



IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 Issue: III Month of publication: March 2023 DOI: https://doi.org/10.22214/ijraset.2023.49972

www.ijraset.com

Call: 🕥 08813907089 🔰 E-mail ID: ijraset@gmail.com



Impact of Foreign Direct Investment on BRICS Countries Economic Growth

Aashiq F P¹, Dr Geeti Sharma²

¹MBA Student, ²Associate Professor, CMS Business School, JAIN (Deemed-to-be) University, Bengaluru, India

Abstract: The purpose of this article is to explore how foreign direct investment (FDI) is linked to economic growth in the BRICS nations. Various sources of data are gathered and analyzed to investigate the contribution of FDI to the development of these emerging economies, and to identify the factors that influence the inflow of FDI. The study examines the period from 2000 to 2020 and employs statistical methods to analyze the relationship between FDI and economic growth. The research findings are pertinent to policymakers, investors, and other interested parties who seek to foster economic growth in the BRICS countries. The study reveals that FDI has a substantial and beneficial impact on economic growth, particularly in India and China when compared to the other BRICS countries. As a result, the paper recommends that policymakers in these nations prioritize the attraction of FDI to stimulate economic growth.

Keywords: FDI, BRICS, GDP, policy, investment, economic development, economic growth drivers

I. INTRODUCTION

Foreign Direct Investment (FDI) has played a crucial role in driving economic growth and development across various countries worldwide. The BRICS countries, comprising Brazil, Russia, India, China, and South Africa, have been increasingly attractive to FDI in recent years, with significant investment capital flowing into these nations. However, there is limited research on the impact of FDI on the economic growth of these countries. To address this gap, this research paper aims to analyze the correlation between FDI inflows and economic growth in each BRICS country while considering potential barriers to FDI that may affect economic growth. The study's findings will offer valuable insights for policymakers, investors, and researchers interested in understanding the role of FDI in driving economic growth in these vital emerging economies.

The aim of this research is to provide empirical evidence that supports the hypothesis that foreign direct investment has a positive impact on the economic growth of BRICS countries. The study will employ various statistical analyses, such as regression, correlation, and ANOVA, to explore the relationship between FDI and economic growth in these nations. FDI inflow, which is measured as the total amount of foreign investment in BRICS countries, and Gross Domestic Product (GDP) per capita, measured as the change in GDP per capita over time, are the main research variables. Both variables will be obtained from World Bank databases and macrotrends.net.

II. REVIEW OF LITERATURE

The impact of foreign direct investment on economic growth in developing countries, especially in BRICS nations, has garnered increasing attention. Studies on this subject have generated contradictory findings, with some indicating a favorable correlation between FDI and economic growth, while others indicate no significant connection.

Numerous studies have found that foreign direct investment (FDI) has a favorable influence on economic growth by promoting capital formation, technological transfer, and job creation. However, other research has suggested that FDI may have negative effects on economic growth by leading to a crowding out of domestic investment, increased income inequality, and environmental damage. As a result, [1] study intends to add to the literature by investigating the effect of FDI on economic growth in the BRICS nations using time-series regression analysis. The study seeks to shed light on the relationship between FDI and economic growth in the BRICS countries and improve our knowledge of the factors that drive economic growth in these regions.

From 1991 to 2018, an investigation was carried out to assess how environmental degradation is affected by foreign direct investment (FDI), natural resources, renewable energy usage, and economic growth in various countries, including those categorized as BRICS, developing, developed, and global. The findings showed that FDI had a negative effect on environmental degradation in BRICS and developing countries, but a positive effect in developed countries. [2] The study suggested policy recommendations to combat environmental degradation in all countries.



ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538 Volume 11 Issue III Mar 2023- Available at www.ijraset.com

The impact of FDI on economic growth and created a model that takes into account the factors affecting FDI flows to both developed and developing countries [3], also considering the external effects of FDI and proposed an equation that links the rate of economic growth to the amount of repatriation.

The impact of scientific research, inflation rate, and GDP growth on FDI inflows found that these factors have significant effects on [4] FDI inflows, and suggested that the government invest in these areas, further open up the economy, and promote sectors that are not yet open to FDI investments. The study also used ARIMA to forecast short-term time series data and recommended that some inflation can be helpful for FDI inflows. The relationship between FDI and economic growth in India, specifically in the agricultural, manufacturing, and service sectors. [1] The study found that FDI does not contribute to agricultural output growth, but it attracts more FDI. The FDI inflow had a positive impact on the manufacturing sector output for a couple of years, and FDI has a bidirectional causality with service sector growth in both the short and long run. Based on these findings, the authors suggested that the government should focus on re-energizing the primary sector to attract more FDI and ensure sustained economic growth, relying more on an agricultural-led economic growth policy than the service sector.

A study [5] concludes that India needs to increase its investment rate to around 30% of its GDP to achieve an economic growth rate of at least 8% per year. However, India's current investment rate is only around 25%. FDI inflows into India have been lower than expected, and domestic savings have not been sufficient to support the desired economic growth rate. The study highlights the importance of understanding FDI trends and their effects to achieve the desired rate of economic growth in India. The study conducted by [6] explored the potential positive and negative impacts of foreign direct investment (FDI) on host economies at both macro and micro levels. It specifically examined the distribution of FDI-enabled production facilities in India and their effects on output, value-added, capital, and employment in the regions where FDI is received. The paper also acknowledges the contributions of the Department of Industrial Policy & Promotion and its team members in providing assistance and support.

According to a study [7], India has experienced lower FDI compared to China due to various factors, and the paper recommends policy changes to promote infrastructure and human capital development. [8] found a strong connection between FDI and export and economic growth, with a significant change in FDI and FII trends before and after the 2008-09 financial crisis. A study [9] notes that traditional economic growth theories have limitations in explaining long-term growth, and the endogenous growth theory recognizes technological progress as an important variable. However, the new growth rate theory still relies on neoclassical assumptions that may not work for all developing economies, and economic growth in developing countries can be hindered by poor infrastructure and institutional structures.

The article [10] discusses how investing in other countries has a positive effect on the economic growth of BRICS countries, while also highlighting a short-term positive effect on human capital. It emphasizes the importance of investing in education to improve the quality of the economy. Another article, [11] found that foreign direct investment and trade openness have a positive effect on economic growth in BRICS countries in the long term. The study identified a two-way relationship between foreign direct investment and economic growth, as well as a two-way relationship between trade openness and foreign direct investment. An article, [12] confirmed the positive effect of investing in other countries on economic growth in BRICS countries and emphasized the need to remove barriers to foreign direct investment to maximize the positive effects on economic growth.

Investing in education and training has a positive but limited impact on economic growth in BRICS countries, according to an article by [13]. China, Brazil, and Russia are more efficient at using their human capital to boost economic growth than South Africa and India. Another article by [14] found that energy consumption, international trade, and investment have a positive impact on economic growth in BRICS and ASEAN countries, and policymakers should collaborate on energy and economic growth policies to increase international trade, workforce, and capital investment. Finally, an article by [15] discovered that foreign direct investment has a positive impact on economic development in the BRICS countries and provides several benefits.

According to a research study examining the correlation between energy, investment, human capital, environment, and economic growth in four BRICS countries [16], it was discovered that economic growth is supported by energy consumption, physical capital investment, human capital development, and improvements in the financial sector. However, environmental pollution negatively impacts economic growth. Another article on the subject, "Investigating the nexus between CO2 emissions, renewable energy consumption, FDI, exports and economic growth: evidence from BRICS countries," found that carbon emissions, renewable energy consumption, exports, FDI, and savings all have a positive effect on economic growth in BRICS countries.

From a study [17] Conversely, high interest rates and trade openness have a negative impact. A Panel Data Analysis Approach revealed that foreign direct investment has a significant positive impact on economic growth in the long term, while the size of the economy has a negative impact in the short term. All these studies recommend that policymakers focus on promoting renewable energy consumption and foreign direct investment and remove obstacles to achieving high and sustainable economic growth.



International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538 Volume 11 Issue III Mar 2023- Available at www.ijraset.com

The review of existing literature has highlighted the requirement for additional research to understand the effect of foreign direct investment on economic growth in BRICS countries, and the significance of utilizing sound empirical techniques to investigate this association. The outcomes of this study could be beneficial for policymakers and industry leaders in the BRICS countries while devising approaches to entice foreign direct investment and foster economic growth.

III. METHODOLOGY

The aim of this study is to explore the impact of Foreign Direct Investment on the economic growth of BRICS countries from 2000 to 2020. The research design is a descriptive study that employs secondary data sources to examine the relationship between FDI and economic growth in these nations. Actual Gross Domestic Product (GDP) data for each country during the 20-year period and FDI data, collected separately for each of the BRICS nations, are used as the primary research variables.

Data for this study was gathered from multiple sources, including the World Investment Reports, the World Bank, the Organisation for Economic Co-operation and Development (OECD), Macro Trends, the International Monetary Fund (IMF), the World Trade Organization (WTO), the Reserve Bank of India (RBI), the United Nations Conference on Trade and Development (UNCTAD), and the Export-Import Bank of India (EXIM Bank).

The primary aim of this research is to analyze the impact of Foreign Direct Investment (FDI) on the economic growth of the BRICS countries over the period of 2000 to 2020. The study seeks to investigate the policies and activities targeted at attracting FDI to promote economic growth, suggest investment and trade policies for the BRICS countries, examine FDI flow trends and patterns in the BRICS, assess the determinants of FDI inflows, and evaluate the impact of FDI on the BRICS economy. Furthermore, the study aims to test various research hypotheses.

The study aims to test two hypotheses regarding the impact of foreign direct investment (FDI) on economic growth in the BRICS countries from 2000 to 2020. The first hypothesis (H0) assumes that FDI has no significant effect on economic growth, while the second hypothesis (H1) posits that FDI has a significant impact on economic growth in the BRICS countries. Secondary data from various sources will be used in this study, and statistical methods such as ANOVA and regression analysis will be employed to examine the hypotheses.

IV. DATA ANALYSIS AND INTERPRETATION

The data used in this study was gathered from several sources such as the World Bank, the Organisation for Economic Co-operation and Development (OECD), and Macro trends. The data collected includes information on FDI inflows, the relationship between FDI inflows and a country's GDP, as well as the GDP growth rates of Brazil, Russia, India, China, and South Africa over the past 20 years from 2000 to 2020. The collected data was then analysed and interpreted.

Table I

A. Analysis for Individual Country

FDI Inflows of BRICS								
Year	Brazil	Russia	India	China	South Africa			
2000	32.99	2.68	3.58	42.1	0.97			
2001	23.23	2.85	5.13	47.05	7.27			
2002	16.59	3.47	5.21	53.07	1.48			
2003	10.12	7.93	3.68	57.9	0.78			
2004	18.16	15.4	5.43	68.12	0.7			
2005	15.46	15.51	7.27	104.11	6.52			
2006	19.42	37.59	20.03	124.08	0.62			
2007	44.58	55.87	25.23	156.25	6.59			
2008	50.72	74.78	43.41	171.53	9.89			
2009	31.48	36.58	35.58	131.06	7.62			
2010	82.39	43.17	27.4	243.7	3.69			
2011	102.43	55.08	36.5	280.07	4.14			
2012	92.57	50.59	24	241.21	4.63			



ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538 Volume 11 Issue III Mar 2023- Available at www.ijraset.com

2013	75.21	69.22	28.15	290.93	8.23
2014	87.71	22.03	34.58	268.1	5.79
2015	64.74	6.85	44.01	242.49	1.52
2016	74.29	32.54	44.46	174.75	2.22
2017	68.89	28.56	39.97	166.08	2.06
2018	78.16	8.78	42.12	235.37	5.57
2019	69.17	31.97	50.61	187.17	5.12
2020	37.79	9.48	64.36	253.1	3.15

FDI Inflows of BRICS Countries for the year of 2000 to 2020, values mentioned are all in Billion USD

GDP of BRICS							
Year	Brazil	Russia	India	China	South Africa		
2000	655.45	259.71	468.39	1,211.35	151.75		
2001	559.98	306.6	485.44	1,339.40	135.43		
2002	509.8	345.47	514.94	1,470.55	129.09		
2003	558.23	430.35	607.7	1,660.29	197.02		
2004	669.29	591.02	709.15	1,955.35	255.81		
2005	891.63	764.02	820.38	2,285.97	288.87		
2006	1,107.63	989.93	940.26	2,752.13	303.86		
2007	1,397.11	1,299.71	1,216.74	3,550.34	333.08		
2008	1,695.86	1,660.85	1,198.90	4,594.31	316.13		
2009	1,667.00	1,222.64	1,341.89	5,101.70	329.75		
2010	2,208.84	1,524.92	1,675.62	6,087.16	417.37		
2011	2,616.16	2,045.93	1,823.05	7,551.50	458.20		
2012	2,465.23	2,208.30	1,827.64	8,532.23	434.40		
2013	2,472.82	2,292.47	1,856.72	9,570.41	400.89		
2014	2,456.04	2,059.24	2,039.13	10,475.68	381.20		
2015	1,802.21	1,363.48	2,103.59	11,061.55	346.71		
2016	1,795.69	1,276.79	2,294.80	11,233.28	323.59		
2017	2,063.51	1,574.20	2,651.47	12,310.41	381.45		
2018	1,916.93	1,657.33	2,702.93	13,894.82	404.84		
2019	1,873.29	1,693.11	2,831.55	14,279.94	387.93		
2020	1,448.57	1,488.32	2,667.69	14,687.67	335.44		

Table II GDP of BRICS

GDP of BRICS Countries for the year of 2000 to 2020, values mentioned are all in Billion USD

B. Correlation between the FDI Inflows and GDP of each Country in BRICS

Table III.								
Correlation between the FDI Inflows and GDP of each Country in BRICS								
	Brazil	Russia	India	China	South Africa			
Correlation	0.935674227	0.668326461	0.88708006	0.76132651	0.28193703			
Coefficient								

1) *Brazil:* The correlation coefficient of 0.93567 indicates a strong positive relationship between FDI inflows and GDP in Brazil. This means that as FDI inflows into the country increase, the GDP of the country also increases.



International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538

Volume 11 Issue III Mar 2023- Available at www.ijraset.com

· DDIGG

- Russia: The correlation coefficient of 0.66833 indicates a moderate positive relationship between FDI inflows and GDP in Russia. This means that as FDI inflows into the country increase, the GDP of the country also increases, but not as strongly as in Brazil.
- *3) India:* The correlation coefficient of 0.88708 indicates a strong positive relationship between FDI inflows and GDP in India. This means that as FDI inflows into the country increase, the GDP of the country also increases.
- 4) *China:* The correlation coefficient of 0.76133 indicates a strong positive relationship between FDI inflows and GDP in China. This means that as FDI inflows into the country increase, the GDP of the country also increases.
- 5) South Africa: The correlation coefficient of 0.28194 indicates a weak positive relationship between FDI inflows and GDP in South Africa. This means that as FDI inflows into the country increase, the GDP of the country also increases, but not as strongly as in the other countries in the BRICS group.

Table IV

C. Regression Analysis between the FDI Inflows and GDP of each Country in BRICS

Regression Analysis between the FD1 mnows and GDP of each Country in BRICS									
	Brazil	Russia	India	China	South Africa				
R^2	0.875486259	0.446660258	0.786911033	0.57961805	0.079488488				
				5					
ANOVA F-significance	4.86848E-10	0.000927746	8.40952E-08	6.10833E-	0.215644658				
				05					
Coefficients of FDI	22.54313505	18.97779477	39.98830611	43.4744446	9.730334321				
inflows									

1) Brazil

The R-squared value is a measure of the proportion of variability in the dependent variable (GDP in this case) that can be explained by the independent variable (FDI inflows). An R-squared value of 0.875 means that 87.5% of the variability in Brazil's GDP can be explained by changes in FDI inflows. In other words, changes in FDI inflows account for a significant portion of the changes in Brazil's GDP.

The F significance value is used in an ANOVA (Analysis of Variance) test to determine whether the relationship between the independent and dependent variables is statistically significant. If the F significance value is less than a certain level of significance (such as 0.05), this indicates that there is a statistically significant relationship between the two variables. In this case, the F significance value is 4.86848E-10, which is very close to 0 and much less than 0.05. This means that the relationship between FDI inflows and GDP in Brazil is statistically significant(Good Fit).

The coefficient of FDI inflows indicates the average change in GDP for a one-unit increase in FDI inflows, holding all other factors constant. In this case, the coefficient of FDI inflows is 22.54, which is positive. This means that for every one-unit increase in FDI inflows, GDP is expected to increase by an average of 22.54 billion USD. The positive sign indicates a positive relationship between the two variables, meaning that an increase in FDI inflows is associated with an increase in GDP.

2) Russia

The R-squared value of 0.447 indicates that FDI Inflow accounts for about 44.7% of the Russia GDP's variance.

The F significance value is 0.000927746, which is less than the level of significance (0.05). This indicates that the relationship between FDI inflows and GDP in Russia is statistically significant.

The coefficient of FDI inflows is 18.98. The positive sign indicates that as FDI increases, GDP also tends to increase. There is a positive association between these two variables. For every one-unit increase in FDI inflow, GDP increases by an average of 18.98 billion USD.

3) India

The R-squared value of 0.787 indicates that FDI Inflow accounts for about 78.7% of the India GDP's variance.

The F significance value is 8.40952E-08, which is less than the level of significance (0.05). This indicates that the relationship between FDI inflows and GDP in India is statistically significant.



International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538 Volume 11 Issue III Mar 2023- Available at www.ijraset.com

The coefficient of FDI inflows is 39.99. The positive sign indicates that as FDI increases, GDP also tends to increase. There is a positive association between these two variables. For every one-unit increase in FDI inflow, GDP increases by an average of 39.99 billion USD.

4) China

The R-squared value of 0.58 indicates that FDI Inflow accounts for about 58% of the China GDP's variance.

The F significance value is 6.10833E-05, which is less than the level of significance (0.05). This indicates that the relationship between FDI inflows and GDP in China is statistically significant.

The coefficient of FDI inflows is 43.47. The positive sign indicates that as FDI increases, GDP also tends to increase. There is a positive association between these two variables. For every one-unit increase in FDI inflow, GDP increases by an average of 43.47 billion USD.

5) South Africa

The R-squared value of 0.079 indicates that FDI Inflow accounts for about 7.9% of the South Africa GDP's variance.

The F significance value is 0.215644658, which is greater than the level of significance (0.05). This indicates that the relationship between FDI inflows and GDP in South Africa is not statistically significant.

The coefficient of FDI inflows is 9.73. The positive sign indicates that as FDI increases, GDP also tends to increase. However, the weak association between the two variables means that this relationship should be interpreted with caution. For every one-unit increase in FDI inflow, GDP increases by an average of 9.73 billion USD.

Inference

In conclusion, the regression analysis between the FDI inflows and GDP of each country in the BRICS shows varying levels of significance and strength of relationship between the two variables. In Brazil and India, there is a strong and statistically significant positive association between FDI inflows and GDP, with R-squared values of 0.875 and 0.787 respectively. This indicates that a significant portion of the variation in their GDPs can be explained by their FDI inflows. In Russia and China, the relationship between FDI inflows and GDP is also statistically significant, but with weaker association as evidenced by the lower R-squared values of 0.447 and 0.58 respectively. In South Africa, the relationship between FDI inflows and GDP is weak and not statistically significant, with an R-squared value of only 0.079. This suggests that other factors besides FDI inflows may have a greater impact on the country's GDP. Overall, these results highlight the importance of considering the strength and significance of the relationship between FDI inflows and GDP when making investment and policy decisions in these countries.

D. ANOVA Test

	Table V							
ANOVA Test								
	Brazil	Russia	India	China	South Africa			
P-value	3.71989E-12	3.30543E-11	8.3704E-11	9.58845E-12	6.42E-18			

Hypothesis Testing

The P-value is a measure of the strength of evidence against the null hypothesis (H0). In this case, the null hypothesis is that there is no significant impact of FDI inflows on the economic growth of the BRICS countries. The alternative hypothesis (H1) is that there is a significant impact of FDI inflows on economic growth.

A small P-value, such as the ones obtained for each of the BRICS countries, indicates strong evidence against the null hypothesis and supports the alternative hypothesis. In other words, a small P-value suggests that the relationship between FDI inflows and GDP is statistically significant, and not likely to have occurred by chance.

A commonly used level of significance is 0.05, which means that a P-value less than 0.05 provides evidence against the null hypothesis at a 95% confidence level. In the case of the BRICS countries, the P-values are much less than 0.05, indicating strong evidence against the null hypothesis and support for the alternative hypothesis.

Therefore, based on the results of the regression analysis, we conclude that there is a significant impact of FDI inflows on the economic growth of Brazil, Russia, India, China, and South Africa.



E. Analysis for BRICS on whole

Aggregated FDI and GDP of BRICS from 2000 to 2020						
Brazil Russia India China South Africa						
FDI Inflow	1096.1	610.93	590.71	3538.24	88.56	
GDP	P 32831.27 27054.39 32777.98 145606.04 6712.81					

Table VI. Aggregated FDI and GDP of BRICS from 2000 to 2020

The FDI inflow and GDP data for each of the BRICS countries over the time period from 2000 to 2020 has been aggregated for the purpose of analysis, and the values are expressed in billions of US dollars.

This aggregated data is used in the regression analysis to study the relationship between FDI inflows and GDP in the BRICS countries. Although aggregating the data over such a long time period could result in limitations in the analysis due to changes in economic policies, advancements in technology, or other factors, it provides a comprehensive view of the relationship between FDI inflows and GDP in each of the BRICS countries over the past 20 years.

F. Correlation between the FDI Inflows and GDP of BRICS

By performing a correlation analysis between FDI inflows and GDP of BRICS countries for the years of 2000 to 2020 it is found that the correlation value is 0.9906

Inference

Correlation value of 0.99 means that there is 99% relation between the variables, and there is a strong positive correlation between FDI inflows and GDP of BRICS countries.

G. Regression Analysis between the FDI Inflows and GDP of BRICS

Regression analysis for BRICS on whole				
	BRICS			
R^2	0.981388215			
ANOVA F-significance	0.001083711			
Coefficients of FDI inflows	40.02106045			

Table VII

The R-squared value of 0.981 indicates that the FDI Inflows account for about 98.1% of the variance in the combined GDP of the BRICS countries.

The ANOVA test is used to determine if the model is a good fit for the data. The F-significance value, which is calculated from the ANOVA test, was used to determine the model's fit. In this case, the F-significance value is 0.001083711, which is less than the level of significance (0.05). This indicates that the model is a good fit for the data.

The coefficient value of the FDI inflows is 40.02. The positive sign indicates that as FDI increases, the combined GDP of the BRICS countries also tends to increase. There is a positive association between these two variables. For every one-unit increase in FDI inflows, the combined GDP of the BRICS countries increases by an average of 40.02 billion USD.

H. ANOVA Test

The ANOVA test results reveal a p-value of 0.0382, which is below the standard significance level of 0.05. This suggests that we can reject the null hypothesis that there is no significant impact of foreign direct investment on the economic growth of the BRICS countries. Furthermore, the calculated F-significance value from the ANOVA test was 0.001083711, providing additional evidence of the significant relationship between FDI and the economic growth of these countries.

I. Chi Square Test

	Brazil	Russia	India	China	South Africa	Row Totals
FDI Inflow	1096	611	591	3538	89	
	(801.1)	(653.29)	(787.99)	(3521.94)	(160.62)	5925
	[108.50]	[2.74]	[49.24]	[0.07]	[31.94]	



International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538

Volume 11 Issue III Mar 2023- Available at www.ijraset.com

GDP Growth	32831	27054	32778	145606	6713	
	(33125.84)	(27011.71)	(32581.01)	(145622.06)	(6641.38)	244982
	[2.62]	[0.07]	[1.19]	[0.00]	[0.77]	
Column Totals	33927	27665	33369	149144	6802	250907

From the chi square test performed it is identified that, the chi-square statistic is 197.1521. The p-value is less than 0.00001. Based on the results of the chi-square test, it can be concluded that there is evidence of a significant relationship between foreign direct investment and economic growth in BRICS countries. The p-value of less than 0.00001 supports the alternative hypothesis (H1) that there is a significant impact of foreign direct investment on economic growth in these countries.

V. FINDINGS AND CONCLUSION

There is a significant impact of FDI inflows on the economic growth of the BRICS countries. All countries, except South Africa, show a strong or moderate positive relationship between FDI inflows and GDP. The R-squared values of Brazil, India, China, and Russia indicate that changes in FDI inflows account for a significant portion of the changes in GDP in these countries. The F significance values for all countries, except South Africa, are less than the level of significance (0.05), indicating a statistically significant relationship between FDI inflows and GDP. The positive coefficients of FDI inflows in all countries indicate that as FDI inflows increase, GDP is expected to increase, implying a positive relationship between the two variables. However, the relationship between FDI inflows and GDP in South Africa is not statistically significant, and the R-squared value indicates that FDI inflows only account for a small portion of the GDP's variance in the country.

Based on the analysis of the aggregated data for FDI inflows and GDP of BRICS countries from 2000 to 2020, it can be concluded that there is a strong positive correlation between FDI inflows and the combined GDP of the BRICS countries. The correlation value of 0.99 and the R-squared value of 0.981 indicate that there is a 99% relationship between the two variables and that FDI inflows account for about 98.1% of the variance in the combined GDP of the BRICS countries. The results of the ANOVA test and chi square test also support this conclusion, with a low p-value and a high F-significance value indicating that the model is a good fit for the data and that there is a significant impact of foreign direct investment on the economic growth of the BRICS nations. Additionally, the coefficient value of 40.02 indicates that for every one-unit increase in FDI inflows, the combined GDP of the BRICS countries increases by an average of 40.02 billion USD. These findings support the hypothesis that foreign direct investment plays a significant role in promoting economic growth in the BRICS countries.

VI. **RECOMMENDATIONS**

The BRICS countries can take different measures to attract foreign direct investment (FDI) inflows, which could have a positive impact on their economies.

Brazil can offer tax incentives, reduce red tape and bureaucracy, and improve infrastructure to attract FDI. Improving the business environment can help to increase the confidence of foreign investors in the country's economy, which could result in increased FDI inflows. This, in turn, could lead to job creation, economic growth, and increased prosperity for the people of Brazil.

Russia can focus on improving the investment climate by simplifying business regulations, reducing corruption, and promoting transparency. Additionally, Russia can leverage its natural resources and expertise in the energy sector to attract FDI from foreign investors. Increased FDI inflows could lead to job creation, economic growth, and improved living standards in the country.

The Russia-Ukraine conflict has had a significant impact on foreign direct investment (FDI) inflows into Russia. The conflict has created political and economic uncertainty, which has deterred potential investors from investing in Russia. Additionally, the imposition of economic sanctions by Western countries against Russia as a result of the conflict has further restricted investment into the country.

To overcome the impact of the conflict on FDI inflows, Russia can take several steps. Firstly, it can work towards resolving the conflict with Ukraine and improving its relations with Western countries. This will reduce political uncertainty and help to lift the economic sanctions that are restricting investment.

India can offer tax incentives and improve infrastructure to attract foreign investment. The country can also focus on improving the ease of doing business by reducing red tape and bureaucracy. Additionally, India can promote its skilled workforce and technology sector to attract FDI in these areas. Increased FDI inflows could result in job creation, economic growth, and improved living standards in India.



ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538 Volume 11 Issue III Mar 2023- Available at www.ijraset.com

China can continue to liberalize its economy and improve the investment climate to attract FDI. The country can also focus on developing its high-tech industries, such as artificial intelligence and biotechnology, to attract foreign investment in these areas. Increased FDI inflows could lead to job creation, economic growth, and improved living standards in China.

South Africa can focus on improving its investment climate by reducing corruption, simplifying business regulations, and promoting transparency. The country can also promote its natural resources, such as minerals and metals, to attract FDI in these areas. Increased FDI inflows could result in job creation, economic growth, and improved living standards in South Africa.

South Africa has been facing low FDI inflows in recent years due to a number of factors, including political uncertainty, labor unrest, crime, and infrastructure issues. The country has also been facing economic challenges, including high levels of government debt and declining competitiveness, which have led to low levels of business confidence.

In order to improve its FDI inflows, South Africa will need to address these issues and create a more favorable investment climate. This could involve implementing policies to reduce political uncertainty, improve labor stability, and address crime and safety concerns. The country could also work to improve its infrastructure, including its transportation networks, energy supply, and telecommunications systems, which will make it more attractive to foreign investors.

Another important factor that could help to improve FDI inflows in South Africa is to improve the country's competitiveness. This could involve measures to increase productivity, reduce corruption, and improve the quality of education and training. The government could also provide tax incentives and other support to encourage investment, as well as promote South Africa as a destination for foreign investment.

Overall, there are several steps that South Africa can take to improve its FDI inflows and support economic growth. By addressing the challenges, it faces and creating a more favorable investment climate, the country can become more attractive to foreign investors and contribute to its economic development.

VII. RESEARCH GAPS

Further examination is needed to understand the influence of political and economic stability on attracting foreign investment in each of the BRICS nations. An analysis of the impact of additional factors such as labor costs, tax policies, and infrastructure on the flow of foreign direct investment into each of the BRICS countries is also required. It would also be beneficial to compare the foreign direct investment inflows in BRICS countries with other growing economies, and to investigate the role of various types of foreign investment, such as portfolio investment, greenfield investment, and mergers and acquisitions, on the economic growth of BRICS nations.

VIII. RECOMMENDATIONS FOR FURTHER STUDY

A comprehensive examination of the elements that draw foreign investment to each BRICS nation and methods to enhance them is recommended. An analysis of the effect of FDI inflows on various industries within each BRICS country is recommended. Additionally, a comparison of the impact of FDI inflows on economic growth and progress in BRICS countries versus other developing nations, as well as an examination of the role played by government policies in attracting and maintaining foreign investment in BRICS countries, would also be valuable avenues for future study.

REFERENCES

- [1] Agrawal, G. (2015). Foreign Direct Investment and Economic Growth in BRICS Economies: A Panel Data Analysis. Journal of Economics, Business and Management, 3(4), 421–424. <u>https://doi.org/10.7763/joebm.2015.v3.221</u>
- [2] Al-Jafari, M. K. (2018). Determinants of Economic Growth in BRICS Countries: A Panel Data Analysis Approach. International Journal of Accounting and Financial Reporting, 8(3), 29. <u>https://doi.org/10.5296/ijafr.v8i3.13372</u>

[3] Awolusi D. Olawumi. (2019). Human Capital Development and Economic Growth in BRICS Countries: Controlling for Country Differences. Journal of Economics and Behavioral Studies, 11(4(J)), 1–17. <u>https://doi.org/10.22610/jebs.v11i4(J).2912</u>

[4] Azam, M. (2019). Relationship between energy, investment, human capital, environment, and economic growth in four BRICS countries. Environmental Science and Pollution Research, 26(33), 34388–34400. <u>https://doi.org/10.1007/s11356-019-06533-9</u>

- Balasubramanyam, V. N., & Mahambare, V. (2003). Foreign Direct Investment in India. Lancaster University Management School Working Paper 2003, 001, Art. 001.
- [6] Banday, U. J., Murugan, S., & Maryam, J. (2021). Foreign direct investment, trade openness and economic growth in BRICS countries: evidences from panel data. Transnational Corporations Review, 13(2), 211–221. <u>https://doi.org/10.1080/19186444.2020.1851162</u>
- [7] Ewo, J., & Wisting, A. (2006). The Impact of FDI on Economic Growth The Case of China. Jönköping University.
- [8] Iqbal, A., Tang, X., & Rasool, S. F. (2022). Investigating the nexus between CO2 emissions, renewable energy consumption, FDI, exports and economic growth: evidence from BRICS countries. Environment, Development and Sustainability. <u>https://doi.org/10.1007/s10668-022-02128-6</u>



ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538

Volume 11 Issue III Mar 2023- Available at www.ijraset.com

- Jana, S. S., Sahu, T. N., & Pandey, K. D. (2019). Foreign Direct Investment and Economic Growth in India: A Sector-specific Analysis. Asia-Pacific Journal of Management Research and Innovation, 15(1–2), 53–67. <u>https://doi.org/10.1177/2319510x19849731</u>
- [10] Mohanty, S., & Sethi, N. (2019). Outward FDI, human capital and economic growth in BRICS countries: an empirical insight. Transnational Corporations Review, 11(3), 235–249. <u>https://doi.org/10.1080/19186444.2019.1657347</u>
- [11] Muhammad, B., Khan, M. K., Khan, M. I., & Khan, S. (2021). Impact of foreign direct investment, natural resources, renewable energy consumption, and economic growth on environmental degradation: evidence from BRICS, developing, developed and global countries. Environmental Science and Pollution Research, 28(17), 21789–21798. <u>https://doi.org/10.1007/s11356-020-12084-1</u>
- [12] Mukthar, J. K., & Maneesha C. (2020). Looking to the future: Trends in FDI Inflows in India. In JETIR2003116 Journal of Emerging Technologies and Innovative Research (Vol. 7). JETIR. <u>www.jetir.org</u>
- [13] Nistor, P. (2015). FDI Implications on BRICS Economy Growth. Procedia Economics and Finance, 32, 981–985. <u>https://doi.org/10.1016/S2212-5671(15)01557-9</u>
- [14] Rahman, M. M. (2021). The dynamic nexus of energy consumption, international trade and economic growth in BRICS and ASEAN countries: A panel causality test. Energy, 229, 120679. <u>https://doi.org/10.1016/j.energy.2021.120679</u>
- [15] Rajesh, C., & Geethanjali, N. (2009). FDI In India and its growth linkages. National Council of Applied Economic Research.
- [16] Samborskyi, O., Isai, O., Hnatenko, I., Parkhomenko, O., Rubezhanska, V., & Yershova, O. (2020). Modeling of foreign direct investment impact on economic growth in a free market. Accounting, 6(5), 705–712. <u>https://doi.org/10.5267/j.ac.2020.6.014</u>
- [17] Shekhar, S., & Jena, N. (2021). Foreign Direct Investment (FDI) and Its Impact on Economic Development: An Empirical Assessment. Academy of Marketing Studies Journal, 26(S1), 1–8.
- [18] Singhania, M., & Gupta, A. (2011). Determinants of foreign direct investment in India. Journal of International Trade Law and Policy, 10(1), 64–82. https://doi.org/10.1108/14770021111116142











45.98



IMPACT FACTOR: 7.129







INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 🕓 (24*7 Support on Whatsapp)