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# Impact of Governance and Financial Development on Foreign Direct Investment in BRICS Nations

Anurag Piyamrao Wasnik<sup>1</sup>, Ishan Kumar Sarraf<sup>2</sup>

#### Abstract

The study tries to understand the impact of Governance and Financial Development on the FDI inflow in the BRICS nations. The study uses the panel regression method to analyze the degree of impact of these indicators on the FDI inflow. The study found that the unit change in Government Effectiveness, Political Stability, and Regulatory Quality will have a positive impact on the FDI inflow in BRICS nations by 1.353, 0.945, and 0.148536 times respectively, while any unit change in the Control of Corruption will have a negative impact on the FDI inflow by 2.820 times. Likewise, for Financial Development, any unit change in the Financial Market Depth and Financial Market Efficiency will positively impact the FDI inflow by 1.634 and 1.624 times, respectively. The study implies that the BRICS nations should focus on strengthening their Government Effectiveness, maintaining Political Stability, improve Regulatory Quality while combating corruption to attract FDI. Similarly, enhancing the Depth and Efficiency of their Financial Markets will significantly strengthen their FDI inflow. The researchers and scholars may pursue the policy implications provided within the study for gauging measures to improve the FDI Inflows in the BRICS nations through Governance and Financial Developments.

Keywords: BRICS, FDI Inflow, Governance, Financial Development

# 1. Introduction

Open economies are more productive than closed economies and grow faster since closed economies only produce to meet domestic demand (Ngepah & Udeagha, 2018). Opening up the economy benefits economic growth in developed and developing countries. As part of economic openness, capital openness led to more capital interchange and increased capital productivity, which encourages economic growth (Guru & Yadav, 2019; Krueger, 1985). Globalization promotes more significant levels of innovation and technology, encouraging entrepreneurship in competitive markets and increasing access to markets, resulting in longer-term growth at constant returns (Krueger & Berg, 2003; Ngepah & Udeagha, 2019; Ngepah, 2014). Foreign direct investment (FDI) has increased due to globalization, and open economics has become more appealing to FDI as their governments have adopted liberal investment policies (Saidi et al., 2013). Foreign direct investment is critical for economic growth and poverty alleviation. Foreign investments help in employment generation, technological transfer, and, as a result, the host country's development and economic progress (Berden et al., 2014; Saidi et al., 2013).

<sup>&</sup>lt;sup>1</sup> Indian Institute of Management, Ahmedabad

<sup>&</sup>lt;sup>2</sup> Pandit Deendayal Energy University (PDEU)

BRICS (Brazil, Russia, India, China, and South Africa) is an organization comprising the world's top five emerging economies that seeks to enhance, widen, and accelerate collaboration within and among member countries to achieve more sustainable, egalitarian, and mutually beneficial growth. They account for 41% of the world's total population, 24% of its GDP, and 16% of international commerce (Evolution of BRICS, 2021). Developing countries are currently leading the charge in attracting and making international investments (UNCTAD, 2009). The BRICS countries are the most favored destinations for the FDI inflow, given their technological advancement, skilled workforce, and favorable environment for setting up any industry. The BRICS are five of the world's greatest emerging nations, accounting for 25% of foreign investment, 18% of goods trade, and 23% of global GDP. As a result, the BRICS have emerged as a critical power in the global economy that cannot be ignored (Xinhua, 2022). The governments of the BRICS countries are spending significant amounts on infrastructure, industry, education, healthcare, housing, and tourism to increase FDI inflows and boost the country's GDP, hence promoting growth in import and export commerce and generating local employment and wealth.

The BRICS countries have adopted a variety of economic growth approaches. Domestic service supply underpins the Brazilian economy. The availability of energy and raw materials is critical to Russia's economic development. The services sector mainly dominates the Indian economy. Furthermore, investment and industry exports drive China's economic growth. In Brazil, Russia, and India, the tertiary sector presently receives the most average inbound FDI, followed by the primary sector, which receives the least. In China, the primary and tertiary industries get far less inward FDI than the secondary sector, which has a distinct industrial structure of foreign FDI. FDI inflows into South Africa have been relatively diverse regarding industry distribution. Despite South Africa's considerable mineral reserves, natural resources are less necessary than expected. More than two-thirds of FDI inflows have gone to non-mining sectors, indicating that dominating the domestic and regional markets has been the primary focus of foreign investments in South Africa (Gelb, S., & Black, A., 2004).

Researchers have focused on the relationship between excellent governance infrastructure and foreign direct investment inflows (FDIs) for several policy implications. Foreign direct investment (FDI) is impacted by the unique political risk of each country. Therefore, governments with prudential rules and regulations and institutional efficacy to safeguard an investor's property rights are more likely to attract FDI (Mody & Srinivasan, 1998). The fundamental governance components that encourage foreign investors to invest in a host nation include operational transparency and accountability, the ability to enforce laws when rules and contracts are breached, and a business-friendly environment. Other examination aspects include government selection processes, monitoring, and replacement. Governance indicators are six components of the governance processes that may be used to measure the level of governance in a country (Kaufmann et al., 2009).

These governance indicators are outlined as follows:

*Voice and Accountability:* It assesses a country's citizens' participation in political decision-making, freedom of association and expression, and access to unrestricted media.

**Political Stability and Absence of Violence/Terrorism:** It evaluates the risk of the present government being removed from office or overthrown using potentially unlawful tactics like terrorism and violent activities driven by political motives. Political stability is required for markets to properly direct resource allocation and inspire faith in economic players to make long-term investments. Foreign investors are unwilling to invest in markets with high levels of uncertainty; therefore, political stability in the host country is critical.

Government Effectiveness: The parameter gathers feedback on the caliber of civil and public services, their immunity to political influence, the effectiveness of policy creation and implementation, and the legitimacy of the political support for these policies. Rammal and Zurbruegg (2006) conducted a study to examine how changes in the standard of governmental regulatory efficacy and governance practices affect the direction of outbound foreign direct investment (FDI) flows among the five ASEAN member countries. The study found that excessive restrictions on foreign trade and business development and a decline in the efficacy and enforcement of investment laws such as price controls have adverse effects on intra-ASEAN FDI flows. These factors are significant in explaining the recent decrease in ASEAN FDI flows.

Regulatory Quality: It includes how the general public views the government's capacity to enact wise policies that promote and enable the expansion of the private sector. Governments have a crucial role in creating laws that regulate the economy, set boundaries for the level of competition and factor endowment, and provide the legal framework for doing business (Rugman & Verbeke, 1998).

Rule of Law: The parameter denotes the efficacy of contract enforcement and the possibility of crime and violence. "The rule of law" broadly refers to a legal system that protects personal fundamental and constitutional rights, public institutions' credibility, and the government's commitment to free and open markets. These standards prohibit arbitrary direct or indirect expropriation of privately owned assets, encouraging FDI and, most likely, private domestic investment.

Control of Corruption: It examines perceptions of the government's misuse of authority for personal gain, including minor and severe corruption. According to Vittal (2001), if China effectively decreases bureaucracy and corruption, strengthens the rule of law, and protects property, FDI might double over the coming decade.

Numerous studies have shown that expanding the financial sector is essential for economic growth. A robust financial sector encourages increased savings rates and credit availability, mobilizes and pools resources, generates investment data, permits and encourages foreign capital inflows, and optimizes capital allocation. Long-term growth rates are generally more significant in countries with advanced financial systems. Much research indicates that this link is causal—financial success comes after and supports economic advancement. Assessing the financial sector's condition and comprehending the relationship between FDI influx and economic growth is essential.

A country's ability to attract foreign direct investment (FDI) is greatly influenced by the quality of its financial infrastructure and the level of governance. Financial development, which encompasses the depth, access, and efficiency of financial markets and institutions, plays a crucial role. Financial markets, including stock and bond markets, determine the size and liquidity of the market. In contrast, financial institutions such as banks, insurance companies, mutual funds, and pension funds offer financial services to people and businesses. The level of activity on capital markets and the ease with which individuals and businesses can obtain financial services are also important considerations.

A comprehensive, multi-dimensional concept of financial development is advocated by Čihák et al. (2012), who developed a matrix of financial system characteristics. A country with a solid financial infrastructure and a high level of governance is more likely to attract FDI due to the greater stability and security offered by the financial system. This, in turn, leads to a more conducive investment environment and increased investor confidence. Thus, countries prioritizing financial development and good governance are more likely to attract FDI and benefit from the economic growth it brings.

# 1.1 Analysis of FDI of BRICS Countries

Table 1 illustrates the total foreign direct investment (FDI) inflows and their trend percentages for the BRICS nations from 2014 to 2020. In 2014, Brazil received the highest FDI inflows of 87,713.98 USD million, but this figure gradually decreased to 37,786.29 USD million in 2020. Similarly, Russia experienced a significant drop in FDI inflows from 22,031.34 USD million in 2014 to 6,852.97 USD million in 2015, followed by a gradual increase to 32,538.90 USD million in 2016, a subsequent decrease in trend. By 2020, FDI inflows had fallen drastically to -237%.

South Africa also experienced a significant decline in FDI inflows, dropping from 5,791.66 USD million in 2014 to 1,521.14 USD million in 2015, representing a decrease of 281%. However, FDI inflows have been on the rise since 2016. The pandemic outbreak in 2020 had a negative impact on the FDI inflows in Brazil, South Africa, and Russia.

On the other hand, India's FDI inflows have been on the rise, increasing from 34,576.64 USD million in 2014 to 64,362.36 USD million in 2020, indicating a growth rate of 46%. Surprisingly, despite the pandemic, FDI inflows in India have remained robust.

As for China, it received the highest FDI inflows of all BRICS nations, with 268,097 USD million in 2014, gradually decreasing to 166,084 USD million in 2017. Nevertheless, China's FDI inflows remained the highest among all the BRICS nations throughout the study.

The trends in FDI inflows for the BRICS nations were mixed over the period studied, with some countries experiencing growth while others experienced a decline. The pandemic had a negative impact on FDI inflows in some countries, while others remained resilient.

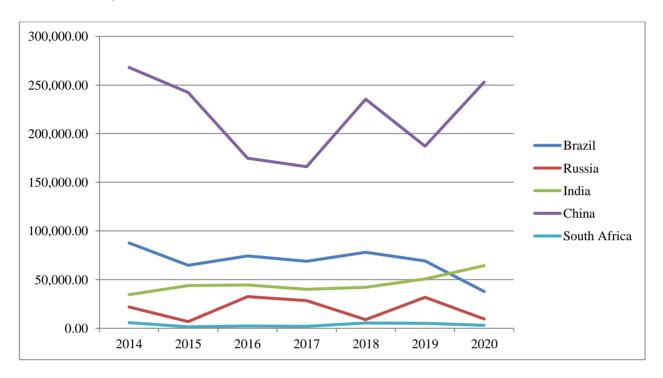


Figure 1: FDI Inflow in BRICS (2014-2020)

Source: World Bank, 2021

Table 1: Trend Percentages of FDI in BRICS Countries

Year	r Brazil		Russia	ia India		China		South Africa		
	Amount in USD millions	% Change	Amount in USD millions	% change						
2014	87,713.98	100%	22,031.34	100%	34,576.64	100%	268,097	100%	5,791.66	100%
2015	64,738.15	-26%	6,852.97	-221%	44,009.49	21%	242,489	-11%	1,521.14	-281%
2016	74,294.63	15%	32,538.90	79%	44,458.57	1%	174,750	-39%	2,215.31	31%
2017	68,885.49	-7%	28,557.44	-14%	39,966.09	-11%	166,084	-5%	2,058.58	-8%
2018	78,162.72	13%	8,784.85	-225%	42,117.45	5%	235,365	29%	5,569.46	63%
2019	69,174.41	-11%	31,974.77	73%	50,610.65	17%	187,170	-26%	5,116.10	-9%
2020	37,786.29	-45%	9,478.81	-237%	64,362.36	21%	253,096	26%	3,153.55	-62%

Source: World Bank, 2021

#### 2. Literature Review

Several pieces of research have been conducted on the factors influencing FDI in developing nations. Singh & Jun's 1995 empirical study on the influence of political risk and macroeconomic factors on FDI inflows in developing countries supports the importance of these aspects in understanding the drivers of FDI.

Wang & Swain (1997) demonstrated that political instability has a detrimental impact on the FDI inflows of multinational corporations and their subsidiaries. Political turmoil, debt repayment or modification, corruption, and opaque institutional procedures all have an adverse impact on the business climate, leading to a decline in FDI inflows. In his study, Morisset (2000) revealed how corruption and weak leadership boost administrative costs, which limit FDI inflows. Other studies claim that institutional and political factors are important drivers of FDI in developing countries.

Globerman & Shapiro (2002) also investigated the connection between the American government and foreign direct investment. In general, governance infrastructure refers to characteristics of laws, rules, and legal frameworks that impact property rights' safety, government openness, and legal procedures. Their findings suggest that the governance infrastructure, which includes the legal system's structure, is a critical factor in determining the amount of FDI received. Globerman & Shapiro (2002) made the case that effective institutions create an environment favorable to multinational corporations overseas. The authors used a probit model to investigate how governance affects FDI outflows from the United States to developing nations.

Samimi & Ariani (2010) assessed how improved governance affected the inflow of foreign direct investment. The researchers used annual average data for 16 MENA (Middle East and North Africa) nations from 2002 to 2007. Political stability, the fight against corruption, and the rule of law were the three governance criteria they adopted from the World Resources Institute for the assessment. They concluded that improving the governance level positively impacts the FDI inflows into MENA countries. As a result, initiatives to develop and enhance the region's governance indices were suggested.

Hassen & Anis (2012) examined how foreign direct investment (FDI) affected Tunisia's economic growth from 1975 to 2009. The real GDP of the Tunisian economy and the coefficients of financial development, FDI, human capital, and trade openness were found to be long-term co-integrated.

In a study conducted by Adhikary (2011) on 15 Asian countries between 1996 and 2008, it was found that good governance and foreign direct investment (FDI) are significant factors that contribute to economic progress. The study utilized the random effect of generalized least squares and Prais-Winsten estimating techniques to investigate the relationship between these variables. Another study by Mengistu & Adhikary (2011) evaluated the impact of good governance on FDI inflows in the same 15 Asian countries using a fixed effect panel data model. The study found that foreign direct investment and governance characteristics such as effective leadership, stable politics, and a lack of violence are important markers of economic success. In particular, the study found that good governance, as measured by the World Bank's governance indicators, positively impacted FDI inflows in these countries. This highlights the importance of a robust institutional framework for attracting FDI.

Financial institutions and markets are crucial in attracting foreign direct investment (FDI) to a country. The depth, access, and efficiency of financial institutions and markets have been shown to impact FDI inflows (Sahay et al., 2015). The size and liquidity of the financial markets, as well as the ease of access to financial services, are key indicators of financial development (Čihák et al., 2012). A country's ability to offer financial services at reasonable prices and generate stable revenues and the level of activity on the capital markets are also essential factors in financial development.

Several studies have examined the relationship between financial development and FDI. Kaur and Singh (2021) analyzed the impact of financial sector development on FDI in India using panel data from 2001 to 2018. The study found that financial sector development, measured by indicators such as credit to GDP ratio, market capitalization ratio, and deposit mobilization ratio, positively affects FDI inflows in India. This suggests that a well-developed financial sector can attract more FDI to a country.

In a cross-country study, Hermes and Lensink (2003) investigated the link between finance, FDI, and economic development. According to the study, the level of financial development in the host country has a considerable impact on the effect of FDI on economic growth. Higher levels of financial development in the host nation mainly, are advantageous for attracting FDI because they enhance credit availability, allowing enterprises to acquire new

equipment, utilize modern technology, and recruit talented managers and laborers. A well-functioning financial framework also provides for FDI backward connections, which boosts industrial efficiency by assisting local suppliers. As a result, the host country's capacity to gain from FDI spillovers is highly determined by its level of financial development. This relationship between finance and FDI emphasizes the importance of finance in the growth equation. Loungani and Assaf (2001) concur, indicating that nations with more modern financial systems are more likely to attract FDI.

According to the above literature analysis, while there have been various studies on the link between governance, financial development, and FDI, there is still a need for a more thorough study on the influence of these characteristics on FDI inflows in the BRICS countries. Given the BRICS countries' distinct economic and political circumstances, a more in-depth analysis is necessary to identify how governance and financial development affect FDI influx in these countries. The current study intends to fill a research vacuum by investigating how governance and financial growth affect FDI in BRICS countries. The research will examine several governance and financial development characteristics that investors assess before investing in these nations. This research will improve understanding of the link between governance, financial development, and FDI by offering insights into the significant determinants that drive FDI inflows in the BRICS states.

#### 2.1 Research Gap

Foreign Direct Investment (FDI) is seen as a critical engine of economic growth in rising economies, particularly the BRICS countries. FDI inflows to these countries have been erratic throughout the years, despite their potential to stimulate economic progress. Two essential variables that impact FDI inflows are governance and financial development. However, there has been little study on the influence of these determinants on FDI inflows to BRICS countries. This article seeks to overcome that gap by investigating the link between governance, financial development, and FDI inflows in the BRICS countries.

The limited research on the relationship between Governance, Financial Development, and FDI inflows to BRICS nations highlights a research gap in this field. Although some studies have examined this relationship, most have focused on a single country or use aggregate data that does not capture country-specific variations. Additionally, the existing literature needs to clearly understand the mechanisms through which Governance and Financial Development impact FDI inflows to BRICS nations. Therefore, there is a need for further research to examine this relationship in detail, using more comprehensive data that captures country-specific variations and identifying the underlying mechanisms through which Governance and Financial Development influence FDI inflows.

#### 2.2 Problem Statement

- 1. The research aims to see whether the country's governance and financial development affect its Foreign Direct Investment.
  - This study aims to examine the relationship between a country's governance, financial development, and foreign direct investment (FDI). FDI has a substantial impact on economic growth and development, which is, in turn, driven by financial development and good governance. This study will examine how and to what extent these factors influence FDI.
- 2. To analyze various governance and financial development parameters, an investor stresses before investing in the BRICS nation.

This study intends to identify the governance and financial development variables that potential investors consider before investing in BRICS nations. Investors are drawn to the BRICS countries because of their growth potential. However, before making investment decisions, investors consider governance and financial development. This study will identify the distinct governance and financial development criteria investors consider when investing in different countries.

#### 2.3 Research Objectives

- 1. Empirically investigate the impact of Governance and Financial Development on FDI inflow in BRICS nations. The study would collect and analyze governance and financial development indicators data to determine their impact on FDI inflows. The research would also use statistical methods to test the significance of the relationship between these variables.
- 2. To investigate the change in FDI inflow based on the country's political stance. The research would also compare the FDI inflows of democratic and autocratic nations within the BRICS group and identify any significant differences.

# 2.4 Research Hypotheses

#### 2.4.1 Governance and FDI

Null Hypothesis (H0): There is no relationship between Governance on the FDI in BRICS nations

Alternate Hypothesis (H1): There is a relationship between Governance on the FDI in BRICS nations

When our null hypothesis (H0) comes to be true, it signifies that the Governance Indicators, i.e., Voice and accountability (VA), Political stability (PS), Government effectiveness (GE), Regulatory quality (RQ), Rule of law (RL) and Control of corruption (CC) have no relationship with the FDI in the BRICS countries.

While if our alternate hypothesis (H1) stands to be true, it signifies that the Governance Indicators, i.e., Voice and accountability (VA), Political stability (PS), Government effectiveness (GE), Regulatory quality (RQ), Rule of law (RL) and Control of corruption (CC) have a relationship with the FDI in the BRICS countries.

#### 2.4.2 Financial Development and FDI

Null Hypothesis (H0): There is no relationship between Financial Development on the FDI in BRICS nations

Alternate Hypothesis (H1): There is a relationship between Financial Development on the FDI in BRICS nations

When our null hypothesis (H0) comes to be true, it signifies that the Financial Development Indicators, i.e., Financial Institution Access (FIA), Financial Institution Depth (FID), Financial Institution Efficiency (FIE), Financial Market Access (FMA), Financial Market Depth (FMD) and Financial Market Efficiency (FME) have no relationship with the FDI in the BRICS countries.

When our alternate hypothesis (H1) comes to be true, it signifies that the Financial Development Indicators, i.e., Financial Institution Access (FIA), Financial Institution Depth (FID), Financial Institution Efficiency (FIE), Financial Market Access (FMA), Financial Market Depth (FMD) and Financial Market Efficiency (FME) a relationship with the FDI in the BRICS countries.

# 3. Research Methodology

# 3.1 Data

The data is the time series data which ranges from 2002-2020. The method used is the quantitative method. Panel regression involves analyzing the relationship between a dependent variable and one or more independent variables over time for a group of countries or regions. The time-series data ranges from 2002-2020, allowing for a longitudinal analysis of changes and trends. The use of quantitative methods involves the use of mathematical and

statistical models to analyze the data, allowing for precise measurement and analysis of the relationship between variables.

# 3.2 Research Design

Table 2: Research Design

Sr. No	Dependent/Independent Variable	Name of the variable	Measured
1	Dependent	FDI Inflow	Total FDI Inflow in the country annually
2	Independent	Governance	Governance Indicators by World Bank: Voice and accountability (VA) Political stability (PS) Government effectiveness (GE) Regulatory quality (RQ) Rule of law (RL) Control of corruption (CC)
3	Independent	Financial Development	Financial Development Indicators by IMF: Financial Institution Access (FIA) Financial Institution Depth (FID) Financial Institution Efficiency (FIE) Financial Market Access (FMA) Financial Market Depth (FMD) Financial Market Efficiency (FME)

Source: Kaufmann & Kraay, 2021; Svirydzenka, 2016

# 3.4 Model of the Theory

We use a statistical model that includes a set of governance and financial indicators as independent variables and FDI inflows as the dependent variable. The model can be specified as follows:

FDI = f (Governance Indicators, Financial Indicators) (3.1)

The aim is to estimate the coefficients of the independent variables and their impact on FDI inflows.

The model includes several governance indicators, such as control of corruption (CC), government effectiveness (GE), political stability (PS), the rule of law (RL), and voice and accountability (VA), as well as financial development indicators such as foreign investment assets (FIA), foreign investment liabilities (FID), foreign investment earnings (FIE), foreign portfolio assets (FMA), and domestic credit provided by the banking sector (FMD).

By estimating the coefficients of these indicators, we can determine the extent to which each variable affects FDI inflows. The model also includes an intercept ( $\beta 0$ ) and an error term ( $\xi t$ ) that captures any unexplained variation in FDI inflows.

# 3.4.1 Mathematical Model

FDI = f (Governance Indicators, Financial Indicators) (3.1)

#### 3.4.2 Statistical Model

$$\begin{split} FDI_1 &= \beta 0_1 + \beta 1_1 \, (CC) + \beta 2_1 \, (GE) + \beta 3_1 \, (PS) + \beta 4_1 \, (RQ) + \beta 5_1 \, (RL) + \beta 6_1 \, (VA) + \xi t_1 \quad (3.2) \\ FDI_2 &= \beta 0_2 + \beta 1_2 \, (FIA) + \beta 2_2 \, (FID) + \beta 3_2 \, (FIE) + \beta 4_2 \, (FMA) + \beta 5_2 \, (FMD) + \beta 6_2 \, (FME) + \xi t_2 \quad (3.3) \end{split}$$

Where,

 $\beta0$  is the intercept, and  $\beta1$  to  $\beta6$  are the coefficients of the governance and financial development indicators, whereas  $\xi$ t represents the error in the model.

#### 4. Data Analysis

Panel regression, fixed effects regression, or longitudinal data analysis is a widely used econometric approach for analyzing data that includes cross-sectional and time-series components. This approach is commonly used in the social sciences, such as economics, political science, and sociology, to estimate the connection between independent factors and a dependent variable across time while allowing for individual differences or unobserved heterogeneity.

Unlike standard regression models, the panel regression model allows adding time-invariant variables unique to each individual or item being researched. As a result, panel regression is a valuable technique for analyzing data in which individuals or entities are monitored across time.

Several studies have used panel regression in recent years to analyze governance, financial, and foreign direct investment (FDI) variables in the BRICS nations. Governance indices like political stability, the rule of law, and government performance have significantly impacted economic growth and development (Kaufmann, Kraay, & Mastruzzi, 2011). Panel regression was used to investigate the association between governance parameters and economic development in the BRICS nations. Panel regression was used by Ogunmuyiwa, Akanbi, and Ogunmuyiwa (2019) to study the influence of governance variables on economic development in the BRICS nations. According to the report, government efficacy and the rule of law benefit economic growth in the BRICS countries.

Financial indicators such as interest rates, inflation, and currency rates are substantial economic growth and development factors. Panel regression investigated the association between BRICS financial indicators and economic development. Guo and Xu (2019) employed panel regression to examine the influence of financial products on BRICS economic growth. The study discovered that financial development has a favorable and considerable impact on economic growth in the BRICS nations.

Foreign direct investment (FDI) is a critical engine of economic growth and development in developing nations. The association between FDI and economic development in the BRICS nations has been investigated using panel regression. For example, Liu, Wang, and Lu (2020) used panel regression to examine the influence of FDI on economic development in the BRICS nations. According to the report, FDI has a favorable and considerable impact on economic growth in the BRICS nations

#### 4.1 Regression Analysis Output

# 4.1.1 Governance Indicators

Table 3: Regression Analysis Output for Governance Indicators

Dependent Variable: Foreign Direct Investment (FDI)				
Independent Variables	Coefficient (Probability)			
GE	1.353658 (0.0648)***			
CC	-2.820424 (0.0000)*			
PS	0.945563 (0.0117)**			
RQ 0.148536 (0.0000)*				
*,**,*** show significance at 1%, 5% and 10%				

Source: Author's calculation from EViews

Based on the regression analysis, the output shows the relationship between the four independent variables and the dependent variable. In this case, the dependent variable is FDI inflow, while the independent variables are GE, CC, PS, and RQ.

The first part of the output shows that the positive and significant value of if there is any change in GE (Government Effectiveness) by 1 unit for the BRICS countries, there will be a positive change in FDI inflow by 1.353658 times. This means that as the government effectiveness of the BRICS countries improves, there is an increase in FDI inflow.

The second part of the output shows that any change in CC (Control of Corruption) by 1 unit will negatively affect the FDI inflow by -2.820424 times. This indicates that as the level of corruption increases in the BRICS countries, FDI inflow decreases. This is because corruption can discourage foreign investors who may be worried about the potential for bribery or other illegal activities.

The third part of the output indicates that any change in PS (Political Stability) in the BRICS countries by 1 unit will positively affect the FDI inflow by 0.945563 times. This means that as the political stability of the BRICS countries increases, FDI inflow also increases. This is because political instability can create an uncertain investment climate, making it more difficult for foreign investors to commit to long-term investment projects.

Finally, the last part of the output shows that any change in RQ (Regulatory Quality) by 1 unit will positively affect the FDI inflow by 0.148536 times. This indicates that as the quality of regulations in the BRICS countries improves, there is an increase in FDI inflow. This is because effective regulations can create a more stable and predictable business environment for foreign investors.

#### Significance of the indicators

In a regression analysis, the significance values, also known as p-values, indicate the probability of observing a coefficient as extreme as the one we obtained in our analysis, assuming that the true coefficient is zero. The smaller the p-value, the more statistically significant the relationship between the independent and dependent variables. In this particular case, our regression model indicates that GE is significant at a 10% significance level, CC is significant at a 1% significance level, PS is significant at a 5% significance level, and RQ is significant at a 1% significance level. This means the coefficient estimates for CC and RQ are highly statistically significant, while the estimates for GE and PS are less statistically significant but still meaningful.

For instance, the highly significant coefficient estimate for CC suggests that control of corruption is a crucial factor in attracting FDI inflows in the BRICS countries. On the other hand, the coefficient estimate for GE suggests that government effectiveness is also a statistically significant factor in attracting FDI inflows in the BRICS countries, albeit at a lower significance level.

# 4.1.2 Financial Indicators

Table 4: Regression Analysis Output for Financial Indicators

Dependent Variable: Foreign Direct Investment (FDI)			
Independent Variables	Coefficient (Probability)		
FMD (-1)	1.632829 (0.0092)**		
FMA(-1)	0.042668 (0.9640)***		
FME(-1)	1.624809 (0.0001)*		
*.**.*** show significance at 1%, 5% and 1	0%		

Source: Author's calculation from EViews

The regression coefficients provide essential information on the strength and direction of the relationships between financial market variables and FDI inflows in BRICS countries. Specifically, the regression analysis coefficients

show that financial market depth (FMD) and financial market efficiency (FME) have a strong positive effect on FDI inflows. In contrast, financial market access (FMA) has a weaker positive effect.

The coefficient for FMD indicates that a one-unit increase in financial market depth will lead to a 1.632829-times increase in FDI inflows. This suggests that a deeper and more liquid financial market can attract more foreign investment, providing investors with more investment options and reducing transaction costs. Policymakers can promote financial market depth by fostering the development of diverse financial instruments, improving the efficiency of the payment system, and reducing regulatory barriers to investment.

The coefficient for FMA indicates that a one-unit increase in financial market access will lead to a 0.042668-times increase in FDI inflows. Although this coefficient is smaller than that for FMD, it still indicates a positive relationship between market access and FDI. Improving market access involves reducing restrictions on foreign investment, simplifying procedures for investment, and enhancing transparency in financial regulation.

The coefficient for FME indicates that a one-unit increase in financial market efficiency will lead to a 1.624809-times increase in FDI inflows. This suggests that more efficient financial markets can attract more foreign investment, enabling investors to transact quickly and cost-effectively and obtain high-quality financial information. Policymakers can promote financial market efficiency by promoting the use of electronic payment systems, improving the quality and availability of financial information, and enforcing regulations effectively and transparently.

# Significance of the indicators

The p-values associated with the regression coefficients provide statistical evidence of the relationships between the financial market variables and FDI inflows in BRICS countries. A p-value represents the probability of observing a coefficient as large as the estimated one or more extreme, assuming that the null hypothesis of no relationship between the variable and the outcome holds. A p-value below a certain significance level (e.g., 5% or 1%) indicates that the coefficient is statistically significant and that we can reject the null hypothesis.

In our regression analysis, the p-values associated with FMD and FME are less than 0.05 and 0.01, respectively, indicating a statistically significant relationship between these variables and FDI inflows in BRICS countries at the 5% and 1% levels of significance, respectively. This suggests that FMD and FME positively affect FDI inflows in BRICS countries.

Conversely, the p-value associated with FMA is greater than 0.05, which suggests a lack of statistical significance in the relationship between FMA and FDI inflows in BRICS countries. Therefore, we accept the null hypothesis of no relationship between FMA and FDI inflows in BRICS countries.

Taken together, these regression analysis probability results suggest that FMD and FME are essential determinants of FDI inflows in BRICS countries, while FMA is not a statistically significant predictor. Hence, policymakers in BRICS countries should prioritize the promotion of financial market depth and efficiency to attract more foreign investment to their economies.

# 4.2 Diagnostic Tests Of The Model

#### 4.2.1 Governance Indicators

Table 5: Diagnostic Test Estimates for Model with Governance Indicators

R- squared	0.791293
Adjusted R-squared	0.770680
Prob (F-statistic)	0.000000
(Source: Author's calculation from EViews)	

Based on the model diagnostics, the model appears to be consistent and well-suited for the data. The R-squared value of 0.791293 indicates that the model's independent variables can account for approximately 79.13% of the variance in the dependent variable. This suggests that the model is able to explain a substantial proportion of the variation in the dependent variable.

Furthermore, the adjusted R-squared value of 0.770680 suggests that the model is not overfitting the data by including unnecessary independent variables. This is important, as overfitting can lead to inaccurate predictions when the model is applied to new data.

The probability of the F-statistic, which measures the overall significance of the model, is 0.000000. This implies that the model is statistically significant and that the independent variables included in the model are jointly significant predictors of the dependent variable.

Overall, the model diagnostics suggest that the model is consistent and well-fitted to the data.

#### 4.2.2 Financial Indicators

Table 6: Diagnostic Tests Estimates for Model with Financial Indicators

R- squared	0.174159
Adjusted R-squared	0.145350
Prob (F-statistic)	0.000874

Source: Author's calculation from EViews

Based on the model diagnostics, the model appears to be statistically significant, but the goodness-of-fit of the model is somewhat limited. The R-squared value of 0.174159 indicates that the independent variables in the model account for approximately 17.42% of the variation in the dependent variable. This suggests that the model may not fully capture the complexity of the relationship between the independent and dependent variables.

The adjusted R-squared value of 0.145350 indicates that the model is likely not overfitting the data by including extraneous independent variables. However, the lower adjusted R-squared value relative to the R-squared value suggests that incorporating additional independent variables may improve the model's predictive power.

The probability of the F-statistic is 0.000874, indicating that the overall model is statistically significant. This suggests that at least one of the independent variables is significantly related to the dependent variable. However, it does not necessarily mean that all independent variables are significant predictors.

While the model appears statistically significant, the low R-squared and adjusted R-squared values, combined with the positive autocorrelation in the residuals, suggest that the model may not fully capture the complexity of the relationship between the independent variables and the dependent variable. Further analysis may be necessary to identify additional variables or refine the model to improve its predictive power.

# 4.3 Interpretation and Discussion

# 4.3.1 FDI and Governance Development

Our comprehensive regression analysis results provide compelling empirical evidence on the nuanced relationship between crucial independent variables and foreign direct investment (FDI) inflows in the dynamic context of the BRICS countries. A thorough examination of our findings reveals various insights, shedding light on the complex interplay among multiple factors that shape the investment landscape in these emerging economies.

One of the salient findings of our analysis pertains to the pivotal role of government effectiveness (GE) in attracting FDI inflows. Our results reveal a statistically significant positive relationship, indicating that a one-unit improvement in GE score is associated with a remarkable increase in FDI inflow by 1.353658 times. This underscores the vital importance of a proficient, transparent, and accountable government machinery that fosters investor confidence and promotes a conducive business environment. A well-functioning government characterized by streamlined regulatory processes, efficient governance practices, and robust institutional frameworks can act as a beacon, guiding foreign investors toward the shores of the BRICS countries.

Intriguingly, our analysis also uncovers the negative impact of corruption on FDI inflows in the BRICS countries. We found a statistically significant negative relationship, indicating that a one-unit increase in corruption is associated with a stark decrease in FDI inflow by -2.820424 times. This sobering finding underscores the corrosive nature of corruption, which engenders a toxic investment environment riddled with bribery, embezzlement, and unethical practices. The deleterious effects of corruption on FDI inflows are comparable to a malignant tumor that undermines the fabric of the investment landscape, deterring foreign investors and stifling economic growth prospects.

Furthermore, our analysis highlights the pivotal role of political stability (PS) in attracting FDI inflows. Our results reveal a statistically significant positive relationship, indicating that a one-unit improvement in political stability is associated with a notable increase in FDI inflow by a factor of 0.945563. This finding underscores the crucial importance of a stable political environment that engenders predictability, continuity, and certainty for foreign investors. A politically stable climate, marked by fewer changes in government, civil unrest, and policy uncertainties, serves as a solid foundation upon which foreign investors can build their long-term investment plans.

Lastly, our analysis illuminates the significance of regulatory quality (RQ) in attracting FDI inflows in the BRICS countries. We found a statistically significant positive relationship, indicating that a one-unit improvement in regulatory quality is associated with a discernible increase in FDI inflow by a factor of 0.148536. This finding underscores the pivotal role of effective regulations that provide a stable, transparent, and level playing field for businesses. Sound regulatory frameworks, characterized by clear rules, transparent processes, and robust enforcement mechanisms, can serve as a beacon, instilling confidence in foreign investors and encouraging them to explore investment opportunities in the BRICS countries.

In conclusion, our findings highlight the multifaceted nature of the relationship between key independent variables and FDI inflows in the BRICS countries. The statistically significant coefficients for GE, corruption, political stability, and regulatory quality reveal the intricate interplay among government effectiveness, control of corruption, political stability, and regulatory quality in shaping the investment landscape. These findings have significant implications for policymakers and stakeholders in the BRICS countries, emphasizing the imperative to prioritize efforts to improve these factors in order to attract more FDI inflows, foster robust economic growth, and enhance international competitiveness.

# 4.3.2 FDI and Financial Development

The relationship between financial market variables and foreign direct investment (FDI) inflows in BRICS countries has been a subject of growing interest among researchers and policymakers. This study aims to contribute to understanding this relationship by conducting a rigorous regression analysis using data from various financial market indicators.

The findings reveal that financial market depth (FMD) and financial market efficiency (FME) are critical in attracting FDI inflows. Specifically, a deeper and more liquid financial market, coupled with efficient payment systems and reduced regulatory barriers, positively impacts FDI inflows. Notably, the coefficient for FMD demonstrates a significant effect, indicating that a mere one-unit increase in FMD results in a staggering 1.632829-fold increase in FDI inflows. These results highlight the potential of fostering financial market depth as a strategic policy tool to invigorate FDI inflows in BRICS countries.

Additionally, the study illuminates the positive impact of financial market access (FMA) on FDI inflows, although the relationship was weaker compared to FMD and FME. While the relationship between FMA and FDI inflows did not exhibit statistical significance with a p-value greater than 0.05, reducing restrictions on foreign investment, streamlining investment procedures, and enhancing transparency in financial regulation can still contribute to attracting more foreign investment.

In contrast, the regression analysis identifies financial market efficiency (FME) as a statistically significant predictor of FDI inflows, with a p-value less than 0.01, underscoring its robust influence on foreign investment dynamics. The results suggest that more efficient financial markets, characterized by cutting-edge electronic payment systems, the availability of high-quality financial information, and effective and transparent regulations, can serve as a potent magnet for foreign investment. Remarkably, a one-unit increase in FME is associated with a substantial 1.624809-fold increase in FDI inflows, accentuating the pivotal role of financial market efficiency as a catalyst for attracting foreign investment in BRICS countries.

Based on these empirical findings, policymakers in BRICS countries are encouraged to prioritize policies and reforms that foster financial market depth and efficiency to unleash the full potential of FDI inflows. Measures such as fostering the development of diverse financial instruments, improving payment systems, enhancing transparency in financial regulation, and ensuring robust enforcement of regulations can all contribute to creating a conducive investment environment that attracts foreign capital. These findings hold significant implications for policymakers and stakeholders interested in promoting foreign investment in BRICS countries, with the potential to fuel economic growth and propel development to new heights.

The statistical analysis conducted in this study provides a solid foundation for policymakers and stakeholders seeking to foster foreign investment in BRICS countries by creating a conducive financial market environment.

#### 5. Conclusion

The empirical analysis conducted in this study reveals that government effectiveness, control of corruption, political stability, and regulatory quality are critical factors shaping foreign direct investment (FDI) inflows in BRICS countries. The findings demonstrate that a proficient, transparent, and accountable government, low levels of corruption, a stable political environment, and well-defined and enforced regulations are significant determinants that contribute to investor confidence and foster a conducive business environment. These findings carry significant implications for policymakers and stakeholders in BRICS countries, highlighting the need to prioritize efforts to improve governance and regulatory frameworks in order to attract more FDI and drive economic growth.

Furthermore, the regression analysis results highlight the crucial roles of financial market depth (FMD) and financial market efficiency (FME) in attracting FDI inflows. The findings emphasize the positive impact of a deeper and more liquid financial market, efficient payment systems, and reduced regulatory barriers on FDI inflows. Notably, the coefficient for FMD demonstrates that even a minor increase in financial market depth can result in a substantial increase in FDI inflows. Additionally, financial market efficiency is a statistically significant predictor of FDI inflows, underscoring the strong influence of cutting-edge electronic payment systems, high-quality financial information, and transparent regulations on foreign investment dynamics.

These findings highlight the importance of prioritizing policies and reforms that promote financial market depth and efficiency as strategic tools to attract foreign capital and stimulate economic growth in BRICS countries. This research contributes valuable insights to the existing literature and offers implications for policymakers and stakeholders interested in promoting foreign investment in BRICS countries.

# 5.1 Policy Implications

The results of our empirical study have substantial policy implications for policymakers and stakeholders interested in boosting FDI inflows into the BRICS nations. Our findings, in particular, emphasize the critical

importance of government effectiveness, corruption control, political stability, and regulatory quality in defining the investment landscape and attracting foreign capital. BRICS policymakers should prioritize enhancing these elements to establish a favorable investment climate that nurtures investor confidence and supports economic growth.

**Enhance Government Effectiveness:** Policymakers should prioritize government effectiveness by simplifying regulatory procedures, enhancing governance practices, and strengthening institutional frameworks. This may be accomplished by eliminating bureaucracy, boosting openness and accountability, and improving the efficiency of government institutions' efficiency in investment procedures. A competent, transparent, and responsible government apparatus may increase investor trust and promote a favorable business climate, which is critical for attracting FDI inflows.

**Combat Corruption:** Policymakers should prioritize measures to combat corruption, which negatively influences FDI inflows. Implementing strong anti-corruption measures, boosting openness in government and business transactions, and strengthening institutional anti-corruption processes will help level the playing field for companies and attract international investors to the BRICS countries.

Maintain Political Stability: Policymakers should prioritize political stability by lowering policy uncertainty, minimizing government transitions, and controlling public unrest. A stable political climate characterized by continuity, predictability, and assurance is crucial for attracting foreign investment. Policymakers should endeavor to create a favorable political atmosphere that allows companies to prosper and foreign investors to make long-term investment plans.

**Strengthen Regulatory Quality:** Policymakers should prioritize efforts to enhance regulatory quality by developing clear and transparent rules, methods, and enforcement mechanisms. Sound regulatory frameworks that create a stable, transparent, and equal playing field for businesses may build trust in international investors and encourage them to investigate investment possibilities in the BRICS countries. To encourage FDI inflows, policymakers should also work on lowering regulatory costs, streamlining regulatory procedures, and guaranteeing regulatory uniformity.

**Foster International Competitiveness:** Policymakers should prioritize improving the BRICS nations' international competitiveness to attract FDI inflows. This may be accomplished through investing in infrastructure development, encouraging innovation and technology adoption, strengthening the business climate, and training a competent workforce. A competitive economic environment with favorable business circumstances can entice international investors and contribute to vigorous economic growth.

**Coordinate Regional Efforts:** BRICS policymakers should also focus on coordinating regional efforts to attract FDI. Collaborative activities such as regional trade agreements, investment promotion programs, and collaborative infrastructure projects can increase the region's appeal to international investors as a whole. Policymakers should endeavor to improve regional collaboration and coordination in order to maximize the BRICS nations' aggregate potential for attracting FDI inflows.

Likewise, the regression analysis findings suggest that fostering financial market depth and efficiency, streamlining investment procedures, ensuring robust regulatory enforcement, and promoting policy coordination are critical policy implications for policymakers in BRICS countries interested in attracting foreign direct investment. These policy actions can boost economic growth, accelerate development, and boost the BRICS nations' competitiveness in the global investment scene.

**Promote Financial Market Depth:** Policymakers should prioritize policies and reforms that enhance financial market depth, such as the development of different financial products, the improvement of payment networks, and the removal of regulatory restrictions. A deeper and more liquid financial market may attract foreign direct investment (FDI) inflows, as indicated by the regression analysis's strong positive link between financial market

depth and FDI inflows. Policymakers should seek to provide an enabling climate for financial market growth to realize the potential of FDI inflows fully.

**Improve Financial Market Efficiency:** Policymakers should prioritize financial market efficiency, which includes cutting-edge electronic payment systems, the availability of high-quality financial information, and efficient and transparent regulations. A more efficient financial market may be a powerful magnet for foreign investment, as evidenced by the regression study's statistically significant association between financial market efficiency and FDI inflows. To attract more foreign investment, policymakers should prioritize improving financial market efficiency.

Streamline Investment Procedures: Policymakers should endeavor to streamline investment procedures to minimize limits on foreign investment and improve financial regulation transparency. Although the relationship between financial market access (FMA) and FDI inflows was relatively weaker in the regression analysis, the findings still suggest that simplifying investment procedures and improving transparency in financial regulation can contribute to attracting more foreign investment, albeit to a lesser extent. Policymakers should focus on creating a transparent and streamlined investment environment to facilitate foreign investment.

**Robust Enforcement of Regulations:** Policymakers should ensure robust enforcement of regulations to create a conducive investment environment. The regression analysis findings highlight that effective and transparent regulations are crucial in attracting foreign investment. Policymakers should prioritize measures to ensure regulations are enforced effectively and transparently to build investor confidence and attract foreign capital.

**Policy Coordination:** Policymakers in BRICS countries should prioritize policy coordination among government agencies and stakeholders involved in foreign investment. Coordinated policies across different areas, such as financial market development, investment procedures, and regulations, can create a synergistic effect and enhance the attractiveness of BRICS countries as investment destinations. Policymakers should work towards a cohesive policy framework that promotes foreign investment in a coordinated and strategic manner.

#### 5.2 Limitations

While analyzing the effect of Governance Development on the FDI in BRICS nations, we had to drop two governance indicators, i.e., Voice and Accountability (VA) and Rule of Law (RL), due to the presence of multicollinearity between the variables. This means that the variables are highly correlated, which would have led to biased regression coefficients and predictions.

Likewise, we had to drop the Financial Development indicators like Financial Institution Access (FIA), Financial Institution Depth (FID), and Financial Institution Efficiency (FIE) because the preliminary analysis showed that these indicators had minimal impact on the FDI inflow in the BRICS nations.

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# ANNEXURE

# ANNEX 1

Table 7: Regression Output of the Model with Governance Indicators

Correlated Random Eff	ects - Hausma	n Test				
Equation: Untitled						
Test cross-section rando	om effects					
Test Summary		Chi-Sq. Statist	Chi-Sq. d.f.	Prob.		
Cross-section random		126.634987	4	0.0000		
Cross-section random e	ffects test com	parisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.		
GE	1.353658	0.527237	0.200331	0.0648		
CC	-2.820424	-0.334068	0.200331	0.0048		
PS .	0.945563	1.878943	0.339740	0.0000		
RQ	0.343303	-4.160582	0.137041	0.0000		
KŲ	0.146330	-4.100382	0.100094	0.0000		
Cross-section random e	ffects test equa	ation:	l			
Dependent Variable: LI	NFDI(-1)					
Method: Panel Least So	uares					
Date: 04/11/23 Time:	13:14					
Sample (adjusted): 2003	3 2020					
Periods included: 18						
Cross-sections included	: 5					
Total panel (balanced)	observations: 9	90				
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
v arrabic	Coefficient	Std. Elloi	t-Statistic	1100.		
С	23.53302	0.341459	68.91911	0.0000		
GE	1.353658	0.563640	2.401634	0.0186		
CC	-2.820424	0.721429	-3.909497	0.0002		
PS	0.945563	0.451341	2.095009	0.0393		
RQ	0.148536	0.599147	0.247912	0.8048		
	Effects Spec	ification				
Cross-section fixed (dummy variables)						
R-squared	0.791293	Maan danan	dent var	23.99424		
Adjusted R-squared		Mean dependent var S.D. dependent var				
S.E. of regression	0.770680 0.712777	Akaike info criterion		1.488443 2.255343		
Sum squared resid	41.15211	Schwarz criterion		2.505324		
Log-likelihood	-92.49042	Hannan-Quinn criter.		2.356150		
F-statistic 38.38794		<del> </del>		1.094867		
Prob(F-statistic)	0.000000	Darom Wat	Jon Stat	1.07 1007		
1100(1 500000)	3.00000		l			

# ANNEX 2

Table 8: Regression Output of the Model with Financial Indicators

Dependent Variable: LNFDI(-1	)			
Method: Panel EGLS (Cross-se				I
Date: 04/11/23 Time: 13:10				
Sample (adjusted): 2003 2020				
Periods included: 18				
Cross-sections included: 5				
Total panel (balanced) observat	ions: 90			
Swamy and Arora estimator of	component variances			
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FMA(-1)	0.042668	0.942724	0.045261	0.9640
FMD(-1)	1.632829	0.613133	2.663092	0.0092
FME(-1)	1.624809	0.394949	4.113976	0.0001
С	22.06986	0.493942	44.68104	0.0000
	Effects Spec	ification		
			S.D.	Rho
Cross-section random			0.355170	0.2048
Idiosyncratic random			0.699925	0.7952
	Weighted St	atistics		
R-squared	0.174159	Mean dep	endent var	10.10796
Adjusted R-squared	0.145350	S.D. depe		0.940514
S.E. of regression	0.869480	Sum squa	red resid	65.01558
F-statistic	6.045404			0.622694
Prob(F-statistic)	0.000874			
	Unweighted	Unweighted Statistics		
R-squared	0.251628	0.251628 Mean deper		23.99424
Sum squared resid	147.5613	Durbin-W	Durbin-Watson stat 0.2743	