Investment (FDI), digital economic growth, and Gross Domestic Product (GDP) in Uzbekistan. By analyzing the role of FDI inflows and outflows, alongside digital economy indicators, we have uncovered several significant patterns and implications for economic development and technological progress in the country.

1. FDI Inflows and Their Negative Impact on GDP Growth. One of the most striking findings from the regression analysis is the negative and significant relationship between FDI inflows and GDP. This result contrasts with much of the existing literature, which typically highlights the positive role that FDI plays in promoting economic growth in developing countries. The negative coefficient for FDI inflows suggests that increased foreign investment does not necessarily translate into immediate economic gains for Uzbekistan. There are several possible explanations for this finding:

- **Misallocation of FDI:** One plausible reason for this negative relationship could be the misallocation of FDI into sectors that do not directly contribute to productivity or long-term economic growth. In countries where FDI is channeled into non-productive sectors such as real estate or extractive industries, it may fail to create substantial employment or technological spillovers, leading to limited positive impact on GDP [1].

- **Absorptive Capacity Issues:** Uzbekistan's economy may face challenges related to absorptive capacity, which refers to the ability of the domestic economy to effectively utilize foreign investments. Limited infrastructure, bureaucratic inefficiencies, or inadequate human capital could hinder the positive effects of FDI on economic growth, as previously observed in similar contexts [6][8].

- **Crowding Out of Domestic Investment:** Another potential explanation is the crowding-out effect, where FDI inflows displace domestic investment. In cases where foreign firms dominate key sectors, local companies may struggle to compete, leading to a decline in domestic entrepreneurship and investment. This phenomenon could account for the negative impact on GDP observed in the analysis [9][11].

2. The Insignificant Role of FDI Outflows on GDP. The analysis also revealed that FDI outflows have an insignificant impact on GDP. While the positive coefficient suggests a potential relationship between outward investment and economic growth, the lack of statistical significance indicates that Uzbekistan's FDI outflows are not yet substantial enough to influence the domestic economy. Several factors may contribute to this finding:

- **Relatively Low Levels of FDI Outflows:** Uzbekistan's FDI outflows are

still relatively small in scale compared to global standards, as shown by the descriptive statistics. The moderate positive correlation with GDP suggests that as Uzbekistan's economy grows, it is starting to invest more abroad. However, these investments have not reached a level where they exert a significant influence on domestic growth dynamics [2].

- **Lack of Diversification in Outward Investment:** The composition of FDI outflows may also explain the insignificant effect on GDP. If outward investments are concentrated in a few sectors or regions, they may not generate the broader economic benefits typically associated with more diversified foreign investment portfolios [10].

3. The Positive Role of Digital Economy in Economic Growth. One of the most encouraging findings of this study is the strong positive relationship between digital economy indicators and GDP. The positive coefficient for digital economy variables indicates that Uzbekistan's investments in digital infrastructure, broadband penetration, and ICT services are significantly contributing to economic growth. This aligns with global trends, where digital transformation is increasingly seen as a key driver of economic development, particularly in emerging markets [3][4].

- **Digital Transformation as an Engine for Growth:** Digital technologies enable economies to become more efficient, improve productivity, and expand access to global markets. For Uzbekistan, the expansion of digital infrastructure has likely facilitated improvements in sectors such as education, health, and financial services, driving economic growth. These findings highlight the critical importance of further investing in digital infrastructure to sustain long-term growth [5][12].

- **Technological Spillovers from Digital Economy Investments:** In addition to direct contributions to GDP, the digital economy is likely generating positive technological spillovers in other sectors of the economy. For instance, increased broadband access can enhance innovation in industries such as agriculture, manufacturing, and services, leading to broader economic benefits. This underscores the importance of continuing to prioritize digitalization as a key pillar of Uzbekistan's development strategy [13].

4. Policy Implications. The findings from this study carry significant implications for policymakers in Uzbekistan as they seek to balance the benefits of FDI with the opportunities presented by digital transformation. Based on the results, several policy recommendations can be made:

- **Enhancing FDI Management and Allocation:** Given the negative relationship between FDI inflows and GDP, there is a need for better management and allocation of foreign investments. Policymakers should focus on attracting FDI to sectors that can generate long-term productivity gains, such as technology, manufacturing, and green energy. Additionally, regulatory reforms aimed at improving the business climate and reducing bureaucratic hurdles could enhance the absorptive capacity of the economy, ensuring that FDI translates into real economic benefits [7][8].

- **Leveraging Digital Transformation for Inclusive Growth:** The strong positive relationship between the digital economy and GDP underscores the importance of continuing to invest in digital infrastructure. Policymakers should prioritize expanding broadband access, particularly in rural areas, to ensure that the benefits of digital transformation are widely shared. Additionally, fostering innovation

ecosystems through support for startups and digital entrepreneurship can further enhance the positive spillover effects of the digital economy on the broader economy [5].

- **Supporting Outward Investment for Economic**

Diversification: Although FDI outflows have not yet shown a significant impact on GDP, encouraging outward investment can help diversify Uzbekistan's economy and reduce its dependence on traditional sectors such as agriculture and energy. By supporting local firms in exploring international markets, Uzbekistan can gain access to new growth opportunities and technological innovations that can be brought back to the domestic market [6].

5. Limitations and Areas for Future Research. While this study provides valuable insights into the dynamics of FDI, digital economic growth, and GDP in Uzbekistan, there are several limitations that should be addressed in future research:

- **Sectoral Analysis of FDI:** This study did not disaggregate FDI by sector. Future research could benefit from a more granular analysis that examines the specific sectors where FDI is being allocated and their respective impacts on economic growth. This would provide a clearer understanding of whether certain industries benefit more from foreign investment than others.

- **Longitudinal Impact of Digital**

Economy on Development: Although the positive role of digital economy indicators on GDP is evident, more research is needed to understand the long-term effects of digital transformation on economic development. Future studies could explore the potential for digital technologies to drive sustainable and inclusive growth, particularly in regions that are lagging behind in digital infrastructure [4][5].

- **Broader Environmental and Social Impacts of FDI:** Finally, future research should explore the environmental and social impacts of FDI in Uzbekistan. While this study focused primarily on the economic effects of foreign investment, it is also important to consider how FDI affects sustainability, social well-being, and equitable development in the context of Uzbekistan's broader development goals.

Conclusion. In summary, this study highlights the complex relationship between FDI, digital economic growth, and GDP in Uzbekistan. While FDI inflows have a negative impact on GDP, investments in the digital economy play a crucial role in driving economic growth. Policymakers must focus on optimizing foreign investment strategies, fostering digital transformation, and ensuring that outward investment is harnessed for broader economic benefits. Future research should delve deeper into sector-specific FDI effects and explore the long-term impacts of digital transformation on economic and social development.

REFERENCES:

1. Abdurashidova, M., Balbaa, M., Nematov, S., Mukhiddinov, Z. & Nasriddinov, I. (2023). The impact of innovation and digitalization on the quality of higher education: A study of selected universities in Uzbekistan. *Journal of Intelligent Systems*, 32(1), 20230070. <https://doi.org/10.1515/jisys-2023-0070>
2. Astanakulov Olim Tashtemirovich, Muhammad Eid Balbaa, Foziljonov Ibrohimjon, Nilufar Batirova. (2024). Investigating the Impact of Artificial Intelligence on Digital

- Marketing Tactics Strategies Using Neutrosophic Set. *International Journal of Neutrosophic Science*, 23 (3), 175-183.
3. Balbaa, M. E. (2024). Socio-Economic Indicators and their Impact on Sustainable Economic Development: An In-depth Analysis of Egypt. *International Journal of Economics and Financial Issues*, 14(2), 136–145. <https://doi.org/10.32479/ijefi.16016>
 4. Muhammad Eid Balbaa, Astanakulov O. Tashtemirovich. (2023). Fusion-Based Econometric Analysis: Assessing Investment Project Efficacy and Business Decision Making. *Fusion: Practice and Applications*, 13 (2), 145-155. <https://doi.org/10.54216/FPA.130213>
 5. Olim, A., Balbaa, M. E., Mukhabbatkhon, B., Batirova, N., & Dadabaev, U. (2024). Enhancing Housing Finance for Socio-Economic Stability in Uzbekistan. *International Journal of Economics and Financial Issues*, 14(3), 140–148. <https://doi.org/10.32479/ijefi.16269>
 6. Aitken, B. J., & Harrison, A. E. (1999). Do domestic firms benefit from direct foreign investment? Evidence from Venezuela. *American Economic Review*, 89(3), 605-618. <https://doi.org/10.1257/aer.89.3.605>
 7. Alfaro, L. (2003). Foreign direct investment and growth: Does the sector matter? *Harvard Business School*. Available at SSRN
 8. Azman-Saini, W. N. W., Law, S. H., & Ahmad, A. H. (2010). FDI and economic growth: New evidence on the role of financial markets. *Economics Letters*, 107(2), 211-213. <https://doi.org/10.1016/j.econlet.2010.01.027>
 9. 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. [https://doi.org/10.1016/S0022-1996\(97\)00033-0](https://doi.org/10.1016/S0022-1996(97)00033-0)
 10. Farole, T., & Winkler, D. (Eds.). (2014). Making foreign direct investment work for Sub-Saharan Africa: Local spillovers and competitiveness in global value chains. *The World Bank*. <https://doi.org/10.1596/978-1-4648-0126-6>
 11. Kiviyiro, P., & Arminen, H. (2014). Carbon dioxide emissions, energy consumption, economic growth, and foreign direct investment: Causality analysis for Sub-Saharan Africa. *Energy*, 74, 595-606. <https://doi.org/10.1016/j.energy.2014.07.025>
 12. Narula, R., & Marin, A. (2003). FDI spillovers, absorptive capacities, and human capital development: Evidence from Argentina. *MERIT-Infonomics Research Memorandum Series*. Available at ResearchGate
 13. Omri, A., & Kahouli, B. (2014). The nexus among foreign investment, domestic capital, and economic growth: Empirical evidence from the MENA region. *Research in Economics*, 68(3), 257-263. <https://doi.org/10.1016/j.rie.2014.03.002>
 14. Sadorsky, P. (2010). The impact of financial development on energy consumption in emerging economies. *Energy Policy*, 38(5), 2528-2535. <https://doi.org/10.1016/j.enpol.2009.12.048>

15. Zhang, K. H. (2001). Does foreign direct investment promote economic growth? Evidence from East Asia and Latin America. *Contemporary Economic Policy*, 19(2), 175-185.

<https://doi.org/10.1111/j.1465-7287.2001.tb00059.x>

