**Exploring the Role of Governance in Afghanistan’s Foreign Direct Investment**

ABSTRACT

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| --- |
| **Aims:** The primary purpose of this study is to investigate the nexus between FDI inflows and governance indicators: government effectiveness, regulatory quality, control of corruption, rule of law, along with market size, trade openness, inflation, exchange rate, and infrastructure.**Place and Duration of Study:** Afghanistan is selected as a sample of this study, and the study period is from 2002 to 2021.**Methodology:** The study utilized Augmented Dickey-Fuller unit-root test and Modified Ordinary Least Squares (FMOLS) model to check the stationarity of the data and empirical estimations, respectively.**Results:** The results reveal that two of the four selected governance indicators, government effectiveness and the rule of law, are positively associated with FDI inflows in Afghanistan, as a unit rise of them draw 1.077% and 0.948% FDI, individually. At the same time, a unit increase in regulatory quality decreases FDI by 0.838% and a level of enhancement in control of corruption negatively affect FDI by 2.443%. Furthermore, the findings from five macroeconomic variables as traditional determinants of FDI have mix impacts. The findings suggest that one percent increase in market size, trade openness, and exchange rate is positively associated with 2.057%, 5.557%, and 0.012% FDI inflows, respectively. However, the inflation and infrastructure coefficients were negative and significant.**Conclusion:** The study concludes that in order to draw more FDI to the country, policymakers should consider formulating and implementing sound policies. Additionally, efforts should be made to expand economy size, trade openness, and control inflation. Since several articles have not taken Afghanistan as part of their studies, it contributes to the literature on this topic that considers Afghanistan as a sample of the study. |

***Keywords:*** *Afghanistan, Foreign Direct Investment, FDI, governance, FMOLS*

INTRODUCTION

Based on empirical analysis, foreign direct investment (FDI) is associated with the economic development of the nations. This includes transferring technology, managerial skills, and other tangible and intangible assets that lead to employment, increased productivity, financial stability, and other positive impacts in the host country. A wide range of factors contribute to the flow of FDI, including institutional determinants. The laws, norms, and codes of behavior that govern economic, legal, political, and social interactions and transactions and the systems that uphold them are known as institutions (North, 1991; World Bank, 2002). Formal rules are laws and regulations; informal rules are behavioral conventions or codes of conduct. The amount of productive and economic activity in an economy is determined by its institutions, which also set the costs and risks associated with conducting business there (Alfaro et al., 2008; North, 1990). In an economy, many economic activities reflect its opportunities, incentives, and current institutional structure (North, 1990).

Besides macroeconomic determinants, a large number of studies have focused on institutional indicators of FDI in various parts of the world (Adelakun & Ogujiuba, 2023; Bouchoucha, 2023; Kalim et al., 2022; Khan et al., 2022, 2023; Mamman & Valei, 2023). The outcomes of these studies are mixed; while the majority have found a positive nexus between institutional factors and the flow of FDI, some studies found the opposite results. The current situation of global economic development indicates that one of the most crucial elements in achieving sustainable development and balancing economic growth is foreign direct investment (FDI) inflow. In this context, the function of quality institutions has been viewed as a significant catalyst for globalization, creating jobs, and attracting FDI (Khan et al., 2023).

Afghanistan is a South-Asian country with decades of political instability and conflicts that have severely impacted the economic conditions. Although, during the first conquest of the Taliban in the 1990s, the country was cut off from the global economic order, after the international community's presence in Afghanistan in 2001, the flow of capital to the country slowly began. As shown in Figure 1, the FDI in Afghanistan experienced a steady decline with some fluctuations between 2002 and 2021. A literature review indicates that Afghanistan was not included as a sample of studies focusing on the various determinants of FDI, including the effect of institutional indicators. In particular, those articles that have focused on Asian countries, including Central Asian, South Asian, ASEAN, and SAARC nations (Kalim et al., 2022; Mengistu & Adhikary, 2011; Shah & Afridi, 2015; Ullah & Khan, 2017) have not considered Afghanistan. Therefore, in this paper, we select Afghanistan as the study sample.

Given the limited empirical studies on the relationship of institutional factors and FDI in conflict prone and politically unstable settings, this work will enrich the existing literature by considering a sample which has been experiencing political instability and economic uncertainty since decades. By providing novel insights by examining various dimensions of governance and macroeconomic effect on FDI in two decades, this study will be beneficial for developing and conflict-affected countries. In particular, the findings will be relevant to the scholars, economists, and policy makers interested in investment dynamics in unstable environments.

 Regarding governance indicators, four of the six governance indicators developed by Kaufmann et al. (1999) from hundreds of indicators in the World Bank, were chosen for this study. We solely focus on the impact of quality of governance, which, according to Rodríguez-Pose & Cols (2017), are Government Effectiveness (GE), Regulatory Quality (RQ), and Control of Corruption (CC). In addition to this, we also include the Rule of Law (RL) as a crucial element, reflecting the quality of good governance. The remaining two indicators, Voice and Accountability and Political Stability, are not included in the current study. The World Bank defines the governance indicators as follows: government effectiveness measures how well public services are perceived, how independent the civil service is from political pressure, how sound policies are formulated and carried out, and how credible the government is in sticking to its policy agenda. Regulatory quality is the perception of the government's capacity to create and implement sensible laws and regulations that lead to license and motivate the growth of the private sector. Control of corruption is the perception of the degree to which public power is used for private benefit, including both minor and major types of corruption, as well as the "capture" of the state by private interests and elites. The rule of law refers to the degree to which individuals believe in and follow social norms, particularly the enforcement of contracts, property rights, the police, the courts, and the possibility of crime and violence.

**Figure 1: FDI inflow to Afghanistan during 2002- 2021**

*Source: World Bank, 2024*

This article's following sections are organized as follows: the second section reviews recent and relevant literature, and the third section has a theoretical framework and research methodology, including variables, data, and an estimation model. The fourth section thereafter presents the findings and interpretation, while the final section discusses the conclusion and suggestions.

**LITERATURE REVIEW**

In the past decades, FDI has been one of the most studied topics in the field of economics. Researchers and scholars have gone through various dimensions of this crucial topic, such as its effect on the economy, its determinants, and many more angles. This paper focuses on the governance determinants of FDI in Afghanistan. Therefore, the most related and recent articles are considered in this part. In literature, scholars have studied the factors that affect FDI in various countries over different periods of time. Bhujabal et al. (2024) studied how institutional quality affects the amount of foreign direct investment (FDI) inflows into South and Southeast Asian nations between 2002 and 2019. Their findings show that institutional quality significantly favors FDI and affects its flow to both regions. This suggests that FDI inflows into South Asian and Southeast Asian nations are facilitated by an ideal governance structure that includes low levels of corruption, a stable political system with a lack of violence, voice and accountability, high-quality regulations, and an effective legal system. A study by Bouchoucha (2023) investigated the impact of institutional, political, and economic governance on FDI inflow in a sample of thirty-two African nations, fifteen of which were low-income and seventeen of which were middle-income from 1996 to 2019. The results suggest that governance indicators attract FDI in African countries and their sub-regions. Another study by Mamman and Valei (2023) aimed to understand whether the quality of institutions matters in FDI attraction into resource-rich countries. According to the findings, a significant pull effect of institution quality was observed on FDI, with trade openness having a key role. Khan et al. (2023), in their study, ascertain the impact of institutional quality on FDI on a global scale, including developed, developing, and Asian nations during 2002-2019. Contrary to some studies, they discovered that regulatory quality enhances FDI in global panel, while institutional quality index and remaining institutional indicators negatively impact it. Another study by Adelakun & Ogujiuba (2023) comparatively analysed the determinants of FDI in top FDI receivers of Africa. They found that some mitigating factors limiting FDI from entering these countries include price inflation, weak domestic savings, and infrastructure shortages. The study also discovered that weak governance could obstruct the development of efficient institutions and capital inflows. Whether the institution's quality played a role in FDI inflow and the quality of the environment in 107 global developing nations and 39 Belt and Road Initiative nations during 2002-2019 was studied by Khan et al. (2022). The results suggested that institutional quality is significantly and positively associated with FDI inflow. Another study by Awadhi et al. (2022) assessed the effect of institutional development indexed by six governance indicators on FDI in 45 sub-Saharan African nations from 1986 to 2015. The results demonstrated that government effectiveness and rule of law are the only factors that positively and significantly influencing FDI inflows into sub-Saharan. Furthermore, the capacity of sub-Saharan Africa to draw FDI inflows is still significantly influenced by trade openness and market size. Kalim et al. (2022) assessed the impact of institutions on global business in the SAARC context from 2001-2019. Findings showed that while external violence has a negative impact on international business, democratic accountability and political stability encourage commerce and FDI. Additionally, Trade is facilitated by corruption control. In another study, Zander (2021) analyzed whether corruption affects FDI in OECD countries. The study's findings were ambiguous, as the corruption had a positive correlation with FDI in regard to the recipient nation, while it was negative in case of the origin country. Siriopoulos et al. (2021) examined the variables influencing FDI, particularly emphasizing the Gulf Cooperation Council nations' adoption of International Financial Reporting Standards and the quality of their governance from 1996 to 2017. The findings demonstrated that implementation of the International Financial Reporting Standards encourages FDI. Furthermore, laws, regulations, and corruption-related governance metrics have a greater impact on determining FDI. A study by Shamsub & Haque (2021) identified the important mix of individual governance indicators that impacted the inflow of capital in a group of seven most interdependent Asian nations during 1997 to 2017. It was found that some traditional push and pull determinants like global growth of GDP, stock market return, growth of GDP, and selected governance factors affect the flow of capital. The cointegration and causality of FDI, foreign portfolio investment (FPI), and institutional quality were examined by Nxumalo & Makoni (2021) in 12 emerging economies from 2007 to 2017. The study revealed that FDI and FPI are significantly cointegrated with institutional quality. Besides, a unidirectional causality to institutional quality from FDI and FPI in the long term is confirmed. Kiyani & Ganic (2021) investigated the nexus between governance indicators and FDI inflow in China over the period of 2002 to 2019. The results suggested that the rule of law, control of corruption, and regulatory quality significantly and positively affect FDI in China. However, an insignificant relationship between FDI and political stability, voice and accountability, and government effectiveness was also confirmed. The factors affecting FDI inflow to Afghanistan were studied by Eryigit & Shafaq (2021) from 1991 to 2017. The findings showed a statistically significant negative impact of GDP on FDI, while globalization was positively significant. When the combined impact of GDP and exchange rate (EXC) are examined on (FDI), it was discovered that both factors have a statistically significant positive impact. Paul & Jadhav (2020) attempted to explore the institutional determinants of FDI in 24 emerging markets, such as China, Indonesia, India, Thailand, Turkey, Malaysia, and Pakistan. The results of this study showed that important factors influencing FDI in emerging markets include institutional quality measured by the efficient rule of law, political stability, control of corruption, and regulatory quality. Further, infrastructure quality and the cost of trade, which is determined by barriers (tariff and non-tariff), are also significant in FDI attraction.

Another study by Minović et al. (2020) examined the connection between institutional quality indicators (political stability, rule of law, and corruption control) and foreign direct investment (FDI) in the Western Balkans between 2002 and 2017. The findings showed that political stability, control of corruption, and rule of law contribute to FDI inflow into the Western Balkans. In a similar article, Bernal Ponce et al. (2020) examined the causality between FDI outward of China and governance indicators by applying a panel data analysis to Latin American nations. A long-run nexus between the outward FDI of China and three governance factors: regulatory quality, government effectiveness, and control of corruption was found. The results support the idea that there is a statistical nexus between governance indicators and FDI. Younsi & Bechtini (2019) analyzed the institutional factors’ impact on FDI attractiveness, using a pool from 25 emerging host nations over the period of 1996 to 2012. It was concluded that government effectiveness, regulatory quality, and political stability positively affect FDI. The other governance indicators were significant statistically and linked to FDI negatively. Another study by Biro et al. (2019) examined whether good governance impacted FDI inflow to the Latin American economies during 2001-2012. A positive effect of voice & accountability, rule of law, control of corruption, and regulatory quality on FDI inflow was found. Ullah & Khan (2017) in their study analyzed the FDI’s determinants with a focus on economic and institutional factors in SAARC (South Asian Association for Regional Cooperation), ASEAN (Association of South East Asian Nations), and Central Asian Nations during the period 2002-2014. It was concluded that institutional indicators play a crucial role in drawing FDI into the ASEAN region, in contrast to SAARC and Central Asian countries. In a similar study, Shah & Afridi (2015) analyzed the impact of governance factors on the FDI inflow of SAARC countries from 2006 to 2014. The results revealed that political stability and regulatory quality have a significant positive impact on FDI. However, corruption hampers the FDI inflow to the SAARC nations. Furthermore, the impact of institutional factors on the FDI inflow of 113 developing countries during 2002-2019 was studied by Kurul & Yalta (2017). Findings suggested that there is only a significant positive effect of government effectiveness, voice and accountability, and control of corruption on FDI. Ajide & Raheem (2016) assessed the linkage between FDI and institutions in the Economic Community of West African States (ECOWAS) from 2000 to 2013. The empirical results suggested that in ECOWAS nations, the governance structures are fragile, especially the components of political governance are not effective in drawing FDI. Another similar study by Bannaga et al. (2013) aimed to analyze the nexus between good governance and FDI in Arab countries from 1999 to 2009. The research findings were mix. Except for the rule of law and control of corruption, the remaining governance factors had a considerable positive impact on FDI inflows to the Arab countries.

While extensive literature exists on the factors impacting FDI in different contexts and countries, few papers specifically focused on the role of governance in shaping FDI within the fragile and conflict affected states like Afghanistan. This study fills this gap by providing a country specific analysis of Afghanistan, combining governance and macroeconomic indicators.

**THEORETICAL REVIEW**

The study is based on the liberalism theory which emphasizes on the economic independence, democratic governance, and rule of law to enhance the mutually beneficial international relations. This theory states that foreign investors are more likely to invest in economies with transparent institutions, sound regulations, and stable governance. According to North (1990), institutions are made up of formal and informal rules that have been developed, changed, and evolved by people. The propensity of economic actors to invest in a foreign nation is influenced by formal measures, such as insurance, taxes, laws, regulations, government policies, and informal norms of behavior like customs and habits. Reputable institutions typically contribute to lower transaction costs and more profitability. Inefficient institutions, on the other hand, require more time and money. In addition, lackluster property rights protection raises the risk premium and decreases economic activity. Institutions influence cross-border investment by international economic actors. Lucas (1993) advances the theory and proposes that institutional variables are essential in drawing foreign direct investment into emerging economies.

Similar to this (Brewer, 1993; La Porta et al., 1997, 1998) and others discovered that well adherence to government policies, rules, and regulations promotes the growth of the capital market and foreign direct investment inflows. To assess this in the case of Afghanistan, we adopted government effectiveness (GE), regulatory quality (RQ), control of corruption (CC), and rule of law (RL) as governance indicators to know their impact on the FDI flow of the country. Beside this, since macroeconomic determinants are also empirically examined to have an impact on FDI. In this study, the market size (MS), trade openness (TO), inflation (Infl), exchange rate (ER), and infrastructure (Infr) are also considered (Mengistu & Adhikary, 2011; Rodríguez-Pose & Cols, 2017; Shah & Afridi, 2015). Thus, this research will investigate this issue further by formulating the below relation.

FDI=F (GE,RQ,CC,RL,MS,TO,Infl,ER,Infr) (1)

methodology

**Variables and Data**

This study utilizes time series data of Afghanistan for 19 years, during the period 2002 to 2021. The study’s time frame is based on the availability of the data for all considered variables. We have considered FDI as the dependent variable, the four governance factors, and five macroeconomic factors, namely, government effectiveness (GE), regulatory quality (RQ), control of corruption (CC), rule of law (RL), market size (MS), trade openness (TO), inflation (Infl), exchange rate (ER), and infrastructure (Infr) are the independent variables. In this study, to simplify the data analysis, we have transformed two variables, namely, FDI and Market size, which is GDP, into logarithm form. The World Development Indicators (WDI) and World Governance Indicators (WGI) of the World Bank, the United Nations Conference on Trade and Development (UNCTAD), and the International Monetary Fund (IMF) were used as data sources. The variables’ names, symbols for brevity, description, and sources are shown in Table 1.

**Table 1: Description of the variables and sources of the data**

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Symbol | Description | Source |
| Dependent variable |  |  |  |
| Foreign Direct Investment | FDI | Foreign Direct Investment inflow, in natural logarithm | WDI |
| Independent variables |  |  |  |
| Government Effectiveness | GE | Government effectiveness estimate | WGI |
| Regulatory Quality | RQ | Regulatory quality estimate | WGI |
| Control of Corruption | CC | Control of corruption estimate | WGI |
| Rule of Law | RL | Rule of law estimate | WGI |
| Market Size | MS | Total GDP | WDI |
| Trade Openness | TO | Trade to GDP ratio | WDI |
| Inflation | Infl | Change of Price over the year | WDI |
| Exchange Rate | ER | Afghani vs US Dollar (Average of the year) | IMF & UNCTAD |
| Infrastructure | Infr | Mobile subscription (per 100 people) | WDI |

*Source: Compiled by Authors, 2024*

Based on the description of Kaufmann et al. (2009), the governance indicators range from −2.5, indicating weak institutions, to 2.5, showing solid institutions.

**Unit Root Test**

Before beginning the time series data analysis, it is necessary to check whether the data is stationary or not. For this purpose, in this study, the Augmented Dickey-Fuller unit-root test (Dickey & Fuller, 1979) has been used to check whether the time series data is stationary or non-stationary. The null hypothesis H0 of this test indicates the presence of a unit root in the data; hence, it is non-stationary. While alternative hypothesis indicates: there is no unit root test in the data, therefore, the data is stationary.

**Estimation Model**

To achieve the objective of the study, we utilized the modified ordinary least squares (FMOLS) model proposed by Phillips & Hansen (1990). It is applied to study the long-run association among the variables under the study, especially when cointegration is present. When variables are not stationary in level and cointegrated, FMOLS is used to study the long-run relationship despite short-run fluctuations. In the case of this study, since the ADF unit root test shows the majority of the variables have a stationarity at the first difference, this technique will be the most appropriate one. Furthermore, FMOLS corrects for endogeneity by modifying the OLS estimators and serial correlation (autocorrelation) using nonparametric adjustments.

The below equation (1) is considered to estimate the impact of explanatory variables on FDI.

$logFDI\_{t}=β\_{0}+β\_{1}GE\_{t}+β\_{2}RQ\_{t}+β\_{3}CC\_{t}+β\_{4}RL\_{T}+β\_{5}logMS\_{t}+β\_{6}TO\_{t}+β\_{7}Infl\_{t}+β\_{8}ER\_{t}+β\_{9}Infr\_{t}+ε\_{t}$ (2)

Where,

logFDIt is the logarithm form of FDI at time t, β0 is the constant (intercept), GE is the government effectiveness, RQ is the regulatory quality, CC is the control of corruption, RL is the rule of law, logMS is the logarithm of market size, TO is the trade openness, Infl is the inflation, ER is the exchange rate, Infr is the infrastructure, β1 to β9 is the long-run coefficients for each independent variable, and εt is the error term.

results and discussions

**Descriptive Analysis**

A descriptive analysis was performed to shed light on the nature of the variables. As shown in Table 2, the dependent variable (FDI in USD million) has an average of 98.81 million dollars, with a substantial standard deviation of 78.94 million dollars, which shows high fluctuations during the study period. The institutional factors further highlight the disparity in the dataset. All four governance indicators' average and maximum scores lie in negative intervals, indicating Afghanistan has fragile institutions.

**Table 2: Descriptive Statistics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  Variable |  Obs |  Mean |  Std. Dev. |  Min |  Max |
| FDI (USD Million) | 20 | 98.814 | 78.942 | 12.97 | 271 |
| GE | 20 | -1.417 | .165 | -1.67 | -.945 |
| RQ | 20 | -1.417 | .233 | -1.812 | -1.019 |
| CC | 20 | -1.458 | .132 | -1.672 | -1.152 |
| RL | 20 | -1.717 | .151 | -1.923 | -1.437 |
| MS (USD Million) | 20 | 14015.594 | 6026.264 | 3825.701 | 20497.129 |
| TO | 20 | .427 | .076 | .301 | .667 |
| Infl | 20 | 6.189 | 6.107 | -2.198 | 22.528 |
| ER | 20 | 58.361 | 13.205 | 46.452 | 92.98 |
| Infr | 20 | 38.513 | 23.825 | .119 | 67.136 |

*Source: Compiled by Authors, 2024*

The descriptive data of macroeconomic variables also vary for each variable. Market size, with an average of 14,015.59 million USD and a standard deviation of 6,026.26 million USD, exhibits a significant variation; during the period, it has a minimum of 3,825.701 million USD and a maximum of 20,497.129 million USD. The trade openness index, with an average of 0.427 and a range of 0.301 to 0.667, has a low deviation; this variable has been integrated over the years. The data pertaining to inflation highlights the additional economic difficulties in some years. With a standard deviation of 6.11%, the average inflation rate is 6.19%, and it ranges from -2.2%, which denotes deflation, to a high of 22.53%, showing that specific years are subject to substantial inflationary pressures that have the potential to undermine buying power and cause market instability. The exchange rate has a mean of 58.36 and a range from 46.45 to 92.98, also exhibiting significant variation, suggesting notable variations in currency stability that may impact the investment. Lastly, Infrastructure, which is indexed by mobile subscription per 100 persons, has a mean of 38.5 and a range of .12 to 67.14, which shows that the infrastructure of Afghanistan is weak and might negatively impact the investments.

**Correlation Matrix**

The correlation is used to show the relationship among the variables. The outcome of the correlation is shown in Table 3. As shown in the table, a mixed correlation between FDI and governance indicators is present. The dependent variable FDI (logFDI) has a positive correlation with government effectiveness (GE) (0.507), suggesting that implementing sound policies attracts more FDI. Moreover, there is an unexpected negative, weak association between FDI (logFDI) and market size (logMS) (-0.360), which is counterintuitive, as larger markets typically attract more FDI. Regarding exchange rate (ER) and infrastructure (Infr) with FDI, they have a negative association (-0.562) and (-0.478), suggesting that FDI may be discouraged by higher exchange rates or currency depreciation and weak infrastructure.

There is A positive correlation among governance factors, as the relationship between government effectiveness and rule of law (RL) is (0.5). Likewise, the association between regulatory quality (RQ) and rule of law (RL) is (0.543). In the case of macroeconomic variables, they have a mixed correlation of positive and negative with the remaining explanatory determinants. Market size (logMS) has a substantial correlation with regulatory quality (RQ) (0.717), trade openness (TO) has an almost identical association with control of corruption (CC) (0.666) but a negative with market size (logMS) (-0.551). Lastly, Infrastructure’s correlation with market size (logMs), regulatory quality (RQ), and exchange rate (ER) is strong (0.954), (0.755), and (0.665), respectively. The remaining details of the correlation among the variables can be inferred from Table 3.

**Table 3: Matrix of correlations**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  Variables |  (1) |  (2) |  (3) |  (4) |  (5) |  (6) |  (7) |  (8) |  (9) |  (10) |
|  (1) logFDI | 1.000 |
|  (2) GE | 0.507 | 1.000 |
|  (3) RQ | -0.285 | 0.015 | 1.000 |
|  (4) CC | -0.228 | 0.062 | 0.239 | 1.000 |
|  (5) RL | 0.070 | 0.500 | 0.543 | 0.368 | 1.000 |
|  (6) logMS | -0.360 | -0.357 | 0.717 | -0.288 | 0.092 | 1.000 |
|  (7) TO | 0.065 | 0.160 | -0.083 | 0.666 | 0.385 | -0.551 | 1.000 |
|  (8) Infl | 0.247 | 0.230 | -0.384 | -0.096 | -0.289 | -0.374 | 0.115 | 1.000 |
|  (9) ER | -0.562 | -0.427 | 0.550 | 0.346 | 0.044 | 0.492 | -0.131 | -0.366 | 1.000 |
|  (10) Infr | -0.478 | -0.394 | 0.755 | -0.129 | 0.178 | 0.954 | -0.429 | -0.504 | 0.665 | 1.000 |
| *Source: Compiled by Authors, 2024* |

**Augmented Dickey-Fuller Unit-root Test**

The result of the ADF unit-root test in Table 4 shows the stationarity of the variables at the level and first difference. At this level, only three macroeconomic variables, namely market size, trade openness, and inflation are stationary, from which market size is not stationary at the first difference. On the other side, at the first difference, most variables are stationary at a 1% significant level, while infrastructure and exchange rate are stationary at 5% and 10% significant levels, respectively.

**Table 4: Augmented Dickey-Fuller unit root test**

|  |  |  |
| --- | --- | --- |
| **Variable** | **At level** | **At first difference** |
| **Statistics** | **Probability** | **Statistics** | **Probability** |
| logFDI | -2.148 | 0.2256 | -4.885 | 0.0000\* |
| CC | -1.997 | 0.2879 | -3.856 | 0.0024\* |
| GE | -2.068 | 0.2576 | -4.334 | 0.0004\* |
| RQ | -2.171 | 0.2170 | -5.201 | 0.0000\* |
| RL | -1.440 | 0.5632 | -4.645 | 0.0001\* |
| logMS | -3.111 |  0.0257\*\* | -1.639 |  0.4629 |
| TO | -4.567 |  0.0001\* | -4.835 | 0.0000\* |
| Infl | -3.289 |  0.0154\*\* | -5.679 | 0.0000\* |
| ER | 2.361 | 0.9990 | -2.677 |  0.0780\*\*\* |
| Infr | -1.770 | 0.3953 | -3.060 |  0.0297\*\* |

\*, \*\*, \*\*\* indicate the 1%, 5%, & 10% significance level

*Source: Compiled by Authors, 2024*

**FMOLS Results and Discussions**

The econometric equation is estimated by means of the FMOLS model to analyze the long-run relationship between FDI and governance determinants in Afghanistan. The outcome of the estimation is reported in Table 5. The results revealed a mix impact of all four governance indicators on FDI, as relationship of government effectiveness and rule of law are positively significant, nevertheless, regulatory quality and control of corruption negatively affect FDI. First, one-unit enhancement in government effectiveness attracts 1.077% FDI in Afghanistan, suggesting that the country's sound policies are associated with higher FDI inflow. Secondly, the findings show that a level of rise in the rule of law positively impacts FDI by 0.948%. In the case of regulatory quality, it has a negative coefficient, implying that one unit of its increase reduces the FDI by 0.838%. Likewise, control of corruption’s impact on FDI inflow of Afghanistan is highly negative and significant, as a one-unit increase in the control of corruption is associated with a 2.443% decline in FDI. However, this seems surprising since many argue that investors look after societies with low levels of corruption, but some empirical shreds of evidence show the opposite. For example, Mina (2012) argues that, surprisingly, when corruption improves (i.e., less corruption), it negatively affects the FDI. Furthermore, Pablo M & Boliang (2007) argue that international and domestic businesses compete to pay bribes to obtain business contracts in comparatively less developed and less democratic nations. Our findings related to the results of governance indicators are backed by (Bellos & Subasat, 2012; Buracom, 2014; Daude & Stein, 2007; Gangi & Abdulrazak, 2012; Jadhav & Katti, 2012; Khan et al., 2023; Mamman & Valei, 2023; Mengistu & Adhikary, 2011; Mina, 2012; Okafor et al., 2017; Pablo M & Boliang, 2007; Younsi & Bechtini, 2019), among others.

Table 5 also contains the nexus of FDI and five macroeconomic variables. The estimated coefficient of market size (logMS) is positive and highly significant. It signifies that a one percent growth in the size of GDP is linked with a 2.057% increase in FDI inflow in Afghanistan. Similarly, there is a very significant association between FDI and trade openness during the study period. The positive coefficient indicates that a one percent increase in trade attracts 5.551% FDI. Regarding inflation, the result is as expected, it has a highly significant negative nexus with FDI. It implies that higher inflation deters FDI, or more the stability of the prices, more FDI flows to the country. The exchange rate’s coefficient is weakly significant with the dependent variable. It denotes that a higher exchange rate or a depreciation in domestic currency might increase the FDI. Lastly, a significant negative relationship exists between infrastructure and FDI inflow in Afghanistan. Our findings in regard to macroeconomic determinants of FDI are supported by the studies of (Ajide & Raheem, 2016; Asiamah et al., 2019; Buracom, 2014; Jabri & Brahim, 2015; Khan et al., 2019; Kok & Acikgoz Ersoy, 2009; Mina, 2012; Okafor et al., 2017; Sabir et al., 2019; Younsi & Bechtini, 2019).

**Table 5: FMOLS Results**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **logFDI**  |  **Coef.** |  **Std. Err.** |  **z** |  **P>z** |  **95%Conf.** |  **Interval** |
| GE  |  1.077 |  0.455 |  2.360 |  0.018\*\* |  0.184 |  1.970 |
| RQ  |  -0.838 |  0.441 |  -1.900 |  0.057\*\*\* |  -1.702 |  0.025 |
| CC  |  -2.443 |  0.496 |  -4.930 |  0.000\* |  -3.415 |  -1.471 |
| RL  |  0.948 |  0.467 |  2.030 |  0.042\*\* |  0.032 |  1.864 |
| logMS  |  2.057 |  0.426 |  4.830 |  0.000\* |  1.222 |  2.891 |
| TO  |  5.551 |  1.193 |  4.650 |  0.000\* |  3.212 |  7.890 |
| Infl  |  -0.035 |  0.008 |  -4.370 |  0.000\* |  -0.050 |  -0.019 |
| ER  |  0.012 |  0.007 |  1.700 |  0.089\*\*\* |  -0.002 |  0.026 |
| Infr  |  -0.063 |  0.011 |  -5.920 |  0.000\* |  -0.084 |  -0.042 |
| cons  |  -31.661 |  9.940 |  -3.190 |  0.001\* |  -51.144 |  -12.178 |
|  |  |
| Number of Obs. | 19 |
| VAR lag(user) | 0 |
| R2 | .5413631 |
| Adjusted R2 | .0827261 |
| Bandwidth(neweywest)  | 9.1953  |
| Standard Error | .7761967 |
| Long run Standard Error | .1444075 |

\*, \*\*, \*\*\* indicate the 1%, 5%, & 10% significance level

*Source: Compiled by Authors, 2024*

**Conclusion and Recommendations**

This article set out to investigate the effect of four governance indicators on the FDI inflow of Afghanistan from 2002 to 2021. It utilized the ADF-unit root test to examine whether the time series data was stationary or non-stationary, and subsequently, the modified ordinary least squares (FMOLS) estimation technique was used as an econometric medium.

Our findings reveal a mix impact of governance and macroeconomic indicators on FDI in Afghanistan. A positive significant association was observed between FDI and two of the four indicators, government effectiveness and the rule of law. In comparison, regulatory quality and control of corruption are negatively significant to FDI. In case of remaining explanatory determinants, the findings further suggest that an increase in market size leads to higher FDI attraction to the country. The negative and significant inflation coefficient implies that higher inflation deters FDI inflow. There is a positive effect of the exchange rate on FDI, as a higher exchange rate, which means lower domestic currency value, motivates investors to invest in Afghanistan. Finally, we found a negative and significant association between infrastructure and FDI.

Policymakers in Afghanistan may consider these results while making policies in order to attract more capital in the form of FDI. Government effectiveness and the rule of law must be strengthened by formulating sound policies, especially investment- related ones. Since GDP expansion is associated with higher FDI, the country should consider expanding its economy size. Trade openness promotes FDI inflow in Afghanistan; hence, policies should be formulated and implemented to enhance trade. The government needs to take measures to keep the inflation rate as low as possible to enable foreign investors to invest in Afghanistan.

It should be considered that this paper is limited to Afghanistan, the selected variables, the chosen period, and the applied methodology. Future studies may include more variables of interest, extend the study period, and apply different methodologies.

**Disclaimer (Artificial Intelligence)**

The authors declare that the generative AI technologies such as large language models (ChatGPT,COPILOT, etc.) have not been used in this paper.

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