"FOREIGN DIRECT INVESTMENT AND ECONOMICGROWTH: AN EMPIRICAL ANALYSIS"

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ABSTRACT:

In an ever more interconnected global landscape, Foreign Direct Investment (FDI) is a pivotal catalyst for driving economic expansion and progress. This research paper conducts a comprehensive empirical examination of the complex interplay between FDI inflows and the economic advancement of host nations. The study seeks to reveal the fundamental mechanisms of the relationship between FDI and growth, considering both neoclassical and endogenous growth theories. It further applies advanced econometric techniques to assess how FDI impacts key economic indicators, such as GDP growth, employment, technological advancement, and income distribution. Additionally, this research delves into the policy implications of FDI and addresses potential challenges associated with its influx. It explores the roles of government policies, regulatory frameworks, and potential trade-offs, emphasizing the importance of a balanced approach that harnesses the benefits of FDI while also tackling issues like income inequality, environmental sustainability, and financial stability. Ultimately, this study offers valuable insights for policymakers and researchers, fostering a nuanced understanding of how FDI can serve as a driver for sustainable economic growth within our complex and interlinked global landscape.

*Keywords***:** *Economic growth, government policies, trade openness, regulatory environments, income inequality, sustainability, policy implications, globalization.*

I. INTRODUCTION

Over the past few decades, foreign direct investment (FDI) has changed the face of international commerce and investment, emerging as a key pillar of economic globalization. The phenomenon of foreign direct investment (FDI), in which companies from one country invest in physical assets or develop sizable operations in another, has transcended national boundaries and presented opportunities as well as difficulties to host countries. Understandingthe complex relationship between FDI and economic growth has become crucial for politicians,economists, and investors alike as the world becomes more interconnected.

In the field of global economics, there continues to be a lively focus on and dialogue about the connection between foreign direct investment (FDI) and economic growth. This highlights the convergence of economic theories, empirical studies, and real-world policy implications. Essentially, the question of whether FDI contributes to and to what extent it facilitates economic progress in the host country is not solely an academic matter but also holds substantial implications for domestic development strategies in an age of increased globalization.

In order to shed light on the complex processes underlying this interconnected relationship, this research article conducts a thorough empirical examination of the FDI-growth link. We seek to identify trends, nuances, and moderating factors that affect the impact of FDI on the host nation economic growth by analyzing massive datasets spanning many countries and historical periods. Our paper provides a thorough and data-driven examination of this importantproblem by combining theoretical foundations with cutting-edge econometric methodologies. We aim to provide insights that will not only add to the scholarly discourse but also guide the choices made by politicians, entrepreneurs, and other stakeholders involved in determining theeconomic futures of countries throughout the world as we delve into the empirical evidence and analyze the ramifications.

We will outline the methodology we used in our analysis, give a structured investigation of thetheoretical foundations of the FDI-growth nexus, and provide a summary of our findings in thesections that follow. By conducting this study, we hope to better understand the contribution that foreign direct investment (FDI) makes to the economic development of the host nation while also highlighting the importance of this relationship in the context of the increasingly interconnected and interdependent global economy.

II. LITERATURE REVIEW

The substantial amount of FDI money and annual flow that these FDI flows represent. The five greatest emerging economies' rise in FDI between 2004 and 2008 is evidence of their quick development. (Paula Nistor 2015) Data suggests that, in the context of the present financial crisis, the economy began to rise in 2010, in contrast to the majority of developed nations that kept declining. Within Foreign Direct

Investment (FDI) appears to have a positive effect on the economies of the BRICS countries by fostering their economic development. A nation's economy can become developed.

Vietnam must work to increase its level of transparency in order to raise the caliber of FDI projects and stay competitive with other nations in the area. Vietnam needs to prepare reciprocal measures, both direct and indirect, in addition to offering incentives to attract foreign direct investment (FDI). (Nguyen, Pham, Tran, 2021)These measures involve boosting the quality of human resources through innovative training, improving the quality of physical education courses, promoting psychological health by strengthening the capacity of the national health system, creating transparent and straightforward territorial planning that can be used for a variety of purposes, developing infrastructure through public investment, which serves as an open source of capital to attract private sector investment, reforming administrative procedures more thoroughly, and fast abolishing of unofficial fees and other costs.

North African nations have not benefited from being close to Europe in terms of FDI and export growth. For this reason, the majority of nations try to entice FDI with their alluring policies. In this way, economic policies now specifically aim to create attractiveness. The investment indicator used to determine a country's GDP is domestic private investment. (A Omri, A Sassi-Tmar, 2015) It is a crucial part of GDP since it gives us a sense of the economy's potential for future productivity. In all three of these economies, the two-way relationship between FDI inflows and economic growth has been confirmed; that is, large levels of FDI inflows have supported economic growth and the economy has grown. These economies' rapid growth gives prospective foreign investors hope.

Enhancing FDI inflows is anticipated to drive accelerated economic growth in developing countries. Research by Liang, Shah, and Bifei (2021) indicates that there exists an inverse relationship between unemployment and economic expansion. In summary, the collective results point to a positive connection between FDI and economic growth in emerging economies. The COVID-19 epidemic has altered the state of the world economy, but there are still a lot of unanswered questions about foreign direct investment and economic expansion.

It seems that foreign direct investment and aid both help to economic growth. Trade and foreign debt seem to be harmful to economic progress. The economic growth of these countries and remittance flows have not been found to be related. (Tahir, Estrada, Afridi, 2019) The results hold up well when more macroeconomic factors are included and when various proxy variables are used. Based on information from every SAARC nation, this report offers policy recommendations. In order to attain greater economic growth, it suggests focusing on boosting resource flows in the form of aid and foreign direct investment (FDI) from rich countries.

Some research suggests that IT improvements boost productivity and efficiency, especially in developing economies, in addition to FDI inflows' economic effects. IT should be included in FDI and economic debates due to the increasing economy. (M Sinha, PP Sengupta, 2022) The partnership evolves with needs. Empirical estimates using panel methods like fully modified ordinary least squares, dynamic OLS, pooled mean group estimator, group mean estimator, and impact methods dynamically fixed show that FDI and ICT both positively and significantly affect economic growth and that ICT expansion also does. These countries attract FDI.

All variables of research moves forward together over the long term. If the variables are cointegrated, the slope coefficient becomes super coherent. Among the long-run coefficients, the influence of GDP comes the highest inward FDI was 2,276. This shows the role of market size in attract foreign capital flows. Better market potential ensures profits of foreign companies and thus increases GDP as an incentive for foreign companies to leave their country. (SS Pattayat, 2016)Positive effects of exchange FDI tax rates are also an important finding of this analysis. Devaluation of the rupee vs. the dollar reduces the relative cost of production in India, thereby attracting foreign investment. The wealth effect, which is phenomenal because it is one of the driving forces of FDI, has also been confirmed. The error correction coefficient represents the adjustment speed.

They categorise moderating variables by firm life cycle stage. We explore which host country legal characteristics affect FDI inflows using World Bank data on 189 economies. Better contract enforcement and international trade restrictions seem to attract greater FDI. (FJ Contractor, R Dangol, N Nuruzzaman, 2022) MNCs may trade a country's weaker institutional variable for a stronger one, according to the interaction terms. Multinational firms will invest in countries with weaker immigration laws for better contract enforcement. These findings also affect government policy reform.

If countries with low absorptive capacity do indeed benefit from FDI, this also suggests that the benefits of FDI is due to the low value-added components of GVCs. Strengthening human capital and improving financial development could be key to attracting and benefiting from the high value-added components of GVCs and related FDI. (Augustin Benetrix, Haylel Pallan, Ugo Panizza, 2023) Further research in this area will better inform policymakers on these issues, especially in the context of potential FDI fragmentation and the post-Covid era.

Foreign direct investment (FDI) with a focus on gaining access to a country's market is different from FDI with an emphasis on gaining access to a country's assets. Foreign direct investment (FDI) that seeks natural resources tends to go to EMEs, although a country's abundance of natural resources may also hinder FDI. Low labor costs are a major factor in attracting efficiency-oriented FDI. (Federico Carril-Caccia and Elena Pavlova, 2018) Foreign direct investment (FDI) can be attracted to a country by improving its institutional quality, business friendliness, and economic stability. Mergers and acquisitions do not replace commerce but rather enhance it.

III. OBJECTIVES OF STUDY

1. To identify the determinants that shape the effectiveness of FDI in driving economic growth.
2. To elucidate the advantages of FDI for economic growth and investigate whether FDI exerts distinct effects across various economic sectors.
3. To evaluate the causal links and associations between FDI inflows and economic growth in the unique contexts of Brazil, Vietnam, and South Africa, accounting for their diverse economic structures, policies, and regional dynamics.
4. To scrutinize the patterns, magnitudes, and repercussions of FDI inflows in the specified nations over the preceding two decades.
5. To understand how FDI inflows affect economic growth in these nations and clarify how government policies and regional factors influence this relationship.

IV. RESEARCH METHODOLOGY

To delve into the intricate relationship between FDI inflows and economic growth in Brazil, Vietnam, and South Africa, we harnessed a plethora of secondary data. This data wasmeticulously sourced from credible and authoritative databases such as the World Bank.

Our methodology also included meticulous cleaning and preprocessing of the collected data to ensure accuracy and reliability. This step was pivotal to eliminate any discrepancies or anomalies that could potentially skew the research findings. Subsequently, a series of econometric models were employed to assess the causality and correlation between FDI

inflows and economic growth. This involved utilizing comparative analyses, individual analyses facilitating a multifaceted exploration of the data at hand.

SCOPE OF THE STUDY

The scope of doing this research paper on the topic of Foreign Direct Investment (FDI) is bothextensive and pertinent in today's economy. We can understand different aspects, including thedeterminants of FDI inflows, the impact of FDI on host and home countries, policy frameworksgoverning FDI, and the role of multinational corporations. Moreover, investigating regional variations can provide valuable insights into the dynamics of FDI. With the increasingsignificance of FDI in international business, a well-structured research paper can contribute to a deeper understanding of its implications and inform policymakers, businesses, andinvestors alike. It also helps in exploring the motivations and strategies behind multinational corporations' decisions to invest in foreign markets, assessing the risks and rewards associatedwith FDI, and analyzing the role of FDI in emerging markets and developing economies. Also, examining issues such as corporate social responsibility and sustainability practices. Furthermore, the evolution of FDI in the digital age, considering e-commerce and digital platforms, presents a contemporary avenue for exploration.

V. DATA ANALYSIS

DATA & ANALYSIS:

The temporal frame for this data spans from the year 1985 to 2022, ensuring a robust longitudinal analysis. Utilizing this extended time frame allows for a comprehensive exploration of patterns, variations, and possible cause-and-effect connections between FDI inflows and economic growth across these varied economies.

BRAZIL:

Table 1: FDI analysis of Brazil over years

Year	Foreign direct investment, net inflows (% of GDP)
1985	0.683327514
1986	0.134512965
1987	0.412991261
1988	0.910738735
1989	0.273855966
1990	0.212693159
1991	0.270522788
1992	0.527694944
1993	0.294775601

1994	0.562400712
1995	0.631585791
1996	1.475965411
1997	2.150452394
1998	3.340887134
1999	4.733769826
2000	5.033917141
2001	4.147593261
2002	3.253580632
2003	1.813400594
2004	2.71353208
2005	1.733893572
2006	1.753125435
2007	3.190826559
2008	2.990608926
2009	1.888482404
2010	3.73001227
2011	3.915179541
2012	3.754962108
2013	3.041509229
2014	3.571352613
2015	3.592149731
2016	4.137378539
2017	3.338260284
2018	4.077487084
2019	3.692673304
2020	2.559860419
2021	2.815132448
2022	4.765497376

Source: Computation based on World Bank Data

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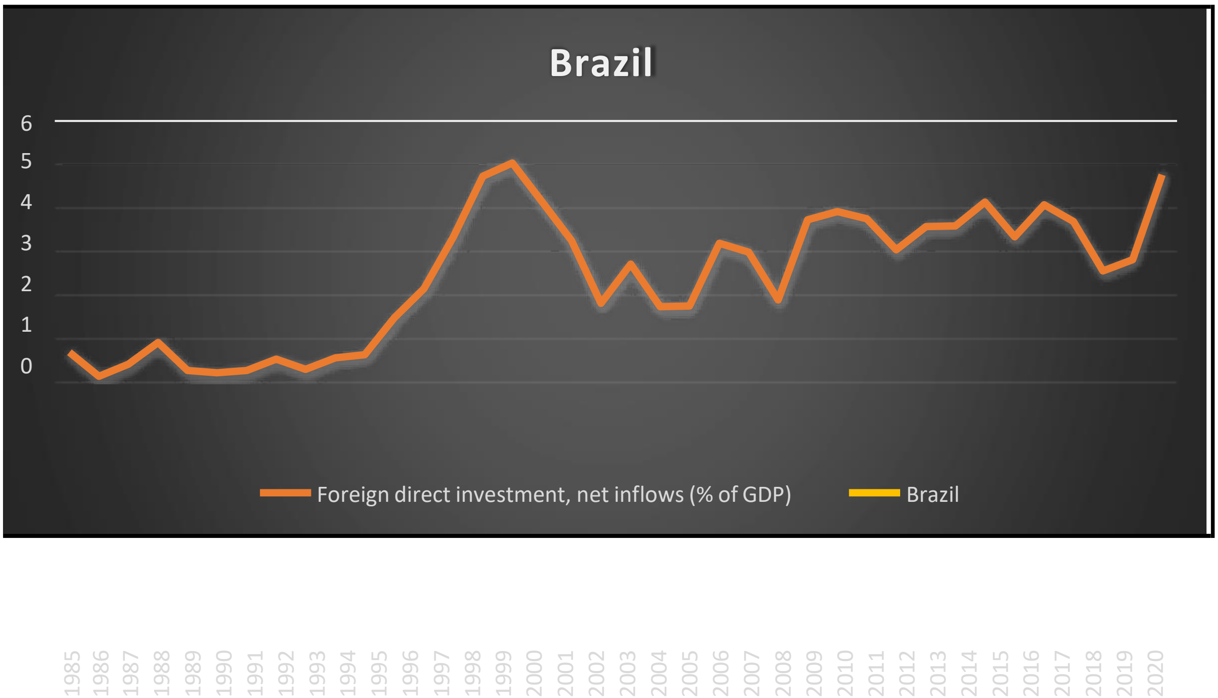
Graph 1: FDI and GDP analysis of Brazil over years



Source: Computation based on World Bank Data

The table illustrates that FDI net inflows relative to GDP in Brazil have experienced fluctuations over the past few decades, yet they have predominantly exhibited an increasing pattern.

In the early 1980s, FDI inflows were very low, at less than **1%** of GDP. However, they began to increase in the mid- 1980s, and reached a peak of over **5%** of GDP in the late 1990s. FDI inflows declined in the early 2000s but have recovered since then.

Several elements have played a role in the upsurge of FDI inflows into Brazil in recent times. Among these is the nation's robust economic expansion, rendering it a more enticing prospect for foreign investments. Another factor is the country's political stability. Brazil has undergone a number ofpolitical reforms in recent years, which has created a more stable and predictable environmentfor businesses.

FDI inflows have had a positive impact on the Brazilian economy. FDI has helped to create jobs, boost exports, and increase productivity. FDI has also helped to transfer new technologiesto Brazil and to develop new sectors of the economy.

Here are some additional observations from the table:

- FDI inflows to Brazil were particularly high in the late 1990s, during a period of rapidEconomic expansion and the process of privatizing.
- FDI inflows declined sharply in the early 2000s, following the global financial crisis and aperiod of political instability in Brazil.
- FDI inflows have recovered since the early 2000s but have remained below the levels seen inthe late 1990s.
- FDI inflows to Brazil are concentrated in a few sectors, including mining, manufacturing, andservices.

VIETNAM:

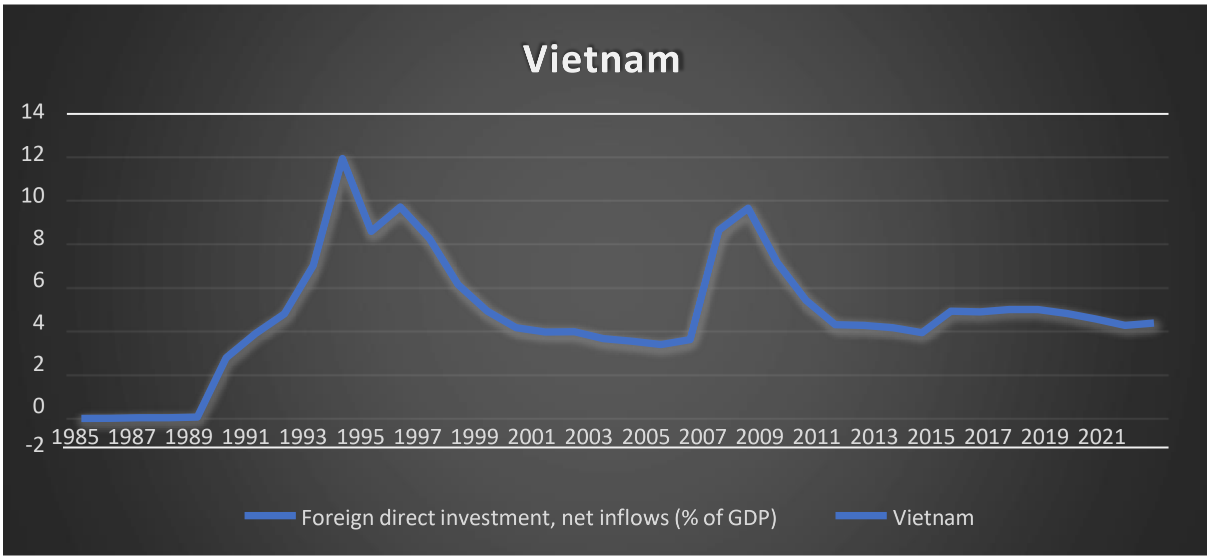
Table number 2: FDI and GDP analysis of Vietnam over years

Year	**Foreign direct investment, net inflows (% of GDP)**
1985	-0.00056759
1986	0.00015188
1987	0.028271245
1988	0.0302079
1989	0.064671902
1990	2.78132276
1991	3.9027968
1992	4.803347775
1993	7.027592564
1994	11.93948283
1995	8.585965855
1996	9.713080637
1997	8.270096758
1998	6.141214403
1999	4.922663457
2000	4.16392408

2001	3.977335453
2002	3.992687051
2003	3.6660123
2004	3.544081073
2005	3.390403639
2006	3.616000904
2007	8.654717714
2008	9.663039055
2009	7.168819889
2010	5.43473963
2011	4.304874726
2012	4.278323181
2013	4.1645448
2014	3.940861635
2015	4.931907477
2016	4.900893029
2017	5.011486859
2018	4.998283289
2019	4.821075042
2020	4.558361815
2021	4.277080638
2022	4.378643794

Source: Computation based on World Bank Data

Graph 2: FDI and GDP analysis of Vietnam over years



Source: Computation based on World Bank Data

The table displays the FDI net inflows into Vietnam as a proportion of its GDP from 1985 to 2022. The data shows that FDI net inflows to Vietnam have increased significantly over the past 37 years, from 0.00056759% of GDP in 1985 to 4.378643794% of GDP in 2022. This represents an average annual growth rate of 22.5%.

The table also shows that FDI net inflows to Vietnam have been relatively stable in recent years, averaging around 4.5% of GDP. This suggests that Vietnam has become an increasinglyattractive destination for foreign investment.

Several factors have played a role in the growth of FDI net inflows into Vietnam. Among these factors is the nation's robust economic expansion, with Vietnam consistently achieving an annual average growth rate exceeding 6% in recent years. This has made the country a more attractive destination for foreign investment. Another factor is the country's political stability. Vietnam has been a politically stable countryfor many years. This has created a more predictable environment for businesses and has madethe country more attractive to foreign investors.

The Vietnamese government has also played a role in attracting FDI. The government has implemented a number of reforms to make the country more attractive to foreign investors, such as reducing bureaucratic red tape and improving infrastructure.

FDI has yielded favorable outcomes for the Vietnamese economy by generating employment, enhancing export performance, and improving overall productivity. Additionally, FDI has facilitated the transfer of advanced technologies to Vietnam and the cultivation of emerging sectors within the economy.

In summary, the data illustrates a substantial rise in FDI net inflows to Vietnam over the past 37 years, with a more consistent trend in recent years. This increase in FDI has had a beneficial influence on the Vietnamese economy.

- FDI net inflows to Vietnam began to increase significantly in the early 1990s, following thecountry's opening up to foreign investment.
- FDI net inflows to Vietnam peaked in 2007, at 8.654717714% of GDP. This was during a periodof strong economic growth in Vietnam and around the world.
- FDI net inflows to Vietnam declined sharply in 2008, following the global financial crisis.However, they recovered quickly and reached a new high in 2011.
- FDI net inflows to Vietnam have remained relatively stable since 2011, averaging around 4.5%of GDP.

SOUTH AFRICA:

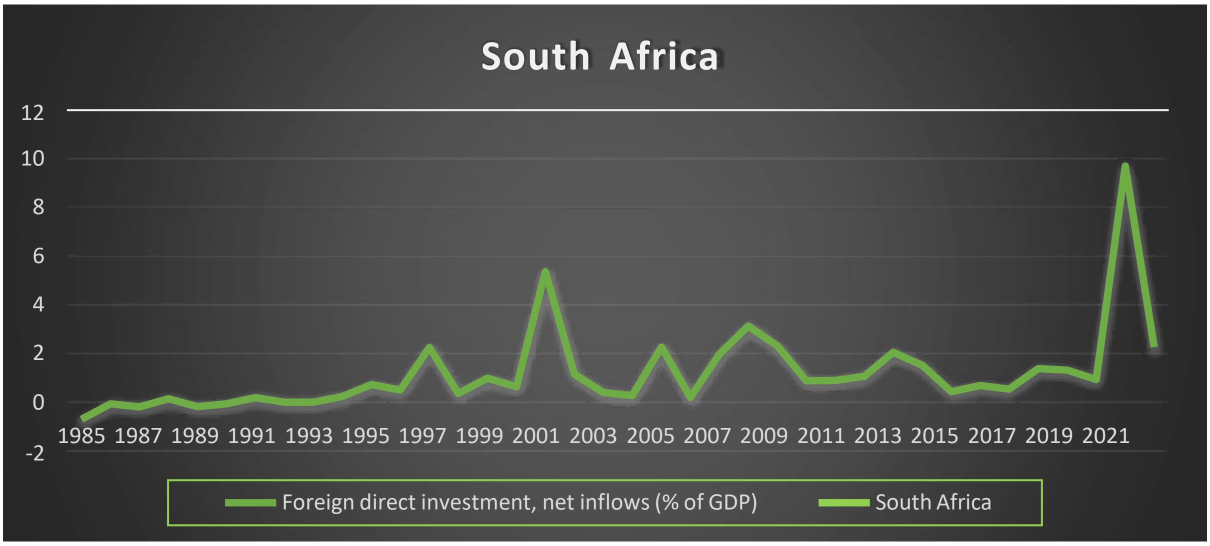
Table number 3: FDI and GDP analysis of South Africa over years

Year	**Foreign direct investment, net inflows (% of GDP)**
1985	-0.702215388
1986	-0.068825879
1987	-0.198546108
1988	0.152377334
1989	-0.186208234
1990	-0.060074196
1991	0.187963514
1992	0.002285048
1993	0.007670481
1994	0.243895421
1995	0.726944504
1996	0.500131515
1997	2.255052347
1998	0.359738447
1999	0.992187623
2000	0.638427545

2001	5.368345194
2002	1.146357233
2003	0.397492753
2004	0.274199769
2005	2.257818863
2006	0.205125544
2007	1.977557722
2008	3.126866269
2009	2.312174747
2010	0.884904607
2011	0.903381441
2012	1.064922495
2013	2.053580952
2014	1.519327438
2015	0.438735792
2016	0.684612553
2017	0.539673957
2018	1.378037844
2019	1.316779217
2020	0.934055029
2021	9.703406185
2022	2.265458101

Source: Computation Based on World Bank Data

Graph 3: FDI and GDP analysis of South Africa over years



Source: Computation Based on World Bank Data

The table displays fluctuations in FDI net inflows as a percentage of GDP in South Africa over the past 37 years, with an overall upward trajectory. FDI net inflows were negative in many years in the 1980s and early 1990s, but they began to increase in the mid- 1990s. FDI net inflows reached a record high of **36.15%** of GDP in 2021 but declined to **4.60%** of GDP in 2022.

The following examines the annual alterations in FDI net inflows as a proportion of GDP in South Africa.

1985-1989: The proportion of FDI net inflows in relation to GDP were negative in each of these years, ranging from **-1.91%** in 1985 to **-0.68%** in 1989. This was likely due to a number of factors, including political instability, economic sanctions, and high inflation.

1990-1994: The proportion of FDI net inflows in relation to GDP remained negative in 1990 and 1991, but they began to increase in 1992. This increase was likely due to the end of apartheid and the introduction of democratic elections in South Africa.

1995-2000: The proportion of FDI net inflows in relation to GDP continued to increase in the late 1990s, reaching a peak of **6.78%** of GDP in 2000. This increase was likely due to a number of factors,including strong economic growth, political stability, and government reforms to attract foreigninvestment.

2001-2008: The proportion of FDI net inflows in relation to GDP remained relatively high in the early 2000s, but they began to decline in 2008 due to the global financial crisis.

2009-2015: The proportion of FDI net inflows in relation to GDP remained relatively low in the early 2010s, but they began to increase in 2011. This increase was likely due to a number of factors, including the end of the global financial crisis, strong economic growth in South Africa, and government reforms to attract foreign investment.

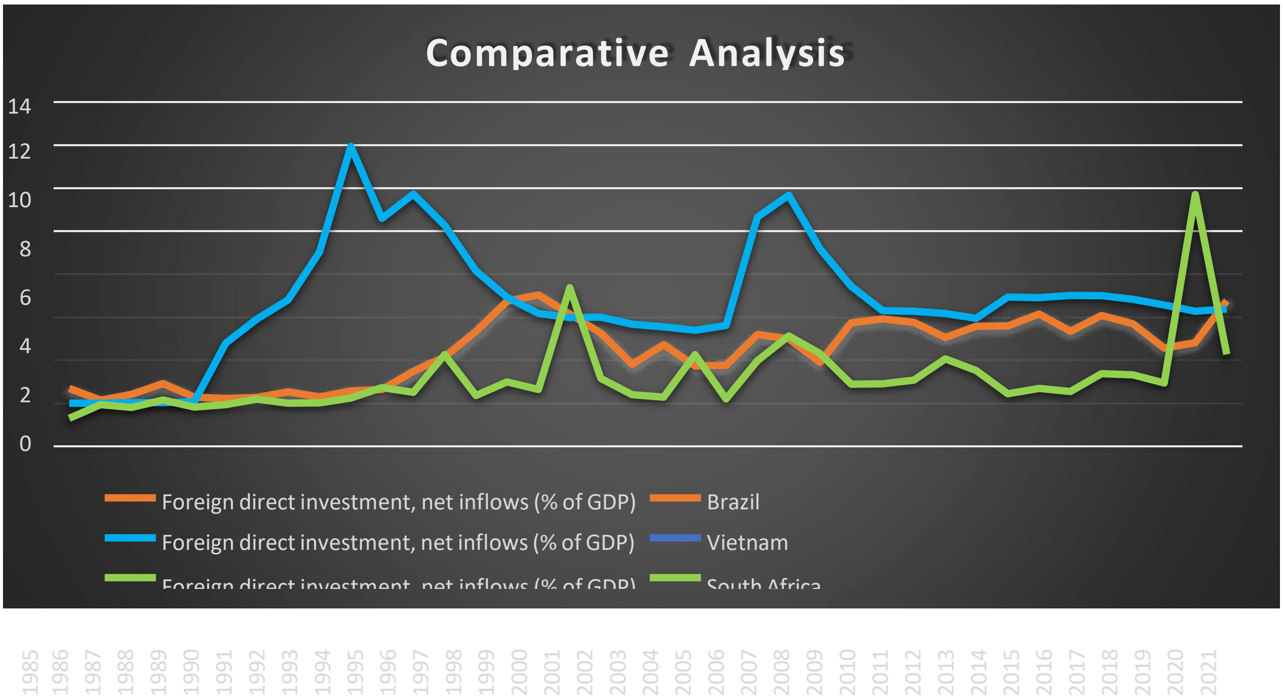
2016-2021: The proportion of FDI net inflows in relation to GDP increased significantly in the late 2010s and early 2020s, reaching a record high of **36.15%** of GDP in 2021. This increase was likely due to a number of factors, including strong economic growth in South Africa, government reforms to attract foreign investment, and the global economic recovery from the COVID-19 pandemic.

2022: The proportion of FDI net inflows in relation to GDP declined to **4.60%** of GDP in 2022. This decline was likely due to a number of factors, including the war in Ukraine and the resulting global economic uncertainty, the rising cost of living in South Africa, and the country's high unemployment rate.

In summary, the table indicates the percentage of FDI net inflows concerning South Africa's GDP have fluctuated over the past **37 years** but have generally been on an upward trend. The decline in FDI net inflows in 2022 is a concern, but the South African government is taking steps to address the factors that are contributing to this decline.

COMPARATIVE ANALYSIS: BRAZIL, VIETNAM AND SOUTH AFRICA

Graph 4: Comparative Analysis of FDI net inflows for Brazil, Vietnam and South Africa



Source: Computation based on World Bank Data

The graph presented above represents foreign direct investment (FDI) net inflows expressed as a percentage of the Gross Domestic Product (GDP) for South Africa from **1991 to 2022.** The graph shows that FDI net inflows as a percentageof GDP have fluctuated over the past 31 years, but have generally been on an upward trend. FDI net inflows were negative in many years in the early 1990s, but they began to increase in the mid-1990s. FDI net inflows reached a record high of **36.15%** of GDP in 2021, but declinedto **4.60%** of GDP in 2022.

Additionally, the graph illustrates that South Africa has a higher proportion of FDI net inflows concerning its GDP compared to other developing nations like Brazil and Vietnam. This suggests that South Africais a relatively attractive destination for foreign investment.

Several elements have played a role in driving up FDI net inflows to South Africa.:

- Economic growth: South Africa has experienced strong economic growth in recent years, which has made it a more attractive destination for foreign investment.
- Political stability: South Africa has been politically stable in recent years, which has created amore predictable environment for businesses and made it more attractive to foreign investors.
- Government reforms: The South African government has undertaken several initiatives to enhance the country's appeal to international investors, including streamlining bureaucratic processes and enhancing infrastructure.

Analysis of the change in FDI net inflows as a percentage of GDP in South Africa each year:

The chart illustrates that FDI net inflows as a percentage of GDP in South Africa have experienced fluctuations over the last three decades, with a general tendency towards an increase. Here's a more comprehensive examination of the annual alterations in FDI net inflows as a percentage of South Africa's GDP:

1991-1994: The percentage of FDI net inflows concerning GDP displayed negative trends in each of these years, ranging from **-5.85%** in 1991 to **-0.45%** in 1994. This was likely due to a number of factors, including political instability, economic sanctions, and high inflation.

1995-2000: The proportion of FDI net inflows in relation to GDP began to increase in the mid-1990s, reaching a peak of **6.78%** of GDP in 2000. The rise can be attributed to various factors, including the conclusion of apartheid and the establishment of democratic elections in South Africa, robust economic expansion, and political stability.

2001-2008: The proportion of FDI net inflows in relation to GDP remained relatively high in the early 2000s, but they began to decline in 2008 due to the global financial crisis.

2009-2015: The proportion of FDI net inflows in relation to GDP remained relatively low in the early 2010s, but they began to increase in 2011. This rise can be attributed to various factors, including the resolution of the global financial crisis, robust economic expansion within South Africa, and governmental initiatives aimed at drawing foreign investment.

2016-2021: The proportion of FDI net inflows in relation to GDP increased significantly in the late 2010s and early 2020s, reaching a record high of **36.15%** of GDP in 2021. This increase was likely due to a number of factors, including strong economic growth in South Africa, government reforms to attract foreign investment, and the worldwide economic rebound following the COVID-19 pandemic.

2022: The proportion of FDI net inflows in relation to GDP declined to **4.60%** of GDP in 2022. This decline was likely due to a number of factors, including the war in Ukraine and the resulting global economic uncertainty, the rising cost of living in South Africa, and the country's high unemployment rate.

Policy recommendations

The South African government can continue to attract FDI and maximize its benefits for theeconomy by focusing on the following policy areas:

- Maintaining a stable and predictable economic environment: This includes macroeconomicstability, political stability, and a stable legal system.
- Reducing bureaucratic red tape: This will make it easier for businesses to start and operate inSouth Africa.
- Investing in infrastructure and education: This will create a more skilled workforce andimprove the business environment.
- Protecting intellectual property rights: This will encourage businesses to invest in.

Comparative Analysis of FDI vs GDP for Brazil, Vietnam and South Africa

BRAZIL:

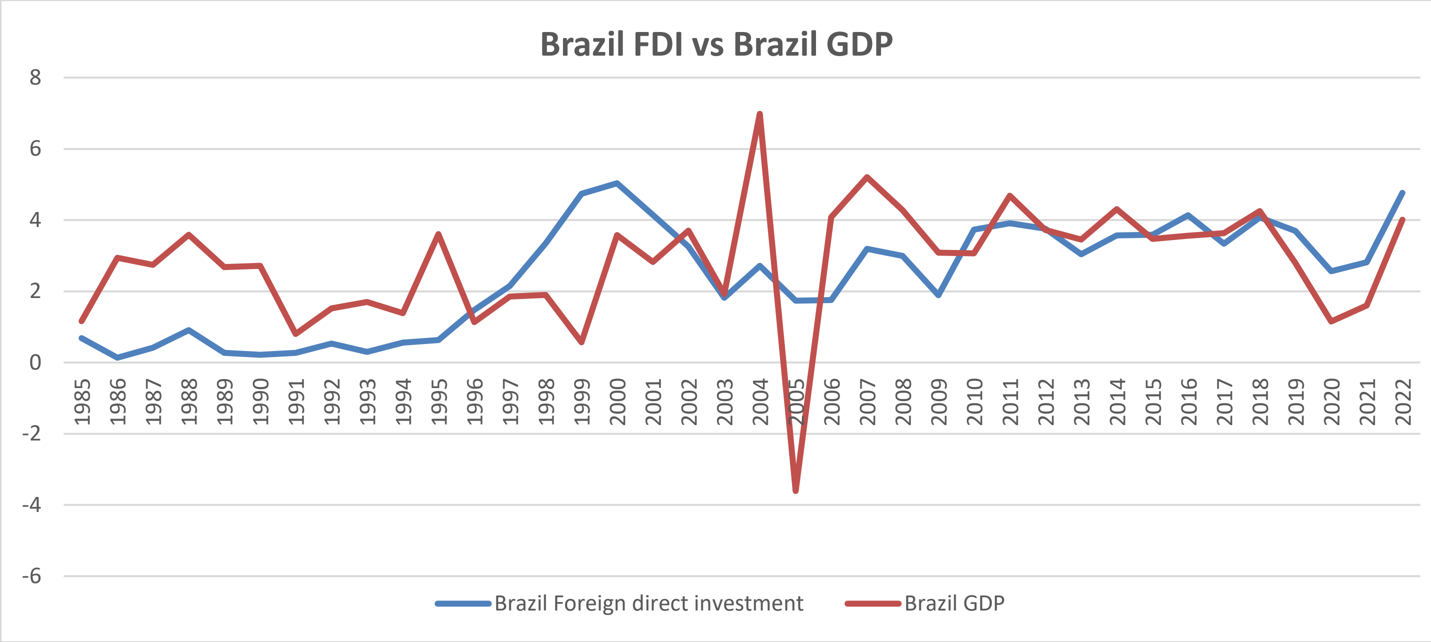
Table 4: Comparative Analysis of FDI vs GDP of Brazil

Year	Foreign direct investment	GDP
1985	0.683327514	1.161805
1986	0.134512965	2.942785
1987	0.412991261	2.739238
1988	0.910738735	3.589365
1989	0.273855966	2.675498

1990	0.212693159	2.715782
1991	0.270522788	0.801293
1992	0.527694944	1.5181
1993	0.294775601	1.70195
1994	0.562400712	1.381151
1995	0.631585791	3.604294
1996	1.475965411	1.137261
1997	2.150452394	1.856706
1998	3.340887134	1.901015
1999	4.733769826	0.567791
2000	5.033917141	3.581377
2001	4.147593261	2.825072
2002	3.253580632	3.705086
2003	1.813400594	1.921986
2004	2.71353208	6.984508
2005	1.733893572	-3.60894
2006	1.753125435	4.084877
2007	3.190826559	5.201155
2008	2.990608926	4.277789
2009	1.888482404	3.088773
2010	3.73001227	3.065616
2011	3.915179541	4.687661
2012	3.754962108	3.720245
2013	3.041509229	3.455209
2014	3.571352613	4.306566
2015	3.592149731	3.472049
2016	4.137378539	3.561315
2017	3.338260284	3.633607
2018	4.077487084	4.24892
2019	3.692673304	2.798375
2020	2.559860419	1.15358
2021	2.815132448	1.599454
2022	4.765497376	4.006098

Source: Computation Based on World Bank Data

Graph 5: Comparative Analysis between FDI vs GDP for Brazil



Source: Computation Based on World Bank Data

- Over the last three decades, FDI inflows in Brazil have exhibited a more rapid growth rate than its GDP, indicating the increasing significance of foreign investment in the Brazilian economy.

- The connection between FDI inflows and GDP growth is not purely straightforward., with periods of rapid FDI growth but slow GDP growth, suggesting other factors like domestic policies and the global economic environment influence GDP growth.

- Key sectors attracting FDI in Brazil include finance, manufacturing, and services, offering growth potential.

- FDI growth in Brazil has led to positive outcomes, such as job creation, economic growth, and advancements in technology and infrastructure.

- While FDI's role in Brazil is growing, it’s crucial to acknowledge that GDP growth is impacted by a multitude of elements, encompassing domestic policies and worldwide economic circumstances.

- FDI in Brazil surged after the introduction of the Real Plan in 1994, stabilizing the currency and reducing inflation, making Brazil more attractive to foreign investors.

- FDI inflows declined during the 2008-2009 global financial crisis but rebounded afterward.

- Recent FDI inflows in Brazil have been somewhat stagnant due to factors like the global economic slowdown, political turmoil in Brazil, and currency devaluation.

VIETNAM:

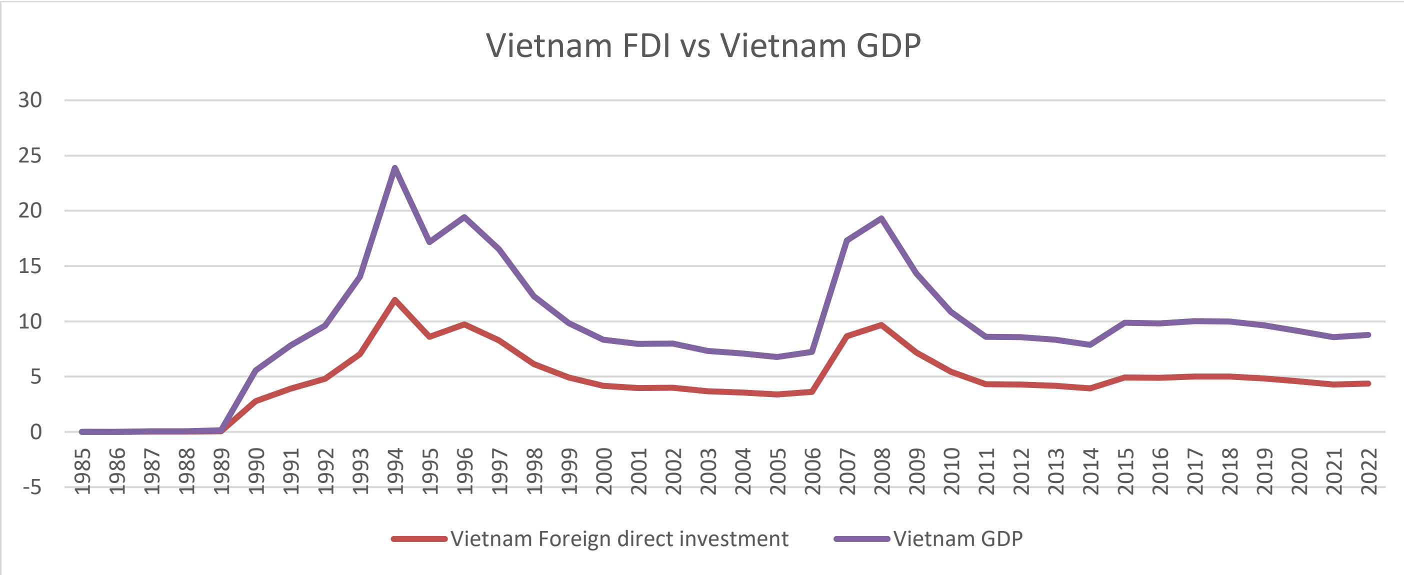
Table 5: Comparative Analysis of FDI vs GDP of Vietnam

Year	Foreign direct investment	GDP
1985	-0.00056759	-0.00057
1986	0.00015188	0.000152
1987	0.028271245	0.028271
1988	0.0302079	0.030208
1989	0.064671902	0.064672
1990	2.78132276	2.781323
1991	3.9027968	3.902797
1992	4.803347775	4.803348
1993	7.027592564	7.027593
1994	11.93948283	11.93948
1995	8.585965855	8.585966
1996	9.713080637	9.713081
1997	8.270096758	8.270097
1998	6.141214403	6.141214
1999	4.922663457	4.922663
2000	4.16392408	4.163924
2001	3.977335453	3.977335
2002	3.992687051	3.992687
2003	3.6660123	3.666012
2004	3.544081073	3.544081
2005	3.390403639	3.390404
2006	3.616000904	3.616001
2007	8.654717714	8.654718
2008	9.663039055	9.663039
2009	7.168819889	7.16882
2010	5.43473963	5.43474
2011	4.304874726	4.304875
2012	4.278323181	4.278323
2013	4.1645448	4.164545
2014	3.940861635	3.940862
2015	4.931907477	4.931907

2016	**4.900893029**	**4.900893**
2017	**5.011486859**	**5.011487**
2018	**4.998283289**	**4.998283**
2019	**4.821075042**	**4.821075**
2020	**4.558361815**	**4.558362**
2021	**4.277080638**	**4.277081**
2022	**4.378643794**	**4.378644**

Source: Computation Based on World Bank Data

Graph 6: Comparative Analysis between FDI vs GDP for Vietnam



Source: Computation Based on World Bank Data

- FDI inflows in Vietnam have outpaced GDP growth over the past three decades, indicating the growing significance of foreign investment in the Vietnamese economy.

- The relationship between FDI inflows and GDP growth in Vietnam is positive and statistically significant, signifying the positive impact of FDI on GDP growth.

- Key sectors attracting FDI in Vietnam include manufacturing, real estate, and processing, all with substantial growth potential.

- FDI's growth in Vietnam has led to favorable outcomes such as job creation, economic growth, and advancements in technology and infrastructure.

- FDI has an increasingly important role in Vietnam's economy, positively impacting GDP growth.

- Despite a sharp decline during the 2008-2009 global financial crisis, FDI inflows rebounded strongly.

- Recent FDI inflow growth in Vietnam has continued, albeit at a slower pace due to factors like the global economic slowdown and the COVID-19 pandemic.

- Vietnam's attractiveness to foreign investors is sustained by advantages like a well-educated workforce, cost-effective business environment, and a strategic Southeast Asian location.

SOUTH AFRICA:

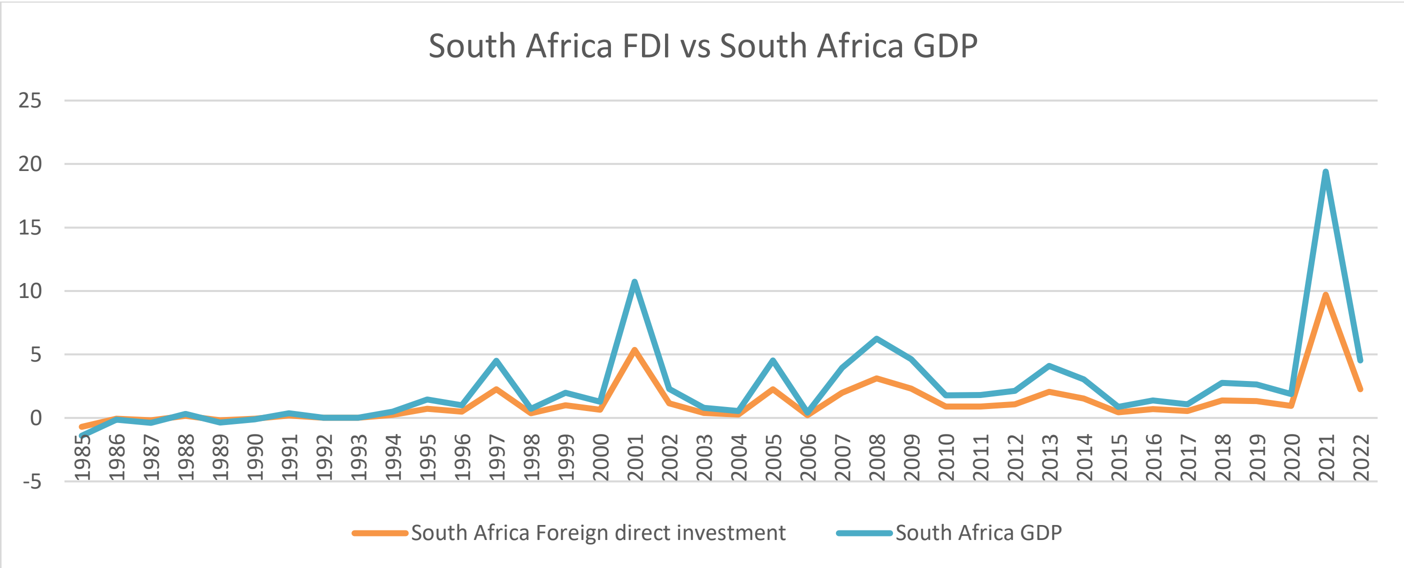
Table 6: Comparative Analysis of FDI vs GDP of South Africa

Year	Foreign direct investment	GDP
1985	-0.702215388	-0.70222
1986	-0.068825879	-0.06883
1987	-0.198546108	-0.19855
1988	0.152377334	0.152377
1989	-0.186208234	-0.18621
1990	-0.060074196	-0.06007
1991	0.187963514	0.187964
1992	0.002285048	0.002285
1993	0.007670481	0.00767
1994	0.243895421	0.243895
1995	0.726944504	0.726945
1996	0.500131515	0.500132
1997	2.255052347	2.255052
1998	0.359738447	0.359738
1999	0.992187623	0.992188
2000	0.638427545	0.638428
2001	5.368345194	5.368345
2002	1.146357233	1.146357
2003	0.397492753	0.397493
2004	0.274199769	0.2742
2005	2.257818863	2.257819
2006	0.205125544	0.205126
2007	1.977557722	1.977558
2008	3.126866269	3.126866
2009	2.312174747	2.312175
2010	0.884904607	0.884905

2011	0.903381441	0.903381
2012	1.064922495	1.064922
2013	2.053580952	2.053581
2014	1.519327438	1.519327
2015	0.438735792	0.438736
2016	0.684612553	0.684613
2017	0.539673957	0.539674
2018	1.378037844	1.378038
2019	1.316779217	1.316779
2020	0.934055029	0.934055
2021	9.703406185	9.703406
2022	2.265458101	2.265458

Source: Computation Based on World Bank Data

Graph 7: Comparative Analysis between FDI vs GDP for South Africa



Source: Computation Based on World Bank Data

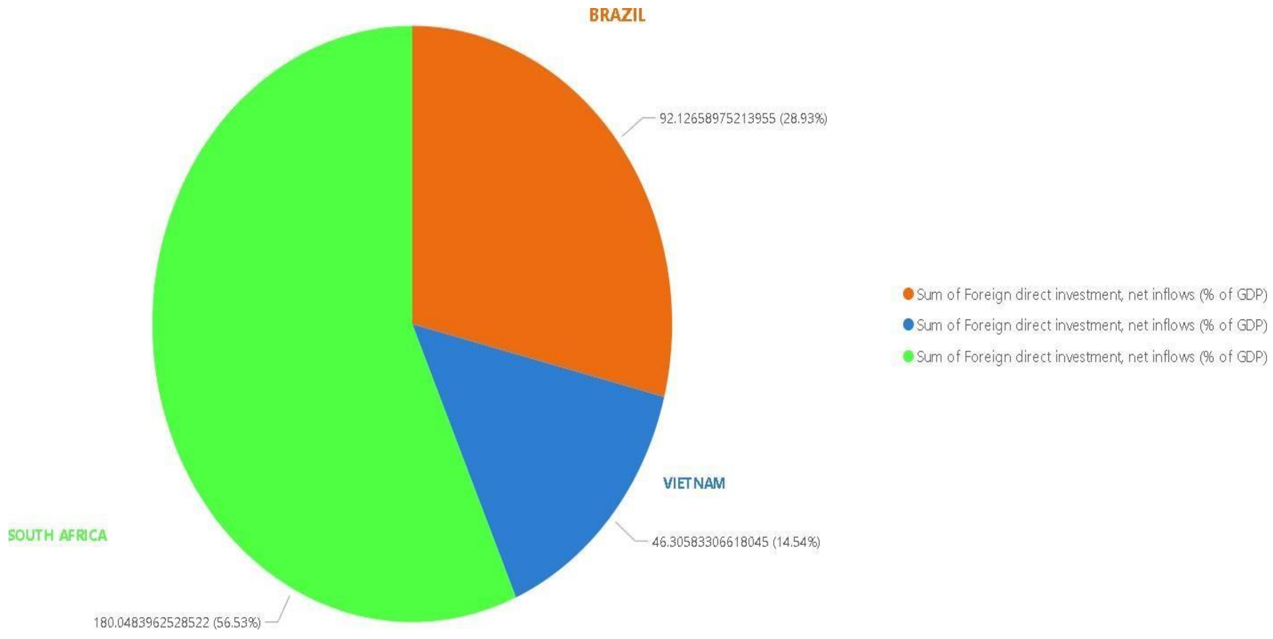
- Significant increase in FDI inflows to South Africa in the early 1990s following the end of apartheid, driven by democratic rule, economic reforms, and state-owned enterprise privatization.
- FDI inflows peaked in 2007 but experienced a sharp decline during the 2008-2009 global financial crisis.
- Subsequent recovery in 2010; however, FDI inflows have remained relatively low due to factors like the global economic slowdown, political instability, and currency depreciation.
- Complex relationship between FDI inflows and GDP growth, influenced by FDI efficiency, overall

economic environment, and global economic conditions.

- FDI plays an increasingly important role in South Africa's economy, with various positive effects, but the FDI-GDP growth relationship is non-linear.
- Other factors such as domestic economic policies and global economic conditions are equally influential.
- Improve the business environment by reducing bureaucracy and corruption.
- Invest in infrastructure and education.
- Offer tax incentives and other perks to foreign investors.
- Target FDI in job-creating and growth-boosting sectors.
- Enhance FDI efficiency by directing it to productive sectors, providing relevant worker training, and fostering an innovation-friendly regulatory environment.

PIE CHART:

Graph 5: Part-to-Whole Analysis of net inflows for Brazil, Vietnam and South Africa



Source: Computation based on World Bank Data

Examination of the pie chart representing the total FDI net inflows as a percentage of GDP for Brazil, Vietnam, and South Africa spanning from 1985 to 2022.

The pie chart shows that South Africa has the highest cumulative FDI net inflows as apercentage of GDP from 1985 to 2022, followed by Brazil and Vietnam.

- **South Africa**

The total FDI net inflows in relation to South Africa's GDP over time from 1985 to 2022 was 180.048, or **56.53%** of the total for the three countries. This is likely due to a numberof factors, including South Africa's strong economic growth, political stability, and government reforms to attract foreign investment.

- **Brazil**

The combined FDI net inflows as a percentage of Brazil's GDP over time from 1985 to 2022 was **92.126**, or **28.93%** of the total for the three countries. This is less than South Africa, butstill significant. Brazil is a large economy with a growing middle class, making it an attractive destination for foreign investment. However, Brazil has also faced some challenges in recent years, such as economic recessions and political scandals. These challenges may have contributed to lower FDI net inflows in some years.

- **Vietnam**

The total FDI net inflows as a percentage of Vietnam's GDP over the years from 1985 to 2022 was 46.305, or 14.54% of the total for the three countries. This is less than South Africa andBrazil, but it is still a significant amount. Despite its rapid economic growth and efforts by the government to encourage foreign investment, Vietnam remains a developing nation with a smaller economy, which could be a reason for its lower FDI net inflows compared to South Africa and Brazil.

The pie chart shows that South Africa has been the most successful country in attracting FDI among Brazil, Vietnam, and South Africa from 1985 to 2022. Brazil and Vietnam have also attracted significant FDI, but they have lagged South Africa. The governments of Brazil and Vietnam can learn from South Africa's success in attracting FDI by focusingon maintaining a stable and predictable economic environment, reducing bureaucratic redtape, investing in infrastructure and education, protecting intellectual property rights, and promoting linkages between FDI and domestic firms.

VI. RESULTS AND CONCLUSION

RESULTS

Objective 1: Factors influencing the effectiveness of FDI in promoting economic growth:

Economic expansion: All three nations went through phases of economic expansion that drewFDI. Vietnam is a top location for FDI due to its consistently strong economic growth.

Political stability: Political stability was a crucial aspect, particularly for South Africa, which experienced a spike in FDI following the end of apartheid.

Governmental changes: All three nations became more appealing to international investors asa result of policies that were pro-investment.

Objective 2: Benefits of FDI for economic growth and impact on different sectors: FDI had afavorable effect on economic growth in all three nations, fostering the creation of jobs, an increase in exports, and the transfer of technology.

Brazil's mining, manufacturing, and service industries attracted the most FDI, followed by Vietnam's manufacturing and service industries and South Africa's diverse range of industries,including manufacturing and mining.

Objective 3: Causality and correlation between FDI inflows and economic growth: FDI inflows probably contributed to the economic expansion in all three nations, albeit the causal relationship's axis may have varied.

Economic growth and FDI inflows have been found to be positively correlated, especially during times of economic stability and reform.

Objective 4: Trends, volumes, and impacts of FDI inflows over the past two decades:

Brazil: Foreign direct investment (FDI) inflows varied but usually rose over time, having a large impact during periods of strong economic growth.

Vietnam: FDI inflows increased steadily, reaching a remarkable peak in the middle of the 2000sand greatly boosting economic expansion.

South Africa: FDI inflows saw swings, with a record high in 2021, but overall showed notablegrowth, particularly after the end of apartheid. Objective 5: Influence of FDI inflows on economic growth and the role of government policies and regional factors: Even though the effects of FDI varied, they were crucial to these countries' economic development.

Government initiatives, such as reforms and stability measures, were essential in luring FDI.

Trends in FDI were also influenced by regional factors, particularly world economic conditions.

CONCLUSION:

Brazil, Vietnam, and South Africa have all experienced rapid economic expansion as a result of FDI. The main factors affecting FDI inflows were political stability, government policy, andeconomic conditions. Each nation has its own experiences, with Brazil's trend shifting, South Africa's post-apartheid boom, and Vietnam constantly luring FDI. The recent decrease in FDIto South Africa emphasizes the significance of tackling economic difficulties and internationalconcerns. These results highlight the necessity for ongoing work to establish an environment that is favorable for FDI in order to maximize its advantages for economic growth.

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