

Project Dissertation Report on
IMPACT OF FDI IN ECONOMIC GROWTH OF INDIA

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DECLARATION

I, Sikshya Bashyal, hereby declare that the Major Research Project Report entitled **“IMPACT OF FDI IN ECONOMIC GROWTH OF INDIA”** submitted to Delhi Technological University is a record of my original work. This project report is submitted in partial fulfilment of the requirements for the award of the degree of MBA in Finance and Human Resources. I also declare that this project report has not been submitted to any other university or institute for the award of any degree or diploma.

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Finally, I would like to thank all the other people who helped me in any way during the project report.

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CERTIFICATE

This is to certify that the Major Research Project titled “**IMPACT OF FDI IN ECONOMIC GROWTH OF INDIA**” is submitted by Sikshya Bashyal, 2K23/DMBA/152 to Delhi School of Management, Delhi Technological University, in partial fulfillment of the requirement for the award of the degree of Masters in Business Administration during the academic year 2024–2025.

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ABSTRACT

This study examines the association between India's economic growth from 1991 to 2022 and foreign direct investment (FDI). Based on time-series analysis, the study concludes that FDI and important economic indicators have a moderately significant relationship, with correlation coefficients hanging around 0.36. According to regression analysis, FDI only accounts for 13–17% of changes in GDP and GNI, suggesting that although FDI is a growth driver, other factors have a greater impact. Large variations in FDI patterns are found in the study, especially between the mid-2000s and 2022. Suggestions are to adopt an integrated growth approach, enhance FDI quality, streamline regulations, and strengthen connections between foreign investment and local industries.

Contents

DECLARATION	ii
ACKNOWLEDGEMENT	iii
CERTIFICATE	iv
ABSTRACT.....	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1: INTRODUCTION	1
1.1. Background	2
1.2. Problem Statement	3
1.3. Objectives of the study	3
1.4. Scope of the study	3
CHAPTER 2: LITERATURE REVIEW	5
CHAPTER 3: RESEARCH METHODOLOGY	8
3.1 Research Design	8
3.2 Data Collection	8
3.3 Data Analysis Tools and Techniques.....	8
CHAPTER 4: DATA ANALYSIS	10
4.1. Trend Analysis	10
4.2. Summary Statistics	15
4.3 Correlation Coefficient	17
4.3 Regression.....	21
CHAPTER 5: RECOMENDATION	31
CHAPTER 6: CONCLUSION	34

REFERENCES	36
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LIST OF TABLES

Table .1 Summary Statistics	15
Table.2 Correlation Coefficient	17
Table.3 Regression of FDI vs GDP	21
Table.4Regression of GDP vs FDI Inflow and outflow	22
Table.5 Regression of GNI vs FDI Inflow	24
Table.6 Regression of GNI vs FDI Inflow and Outflow	25
Table.7 Regression of GFCF vs FDI Inflow.....	27
Table.8 Regression of GFCF vs FDI Inflow and outflow	28

LIST OF FIGURES

Figure 1 Trends in FDI Inflows and Outflows (1990-2022)	10
Figure 2 Trends in GDP, GNI and GFCF (1990-2022).....	12
Figure 3 Trends in FDI Inflows and Outflows (1990-2020)	13
Figure 4 Normalized Values of All Economic Indicators (1990-2022)	14
Figure 5 Correlation Matrix	19

CHAPTER 1: INTRODUCTION

Foreign Direct Investment (FDI) happens when a person or a company from one country invests in a business in another country. This usually means setting up a new business, forming partnerships with local companies, or buying a big share in an existing business with the goal of having some control over how things are run.

FDI is more about long-term commitment than short-term investments. In addition to financial resources, investors contribute their time, expertise, and experience to the expansion of the company. Such commitment can contribute to stable and sustainable economic growth in the host nation.

FDI also has a number of significant advantages. It brings cutting-edge skills, contemporary technology, and fresh capital to the local market. Foreign businesses frequently have more advanced production methods, technical know-how, and better business management strategies. Local businesses may benefit from increased productivity and competitiveness as a result. Additionally, it creates opportunities for local workers to develop and learn. Another big advantage of FDI is job creation. When foreign businesses start or expand operations, they need people to work with them creating employment for the local population and helping improve their quality of life.

FDI has the power to propel a nation's economic growth on a larger scale. Increased investment can boost exports, production, and industry growth, all of which contribute to a stronger economy as a whole. Additionally, it facilitates local companies' access to international markets. Foreign businesses can assist local partners in growing their reach and breaking into international supply chains because they frequently have robust networks and international experience.

Lastly, improved infrastructure may result from FDI. International businesses may make investments in communication systems, power supplies, or roads, which would facilitate business dealings and enhance local communities' quality of life.

By bringing money, technology, and experience to a host nation, foreign direct investment (FDI) has a major impact on economic growth and increases employment, productivity, and innovation. In the end, it propels overall economic prosperity by fostering a more competitive business climate and expanding access to international markets.

1.1. Background

India's economic journey from 1970 to 1998 is a tale of tenacity, change, and slow ascent to prominence in the world economy. India had to negotiate a challenging course during these nearly three decades, one that was characterized by major policy changes, population pressures, and ambitious development goals. A controlled economic environment that imposed stringent regulations on businesses and a predominantly agrarian economy marked the beginning of this period. Notwithstanding these difficulties, India's GDP experienced periods of noteworthy expansion, which were a result of the country's attempts to modernize its agricultural sector, build out its infrastructure, and boost industrial production.

However, the economic situation was anything but stable. Both internal and external factors, such as bureaucratic roadblocks and a lack of foreign investment, contributed to the volatility that characterized the 1970s and 1980s. External shocks, such as the 1973 oil crisis, put the nation's economic stability to the test. The impact of economic expansion on individual living standards was lessened by fluctuating growth rates and the frequent tempering of gains in per capita income by rapid population growth.

India's severe balance of payments crisis in 1991 brought to light shortcomings of its closed economy. Wide-ranging economic reforms that sought to de-regulate industries, encourage foreign investment, liberalize the market, and boost exports were sparked by this crisis. The mid-1990s saw a new wave of growth brought about by the reforms, with GDP growth rates in some years hitting double digits, indicating a move toward a more dynamic and open economy.

The economic structure also gradually changed during this time, with the service sector becoming more prominent and making a substantial growth contribution. Per capita income increased along with the GDP, but there were still issues making sure that the advantages of growth were distributed fairly among India's enormous and diverse population.

Examining India's GDP and per capita growth rates over this period offers important new perspectives on how demographic factors, world events, and economic policies interact to determine the course of a nation's development. It also emphasizes the need of flexible policy structures able to handle crises and maximize chances for long-term development. With rising contributions from the industrial and service sectors, India progressively turned over three decades toward a more varied economy. The change was not linear or smooth; it included periods of fast

expansion, stagnation, and major policy changes—especially the liberalization changes of 1991. Appreciating the subtleties of India's economic development over this period requires an awareness of this historical background.

1.2. Problem Statement

The relationship between FDI and GDP in India from 1970 to 1998 is investigated in this paper. It specifically aims to ascertain how much FDI inflows affected GDP growth during this period and, conversely, how GDP performance might have drawn or discouraged FDI.

The study aims to offer a more nuanced knowledge of the intricate interaction among FDI and GDP in India during this time. It seeks to pinpoint the circumstances under which FDI has most affected GDP growth as well as the elements that might have limited or restricted this effect.

1.3. Objectives of the study

- To establish correlation: Quantify statistical relationship between FDI inflows and GDP growth rates in India between 1991 and 2022.
- To assess causality: Determine the extent to which FDI influenced subsequent GDP inflows into India during the study period.
- To Identify mediating factors: Identify and analyze the key mediating factors (policy environment, institutional quality, infrastructure, human capital) that shaped relationship between FDI and GDP.
- To identify trends and shifts in the FDI-GDP relationship.

1.4. Scope of the study

- Geographic Scope: The study is confined to India.
- Temporal Scope: Analysis will cover the period from 1991 to 2022.
- Data Scope: The analysis will primarily focus on the data, including GDP (in million USD), Annual GDP Growth (%). Secondary data sources for FDI inflows and other relevant macroeconomic indicators will be incorporated to enrich the analysis.
- Variable Scope: The core variables of interest are FDI inflows (as independent variable) and GDP growth (as dependent variable).

- **Methodological Scope:** The study will employ econometric techniques such as time series analysis, regression analysis, and causality tests to assess relationship between FDI and GDP.
- **Limitations:** The study is constrained by availability and reliability of data, particularly for FDI inflows and mediating variables. The analysis will focus on the aggregate level, and sector-specific impacts of FDI may not be fully explored due to data limitations. Additionally, the study will not delve into the micro-level impacts of FDI on firms and individuals. Potential omitted variable bias (consider including control variables like exchange rates, policy changes), Endogeneity concerns (may need instrumental variables approach), Structural breaks due to policy changes or global economic events are other notable limitations.

CHAPTER 2: LITERATURE REVIEW

P. Sudhakar, and Dr. R. Velmurugan (2023) noticed that Foreign Direct Investment (FDI) has significantly boosted India's economic growth. It basically means when foreign companies or individuals invest money into businesses or projects within India. FDI increases, both the country's GDP and stock market tend to grow as well, showing a positive connection between them.

Abdulhamid Sukar (2007) With the world becoming more interconnected due to globalization and with trade rules and currency exchange systems becoming more flexible, foreign direct investment (FDI) has seen major boost. In recent decades, FDI has grown at a much faster rate than global trade, showing just how important it has become in today's global economy. Foreign direct investment (FDI) has a little beneficial influence on economic growth. What really makes bigger difference are the country's own economic conditions—things like stable government policies, openness to global trade, and strong local investments. These elements contribute significantly to long-term growth.

Bhavya Malhotra (2014) observed that India's economy has benefited rather honestly from foreign direct investment (FDI). FDI brings fresh technologies, worldwide knowledge, and improved business practices in addition to the cash flow. This gives people an opportunity to pick up fresh skills and advance professionally, so strengthening local businesses, generating more employment possibilities, and so supporting local industries. All things considered, FDI is a useful tool for India's forward travel on the road of economic growth and development.

Khamis Hareb et al. (2015) observed that attracting Foreign Direct Investment (FDI) seems to depend more on other factors than inflation. This suggests that foreign investors' decisions to invest in a country within the specified observation range are not significantly impacted by changes in inflation rates. Their decisions are undoubtedly influenced by other factors.

Naveen Kumar Sharma et al. (2019) found that Sensex and the Nifty, India's two primary stock market indices, typically follow the movement of FDI. Bringing money into the nation from overseas investors increases market confidence, which frequently results in rising stock prices and positive momentum. Conversely, the market may lose some of that vigor if FDI slows down. To put it simply, FDI has a significant impact on the behavior of the Indian stock market, which functions as a kind of pulse that indicates global confidence in India's economic potential.

Elena Pelinescu and Magdalena Radulescu (2009) found that FDI promotes economic growth in both developed and developing countries. Whether a nation is already well-established or still on its growth journey, FDI brings in valuable capital, knowledge, and resources that help drive progress. What's interesting is the strong, direct relationship between the amount of FDI a country receives and its GDP per capita growth, which essentially reflects the overall standard of living of its people. Increased foreign investment may boost a country's output, employment creation, and economic activity. This, in turn, raises the income levels of individuals and improves the economic well-being of the nation as a whole. The presence of FDI not only supports immediate growth but also sets the stage for long-term prosperity by fostering innovation, improving infrastructure, and creating more opportunities for people to thrive. Simply put, FDI is a catalyst that helps countries, whether they are well-developed or still developing, build a better future for their citizens.

Saswata Chaudhury et al. (2020) found an important point about although foreign direct investment (FDI) has the ability to significantly increase economic growth, the kind of FDI is just as important as the quantity. Not all FDI is beneficial, and some investments may even hurt the economy, depending on the sector and how they are managed. This is an important insight for policymakers, as they need to ensure that the right kind of FDI is attracted to the right areas. The study highlights how crucial domestic investment is to bolstering and enhancing the effects of FDI. For FDI to truly have an impact, it must be supported by robust domestic investments. Together, foreign and domestic investments can strengthen economic growth by enhancing infrastructure, developing skills, and fostering an environment that is welcoming to both domestic and international companies.

Susic et al. (2019) determined that foreign capital inflows are recognized to have a favorable effect on overall development and are viewed as a major factor in accelerating economic growth. The ability of these capital sources to have a favorable influence on important aspects of the economy is clear from the careful monitoring of various types of foreign investments, including joint ventures with foreign investors and investments in free zones. They contribute to the development of a more vibrant and dynamic economic environment.

Bakawdah and Tayachi (2021) highlighted the beneficial effects of FDI on the growth of the securities market in Saudi Arabia. They discovered a robust statistical correlation between FDI and market capitalization, demonstrating how FDI contributes to stock market expansion. This

relationship shows that FDI is important for bolstering the market's overall stability and structure in addition to bringing in capital. As FDI encourages the formation of a more dynamic and linked financial sector, which in turn supports general economic growth, the research emphasizes how important it is for Saudi Arabia to attract FDI.

CHAPTER 3: RESEARCH METHODOLOGY

The impact of foreign direct investment (FDI) on India's economic development from 1991 and 2022 is examined in this paper, with particular attention paid to the statistical connection. A thorough grasp of the long-term relationships between FDI, GDP, and other factors is ensured by the combination of quantitative analysis and qualitative interpretation used to achieve this.

3.1 Research Design

Time-series data analysis supports the study's quantitative research design. The technique is primarily analytical and explanatory given the nature of the study aims in order to identify both a correlation and a causal link between FDI inflows and GDP growth in India. Furthermore, utilizing a descriptive component, trends and variables that might influence this connection are identified and investigated.

3.2 Data Collection

- **Time Frame:** The study covers a 32-year period from 1991 to 2022.
- **Data Sources:**
 - FDI inflow data was collected from official sources of the Food and Agriculture Organization.
 - GDP growth rates were sourced from the Food and Agriculture Organization.

3.3 Data Analysis Tools and Techniques

To fulfill the study's objectives, the following statistical tools and models were employed:

1. Correlation Analysis

- The strength and direction of the relationship between FDI inflows and GDP growth rates are measured by the Pearson correlation coefficient.

2. Regression Analysis

- Linear and multiple regression models are used to measure the degree to which changes in FDI inflows can explain variations in GDP growth.

- This helps in quantifying the economic significance of FDI in India's growth pattern.

3. **Trend Analysis**

- A time-series trend analysis is carried out to observe patterns, fluctuations, and structural shifts in the FDI-GDP relationship across different policy regimes and global economic events.

CHAPTER 4: DATA ANALYSIS

4.1. Trend Analysis

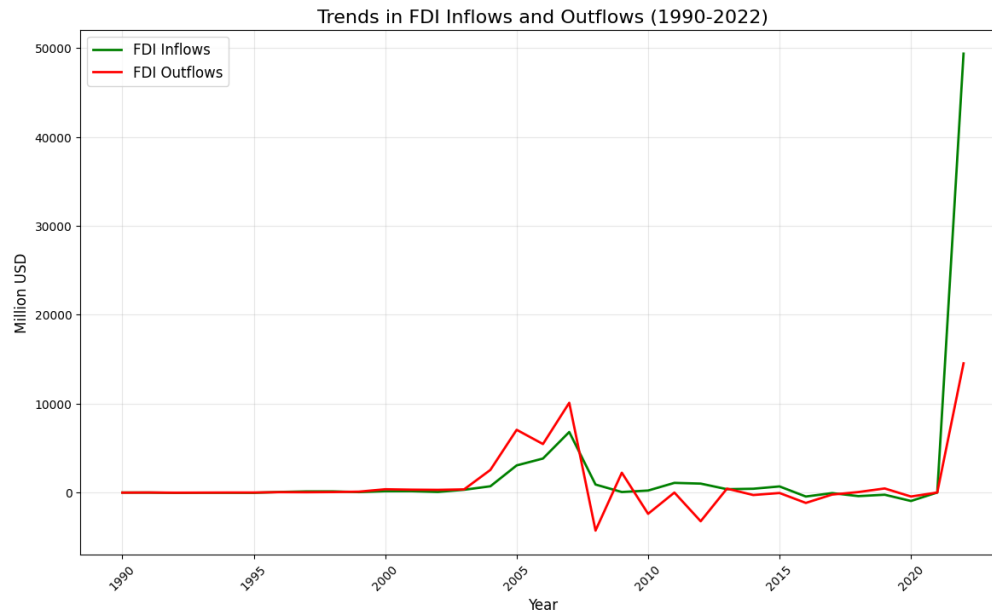


Figure 1 Trends in FDI Inflows and Outflows (1990-2022)

FDI Inflows

- 1990s to Early 2000s: FDI inflows remained very low and relatively stagnant, with some years even showing negative values, indicating net disinvestment or repatriation of capital.
- 2004–2007: There was a notable increase in inflows, peaking in 2007. This period likely reflects liberalization policies and increased investor confidence.
- 2008–2010: A sharp drop occurred, possibly due to the global financial crisis, followed by a period of low and volatile inflows.
- 2011–2021: FDI inflows remained modest, fluctuating but without major spikes or sustained growth.
- 2022: There is a dramatic and unprecedented surge in FDI inflows, reaching nearly \$50,000 USD, far exceeding previous years. This spike is highly anomalous compared to the historical trend.

FDI Outflows

- 1990s to Early 2000s: Outflows were also low and stable, mirroring the inflow pattern.
- 2004–2007: Outflows increased significantly, peaking in 2007, which coincides with the rise in inflows, indicating growing international investment activity by domestic firms.
- 2008–2010: Outflows became highly volatile, with some years showing large negative values (net repatriation or disinvestment), possibly reflecting the impact of the global financial crisis.
- 2011–2021: Outflows stabilized somewhat but remained modest, with occasional negative years.
- 2022: Outflows also show a sharp spike, reaching over \$14,000 USD, which is the highest in the observed period and mirrors the inflow anomaly

The trends indicate that both FDI inflows and outflows were subdued until the mid-2000s, after which both increased significantly, reflecting greater integration with global capital markets.

The sharp spikes in 2022 for both inflows and outflows are highly unusual and may be due to extraordinary economic events, major policy changes, or possibly data irregularities. This warrants further investigation to identify the underlying cause.

The volatility seen after 2008, especially in outflows, likely reflects global economic instability and changing domestic investment climates.

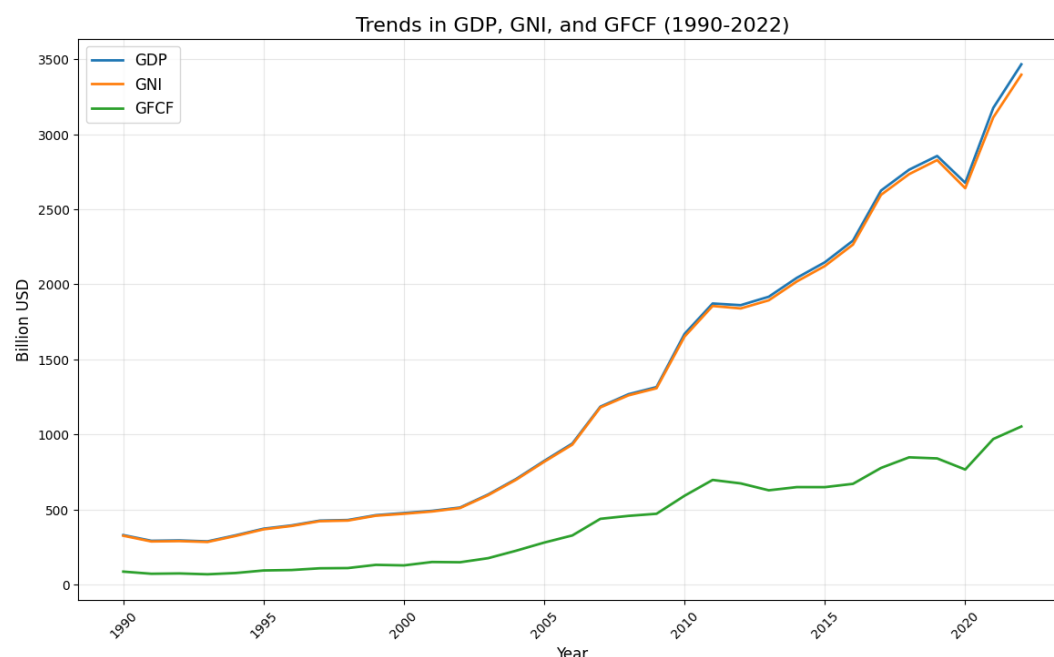


Figure 2 Trends in GDP, GNI and GFCF (1990-2022)

Gross Domestic Product (GDP)

GDP exhibits a consistent upward trend from 1990 to 2022, indicating significant economic expansion. GDP increased from approximately \$329 billion in 1990 to \$476 billion in 2000, showing steady but moderate growth. The growth rate accelerated, reaching \$1.67 trillion by 2010. GDP continued to rise, reaching \$2.68 trillion in 2020 despite a slight dip, likely due to global economic impacts. A strong recovery and growth phase is evident, with GDP reaching \$3.47 trillion in 2022.

Gross National Income (GNI)

GNI mirrors the GDP trend, showing consistent growth, though generally slightly lower than GDP. This difference reflects net income from abroad. GNI increased from \$325 billion in 1990 to \$471 billion in 2000. GNI grew to \$1.65 trillion by 2010. GNI reached \$2.64 trillion in 2020, showing similar trends to GDP with a slight decrease around 2020. A significant increase to \$3.40 trillion in 2022.

Gross Fixed Capital Formation (GFCF)

GFCF, which stands for fixed asset investment, likewise rises on average, although it fluctuates more than GDP and GNI. From \$85.8 billion in 1990 to \$127.3 billion in 2000, GFCF grew. GFCF

saw substantial growth, reaching \$591.3 billion by 2010. Fluctuations are more pronounced, with GFCF growing to \$765.9 billion in 2020, showing slower growth compared to the previous decade. A significant increase to \$1.05 trillion in 2022, indicating strong investment activity.

The consistent upward trends in GDP and GNI indicate sustained economic development over the period. The growth in GFCF supports the expansion in GDP and GNI, reflecting increased investment in fixed assets necessary for economic growth. The slight dips or slower growth around 2008-2009 and 2020 likely reflect the impacts of the global financial crisis and the COVID-19 pandemic, respectively. Strong growth in all three indicators from 2020 to 2022 suggests a robust recovery and potentially new growth drivers in the economy.

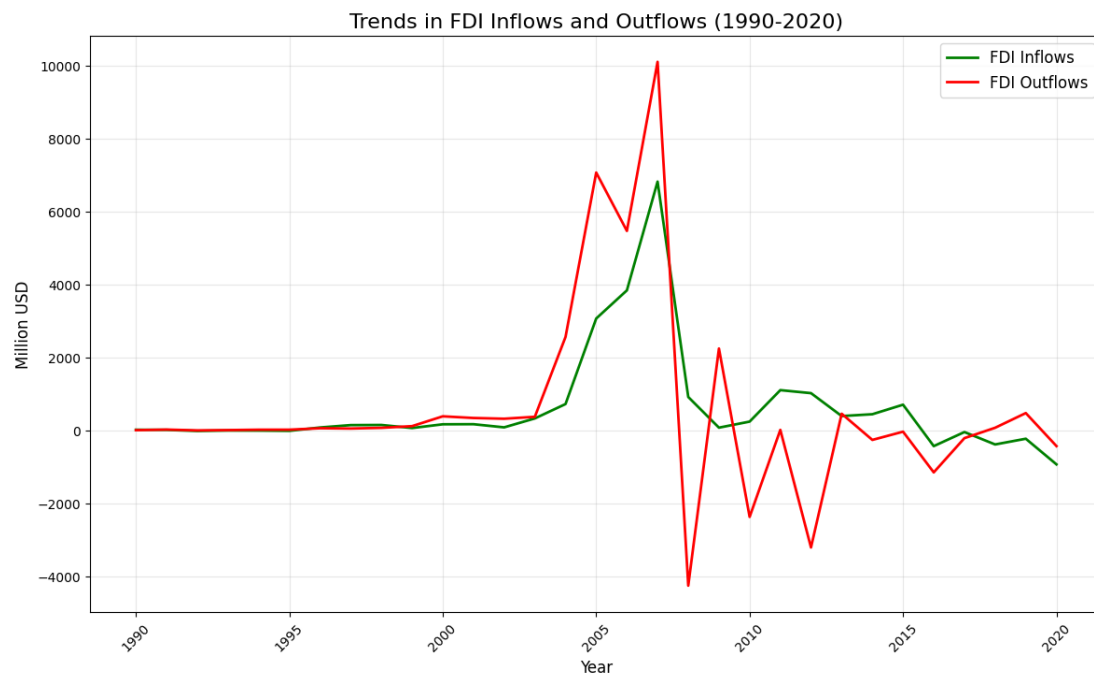


Figure 3 Trends in FDI Inflows and Outflows (1990-2020)

Between 1990 and 2020, the trends in FDI inflows and outflows reveal a shifting economic landscape. Initially, both inflows and outflows were minimal, indicating limited integration with global markets. As the years progressed into the 2000s, there was a noticeable increase in both, suggesting a growing participation in the global economy. However, the global financial crisis around 2008 caused significant volatility, with FDI outflows experiencing negative values, as

investments were repatriated. In the subsequent decade (2011-2020), FDI inflows remained modest, while outflows were mixed, often fluctuating with negative values, underscoring the impact of global uncertainties and domestic policy changes on investor sentiment. Overall, this period highlights a gradual integration into global capital markets, marked by fluctuations due to economic events and policy shifts, underscoring the complex interplay between domestic and international factors in shaping FDI trends.

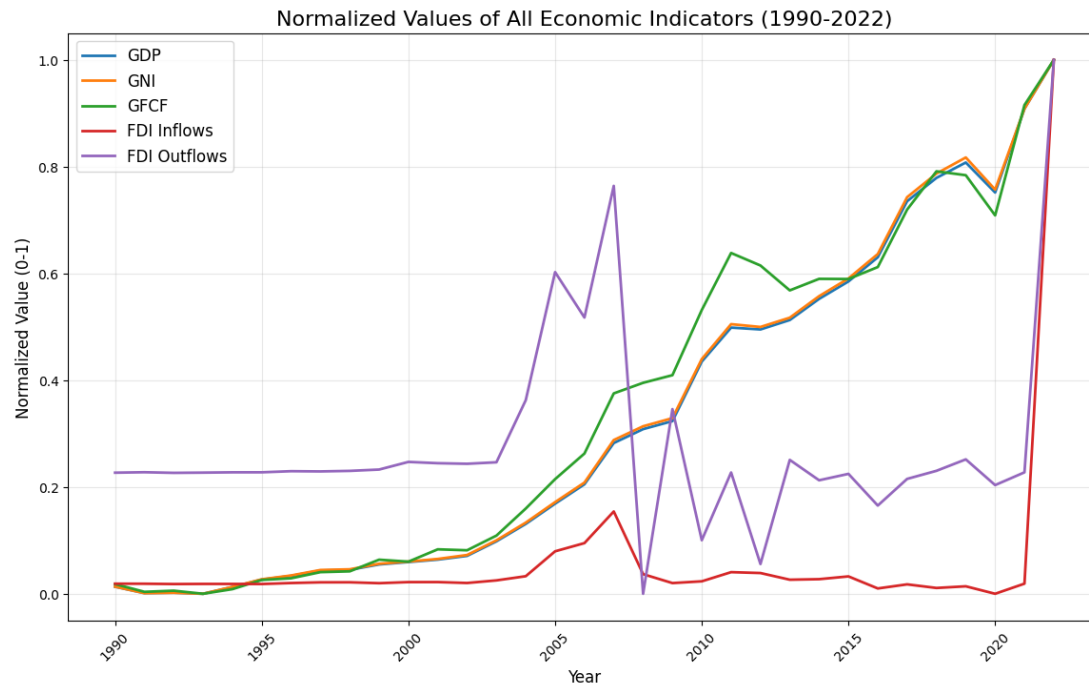


Figure 4 Normalized Values of All Economic Indicators (1990-2022)

Interpretation:

1. Early Stages (1990-2000):

Stable but Moderate Growth: GDP, GNI, and GFCF show steady but moderate growth. FDI inflows and outflows are minimal, indicating limited integration with global capital markets.

2. Globalization and Expansion (2000-2010):

Accelerated Economic Activity: GDP and GNI experience rapid growth. GFCF also sees significant increases, driven by domestic and foreign investments. FDI inflows rise, indicating increased attractiveness to foreign investors.

3. Economic Shocks and Resilience (2010-2020):

Moderate Growth with Challenges: Growth moderates, and economic shocks (e.g., global financial crisis, COVID-19) impact GDP, GNI, and GFCF. FDI inflows show some volatility, reflecting global economic uncertainties.

4. Recovery and New Dynamics (2020-2022):

Strong Rebound: All indicators show a strong recovery. The massive surge in FDI inflows and outflows suggests a significant shift in the economy's global engagement, driven by policy changes, strategic investments, or exceptional economic circumstances.

4.2. Summary Statistics

Table.1 Summary Statistics

	GFCF (USD)	GDP (USD)	GNI (USD)	FDI (OUT)	FDI (IN)
Mean	409698.0922	1311589.889	1296273.267	1000.433862	2060.801806
Standard Error	54456.09764	173646.1024	171009.9066	622.220085	1498.914264
Median	326638.8699	939066.4174	931731.1284	54.796395	148.966988
Standard Deviation	312826.4644	997520.9133	982377.1216	3574.382258	8610.606893
Sample Variance	97860396799	995047972526	965064809122	12776208.53	74142551.06
Kurtosis	-1.23547834	-0.9291064593	-0.9624374837	6.751772268	31.01538754
Skewness	0.4312308381	0.6512022811	0.6378012952	2.382269944	5.506296699
Range	984644.9045	3178267.631	3112922.303	18796.04114	50282.43854
Minimum	67991.26663	287273.8158	283312.2888	-4252.938387	-927.82659
Maximum	1052636.171	3465541.447	3396234.592	14543.10275	49354.61195
Count	33	33	33	33	33

Interpretation:

1. Mean (Average):

On average, India received \$2.06 billion in FDI annually, while its GDP averaged around \$13.12 trillion. Although FDI is only a fraction of the economy, it can be a significant factor influencing GDP growth when channeled effectively.

2. Standard Deviation:

The standard deviation of data provides insight into its stability over time by measuring how much results depart from the mean. In this analysis, the high standard deviation for FDI indicates significant fluctuations in foreign investment inflows, pointing to a level of instability and a possible dependence on external economic factors, global investor sentiment, or policy changes. In contrast, GDP, although much larger in scale, exhibits relatively lower variability, suggesting a steadier and more consistent growth trend. This implies that while FDI may experience year-to-year volatility, India's overall economic growth, as reflected in GDP, has maintained a more stable upward trajectory driven by a broader set of internal economic activities.

3. Median:

The fact that the median FDI is much lower than the average tells us that in most years, India received relatively modest amounts of foreign investment. However, there were a few standout years when FDI shot up significantly, pulling the average higher. This shows that FDI inflows haven't been steady and were influenced by specific high-impact years, possibly due to favorable policies or global investor interest. On the other hand, the GDP median being lower than the mean suggests that India's economy has grown gradually over time, with some particularly strong years giving a boost to the overall average. While FDI shows a more uneven journey, GDP reflects a more stable and consistent path of growth.

4. Sample Variance:

Variance reflects data spread. A high variance in FDI shows huge year-to-year fluctuations. GDP's large variance is due to the scale, but its coefficient of variation would be smaller—indicating more predictable growth.

5. Kurtosis:

The extremely high kurtosis value for FDI indicates a leptokurtic distribution, meaning the data has sharp peaks and heavy tails. In simple terms, this suggests that while most years had relatively average FDI inflows, there were a few years with exceptionally high inflows that stand out as outliers—possibly driven by significant policy shifts or economic reforms like the 1991 LPG reforms or initiatives such as Make in India. In contrast, GDP shows a negative kurtosis, pointing to a platykurtic distribution, which is flatter and more uniform. This reflects a more stable and

consistent economic growth pattern, less affected by extreme fluctuations. Overall, this highlights how FDI tends to be more erratic and influenced by external or sudden internal changes, whereas GDP growth follows a more structured and steady path over time.

6. Skewness:

FDI's skewness being greater than 5 indicates a highly right-skewed distribution, meaning that in most years, India received relatively low levels of foreign investment, with only a few years experiencing exceptionally high inflows. These occasional spikes create an uneven pattern in the data, reflecting how FDI is often influenced by specific events or favorable policy environments. On the other hand, GDP shows a moderate right skew, which is typical for developing economies undergoing steady growth. This suggests that while GDP has generally increased over time, the growth has been more balanced and consistent. The key takeaway here is that FDI inflows have been quite unequal and concentrated in certain periods, whereas GDP reflects a more gradual and sustained upward momentum.

7. Range, Minimum and Maximum:

The wide range in FDI, spanning from a negative value—possibly due to disinvestment or capital repatriation—to over \$49 billion in a single year, highlights the significant fluctuations in foreign investment over time. This level of variability suggests that FDI is highly sensitive to external factors and policy environments, making it an unstable contributor to long-term growth unless supported by consistent and investor-friendly policies. In contrast, the broad range in GDP reflects substantial economic expansion over the years, driven by factors like population growth, increased productivity, inflation, and structural reforms. While FDI shows an uneven pattern, GDP's steady rise reinforces the narrative of India's ongoing and resilient growth journey.

4.3 Correlation Coefficient

Table.2 Correlation Coefficient

	FDI (USD)	GDP (USD)
FDI (USD)	1	
GDP (USD)	0.366937	1

Interpretation:

This is the GDP-FDI Pearson correlation coefficient. The correlation study shows that FDI and GDP in USD have a Pearson correlation value of 0.3669. This implies that there is a positive but relatively weak linear relationship between the two variables. In other words, there is a modest association between an increase in GDP and an increase in foreign direct investment. This suggests that while foreign direct investment (FDI) contributes to India's economic growth, it is neither the primary driver nor the sole one. Other elements that probably have a big impact on GDP growth include exports, consumption, government expenditure, domestic investment, and policy changes. The weak-to-moderate correlation implies that FDI alone cannot fully explain changes in GDP, and further analysis may be needed to explore the conditions under which FDI has a stronger impact, such as sector-specific inflows, policy environment, or the nature of investments (greenfield vs. brownfield). Nonetheless, the positive direction of the correlation supports the idea that encouraging FDI can have beneficial effects on economic development.

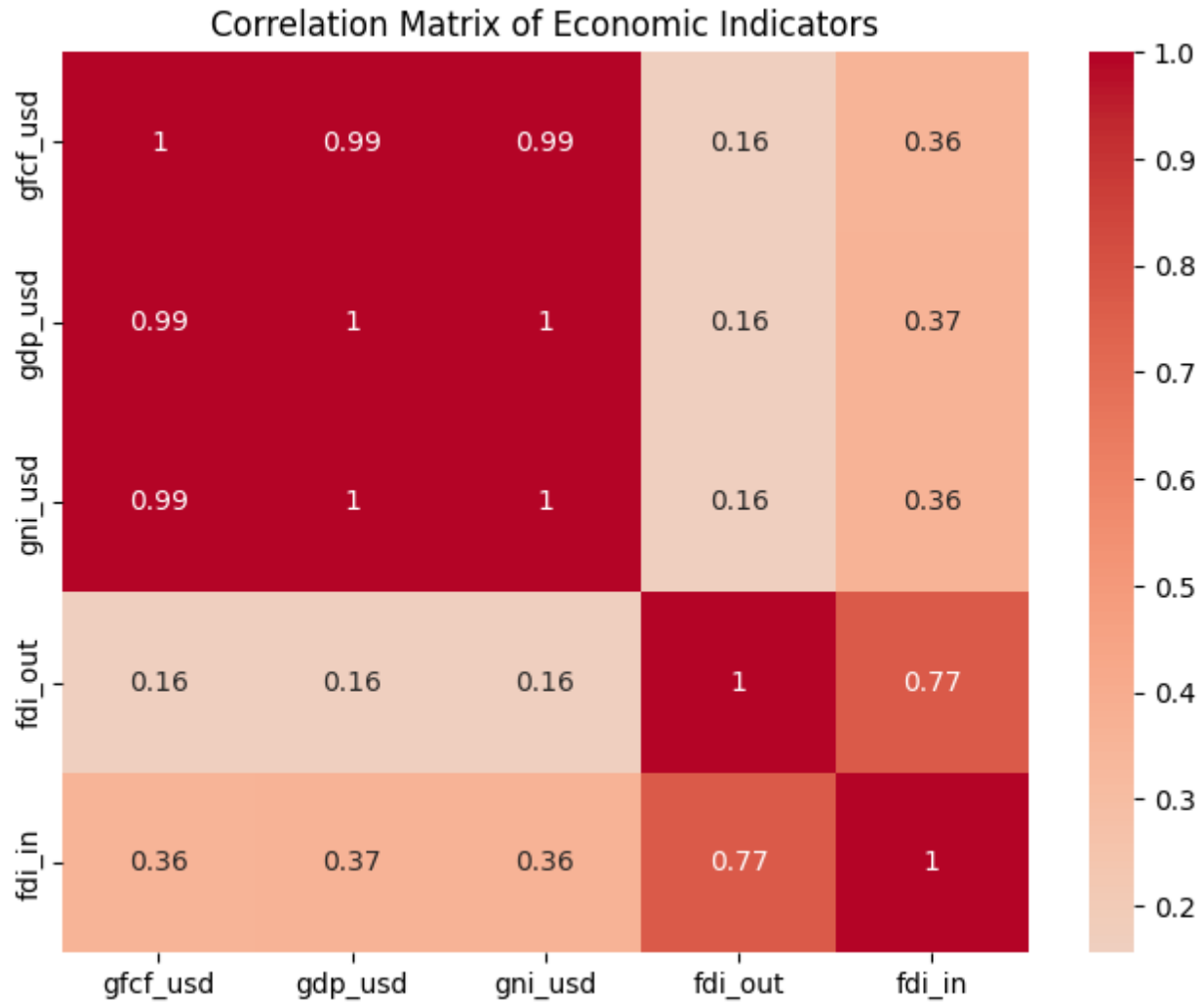


Figure 5 Correlation Matrix

Interpretation:

The strong correlation observed between `gfcf_usd`, `gdp_usd`, and `gni_usd` ranging from 0.99 to 1.00 indicates that these three economic indicators tend to grow or shrink together over time. Given that Gross Fixed Capital Formation (GFCF), which represents investment in tangible assets like infrastructure and equipment, is a significant component of GDP, this close association makes sense and is to be expected. Net income from overseas is included in gross national income (GNI), which frequently exhibits similar trends to GDP. Therefore, when GDP increases, it is often accompanied by a rise in both GFCF and GNI, highlighting the interconnected nature of investment, output, and income within an economy. This strong internal consistency suggests that

domestic economic growth in the dataset is being driven primarily by investment and income generated within the country.

The moderate correlation of 0.77 between `fdi_in` (Foreign Direct Investment inflows) and `fdi_out` (Foreign Direct Investment outflows) suggests a significant relationship between the two when outward FDI increases, inward FDI tends to rise as well. This trend can be a sign of an international investment climate in which a nation that is actively investing overseas is likewise seen as a desirable location for foreign investment. Such a scenario often reflects economic liberalization, strong bilateral trade relationships, or policies that facilitate cross-border capital flows. It may also signal that the domestic economy is integrated into global markets, encouraging both domestic firms to expand internationally and foreign firms to enter the local market.

The correlation between FDI and GDP is relatively weak, with `fdi_out` and `gdp_usd` showing a correlation of 0.16 and `fdi_in` and `gdp_usd` at 0.37. These values indicate that changes in foreign direct investment whether inflows or outflows do not strongly explain variations in GDP. While inward FDI (`fdi_in`) exhibits a slightly stronger association with GDP than outward FDI (`fdi_out`), the overall relationship remains limited. This implies that while FDI may support economic expansion, other variables like domestic consumption, public expenditure, and trade dynamics most likely have a greater influence on GDP swings throughout the studied time frame.

4.3 Regression

FDI vs GDP

Table.3 Regression of FDI vs GDP

Regression Statistics								
Multiple R	0.366937							
R Square	0.134643							
Adjusted R Square	0.106728							
Standard Error	942787.7							
Observations	33							

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-2093.528042	2363.273609	0.8858593582	0.3825137814	6913.456345	2726.40026	6913.456345	2726.40026
X Variable 1	0.00316740025	0.001442210571	2.196211904	0.03568388642	0.0002259921714	0.006108807878	0.0002259921714	0.006108807878

The regression equation is:

$$\text{GDP_USD} = -2093.53 + 0.0032 \times \text{FDI_IN}$$

Where:

GDP_USD is the dependent variable (Y)

FDI_IN is the independent variable (X)

This equation indicates that for each additional unit of foreign direct investment inflow (FDI_IN), GDP_USD is expected to increase by approximately 0.0032 units, with a starting point (intercept) of -2093.53 when FDI_IN is zero.

The model's R-squared value of 0.135 indicates that FDI_IN explains around 13.5% of the variation in GDP_USD. The p-value of 0.036 (less than 0.05) indicates that this relationship is statistically significant at the 5% significance level.

In the dataset under investigation, there is a slightly positive association between GDP and FDI, per the regression output. The Multiple R value of 0.3669, which shows a minor correlation between the two variables, suggests that GDP tends to increase in tandem with FDI, but not much. The R Square value of 0.1346 further supports this, indicating that variations in FDI only explain 13.46% of the variation in GDP. This suggests that the majority of fluctuations in GDP, or around 86.54%, are caused by other variables not taken into consideration by this model. After correction, the Adjusted R Square, which takes into consideration the number of variables in the model, is somewhat lower at 0.1067, suggesting a little decrease in explanatory power.. The standard error of 942,787.7 is quite high, suggesting that the predictions made by the regression model deviate significantly from the actual GDP values, further pointing to the model's limited accuracy. Based on 33 observations, this analysis concludes that while FDI has a positive association with GDP, it is not a strong standalone predictor of economic growth, and other macroeconomic variables likely play a more dominant role.

Table.4Regression of GDP vs FDI Inflow and outflow

Regression of <i>gdp_usd</i> vs <i>fdi_in</i> & <i>fdi_out</i>	
<i>Regression Statistics</i>	
Multiple R	0.4147524737
R Square	0.1720196144
Adjusted R Square	0.1168209221
Standard Error	937446.2923
Observations	33

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1252911.09 9	169768.2 737	7.38012 5103	0.000000031 94575623	906198.0 293	1599624. 168	906198.0 293	1599624. 168
X Variable 1	69.4083032 6	30.07819 34	2.30759 5484	0.028100187 75	7.980437 348	130.8361 692	7.980437 348	130.8361 692
X Variable 2	- 84.3213820 7	- 72.45769 497	- 1.16373 2604	- 0.253704703 5	- 232.2997 368	- 63.65697 262	- 232.2997 368	- 63.65697 262

The regression equation is:

$$\text{GDP_USD} = 1,252,911.10 + 69.41 \times \text{FDI_IN} - 84.32 \times \text{FDI_OUT}$$

Where:

GDP_USD is the dependent variable

FDI_IN is the first independent variable (X Variable 1)

FDI_OUT is the second independent variable (X Variable 2)

According to this formula, GDP_USD is predicted to rise by around 69.41 units for every extra unit of foreign direct investment inflow (FDI_IN), while keeping FDI_OUT unchanged. GDP_USD is predicted to fall by around 84.32 units for every extra unit of foreign direct investment outflow (FDI_OUT), while keeping FDI_IN unchanged.

The starting point (intercept) is 1,252,911.10 when both FDI_IN and FDI_OUT are zero

The model appears to explain 17.2% of the variation in GDP_USD, with an R-squared value of 0.172. However, the whole model's p-value (Significance F) is 0.059, which is just over the conventional 0.05 significance level. With a p-value of 0.028, the FDI_IN variable is statistically significant, but the FDI_OUT variable is not (p-value = 0.254).

A comparatively poor explanatory power of the foreign direct investment variables (fdi_in and fdi_out) on GDP is revealed by the regression analysis performed to investigate the link between GDP (gdp_usd) and these independent variables. A somewhat positive linear connection between the actual and forecast GDP figures is indicated by the Multiple R value of 0.4147. But according

to the R Square value of 0.1720, FDI inflows and outflows together only account for 17.2% of the volatility in GDP; other variables account for the remaining 82.8%.

Furthermore, the Adjusted R Square, which accounts for the number of predictors, is even lower at 11.68%, implying limited improvement in model accuracy after including both variables. The standard error of approximately 937,446 signifies a high average deviation of actual GDP values from the predicted values, further supporting the model's low predictive accuracy. Overall, the results show that, despite a moderate correlation, FDI inflows and outflows by themselves do not substantially affect GDP in the observed data. Instead, consumption, government spending, trade, gross capital formation, and other macroeconomic indicators probably have a greater impact on economic growth.

Table.5 Regression of GNI vs FDI Inflow

Regression of gni_usd vs fdi_in								
<i>Regression Statistics</i>								
Multiple R	0.3633692403							
R Square	0.1320372048							
Adjusted R Square	0.1040384049							
Standard Error	929871.4996							
Observations	33							
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1210839.636	166582.108	7.268725621	0.00000003537115684	871093.1871	1550586.085	871093.1871	1550586.085
X Variable 1	41.45650043	19.09036294	2.171593099	0.03765782974	2.521448512	80.39155235	2.521448512	80.39155235

The regression equation is:

$$\text{GNI_USD} = 1,210,839.64 + 41.46 \times \text{FDI_IN}$$

Where:

GNI_USD is the dependent variable (Y)

FDI_IN is the independent variable (X)

According to this equation, the Gross National Income in USD (GNI_USD) will increase by about 41.46 units for each additional unit of foreign direct investment inflow (FDI_IN), with a starting point (intercept) of 1,210,839.64 when FDI_IN is zero. The R-squared value of 0.132 indicates that FDI_IN is responsible for about 13.2% of the variance in GNI_USD. The p-value of 0.038 (less than 0.05) indicates that this relationship is statistically significant at the 5% significance level. With correlation coefficient (Multiple R) of about 0.36, the regression analysis between Gross National Income (GNI) in USD and Foreign Direct Investment (FDI) Inflow shows a weak positive connection. According to the R Square value of 0.132, changes in FDI inflows account for just 13.2% of the variance in GNI, with other factors not included by this model accounting for the other 86.8%. This explanatory power is somewhat reduced to 10.4% by the Adjusted R Square, which accounts for number of variables used, confirming minimal impact of FDI inflows on GNI. Additionally, the relatively high standard error suggests considerable variability in the data. Overall, the findings suggest that while FDI Inflows have a minor positive association with GNI, they are not strong standalone predictors of national income, and a more comprehensive model incorporating other economic variables may provide a clearer picture.

Table.6 Regression of GNI vs FDI Inflow and Outflow

Regression of *gni_usd* vs *fdi_in* & *fdi_out*

<i>Regression Statistics</i>	
Multiple R	0.4110484828
R Square	0.1689608552
Adjusted R Square	0.1135582455
Standard Error	924918.2356
Observations	33

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1239150.774	167499.4861	7.397937762	0.00000003046525728	897071.1866	1581230.36	897071.1866	1581230.36
X Variable 1	67.78640675	29.67622764	2.284198908	0.02960639473	7.179464439	128.3933491	7.179464439	128.3933491
X Variable 2	-82.53604653	71.48936845	-1.15452197	0.2574003359	-228.5368146	63.46472157	-228.5368146	63.46472157

The regression equation is:

$$\text{GNI_USD} = 1,239,150.77 + 67.79 \times \text{FDI_IN} - 82.54 \times \text{FDI_OUT}$$

Where:

GNI_USD is the dependent variable (Gross National Income in USD)

FDI_IN is the first independent variable (X Variable 1)

FDI_OUT is the second independent variable (X Variable 2)

This equation indicates that for each additional unit of foreign direct investment inflow (FDI_IN), GNI_USD is expected to increase by approximately 67.79 units, holding FDI_OUT constant. For each additional unit of foreign direct investment outflow (FDI_OUT), GNI_USD is expected to decrease by approximately 82.54 units, holding FDI_IN constant. The starting point (intercept) is 1,239,150.77 when both FDI_IN and FDI_OUT are zero.

With R-squared value of 0.169, the model appears to account for 16.9% of the variation in GNI_USD. The p-value (Significance F) for the entire model, however, is 0.062, which is somewhat higher than the standard 0.05 significance limit. The FDI_OUT variable is not statistically significant (p-value = 0.257), however the FDI_IN variable is (p-value = 0.030).

With a Multiple R value of 0.4110, the regression analysis of GNI (in USD) versus FDI inflows and outflows shows a somewhat favorable connection. The R Square value of 0.1690 suggests that the combined impact of FDI inflows and outflows may be responsible for 16.9% of the variation in GNI. This is an improvement above the model that only utilized FDI inflows as a predictor. A somewhat better model fit is indicated by the Adjusted R Square of 0.1136 after controlling for the number of predictors. Furthermore, a little improvement in prediction accuracy is shown by the standard error, which is around 924,918. Overall, while incorporating both FDI components slightly enhances the model's explanatory power, the relatively low R Square indicates that GNI is still largely influenced by other macroeconomic factors such as domestic investment, trade, labor productivity, and consumption, which should be considered in future models for a more comprehensive understanding.

Table.7 Regression of GFCF vs FDI Inflow

Regression of *gfcf_usd* vs *fdi_in*

<i>Regression Statistics</i>								
Multiple R		0.3604510254						
R Square		0.1299249417						
Adjusted R Square		0.1018580043						
Standard Error		296466.747						
Observations		33						

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	382711.241	53110.62408	7.205926264	0.00000004200615165	274391.409	491031.0729	274391.409	491031.0729
X Variable 1	13.09531619	6.086494536	2.151536671	0.03933737431	0.6818287433	25.50880364	0.6818287433	25.50880364

The regression equation is:

$$\text{GFCF_USD} = 382,711.24 + 13.10 \times \text{FDI_IN}$$

Where:

GFCF_USD is the dependent variable (Y) representing Gross Fixed Capital Formation in USD

FDI_IN is the independent variable (X) representing Foreign Direct Investment inflow

This equation indicates that for each additional unit of foreign direct investment inflow (FDI_IN), the Gross Fixed Capital Formation in USD (GFCF_USD) is expected to increase by approximately 13.10 units, with a starting point (intercept) of 382,711.24 when FDI_IN is zero.

The model's R-squared value of 0.130 indicates that FDI_IN is responsible for around 13.0% of the variation in GFCF_USD. The p-value of 0.039 (less than 0.05) indicates that this relationship is statistically significant at the 5% significance level.

According to the regression analysis, there is a little positive association (Multiple R of 0.36) between foreign direct investment inflow (*fdi_in*) and gross fixed capital formation in USD (*gfcf_usd*). This suggests that there is a minor tendency for gross capital creation to rise in tandem with FDI, although the link is weak. Only over 13% of the variability in *gfcf_usd* can be

statistically explained by variations in fdi_in, according to the R-squared value of roughly 0.13. Other factors probably account for the remaining 87% of the difference. Furthermore, the standard error of the regression, at roughly 296,466.75, suggests a considerable degree of scatter around the regression line, indicating that predictions of gfcf_usd based solely on fdi_in may have substantial error. This analysis is based on 33 observations.

Table.8 Regression of GFCF vs FDI Inflow and outflow

Regression of gfcf_usd vs fdi_in & fdi_out

<i>Regression Statistics</i>								
Multiple R		0.4045259013						
R Square		0.1636412048						
Adjusted R Square		0.1078839518						
Standard Error		295470.5239						
Observations		33						

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	391326.135	53508.68	7.31331	0.000000038	282046.8	500605.4	282046.8	500605.4
X Variable 1	21.1073350	9.480243	2.22645	0.033640428	1.746093	40.46857	1.746093	40.46857
X Variable 2	-25.1151809	22.83769	-1.09972	0.280198900	-71.75597	21.52561	-71.75597	21.52561

The regression equation is:

$$\text{GFCF_USD} = 391,326.14 + 21.11 \times \text{FDI_IN} - 25.12 \times \text{FDI_OUT}$$

Where:

GFCF_USD is the dependent variable (Gross Fixed Capital Formation in USD)

FDI_IN is the first independent variable (X Variable 1)

FDI_OUT is the second independent variable (X Variable 2)

This equation indicates that:

For each additional unit of foreign direct investment inflow (FDI_IN), GFCF_USD is expected to increase by approximately 21.11 units, holding FDI_OUT constant

For each additional unit of foreign direct investment outflow (FDI_OUT), GFCF_USD is expected to decrease by approximately 25.12 units, holding FDI_IN constant

The starting point (intercept) is 391,326.14 when both FDI_IN and FDI_OUT are zero

The model appears to explain around 16.4% of the variation in GFCF_USD, with R-squared value of 0.164. The p-value (Significance F) for the entire model, however, is 0.069, which is somewhat higher than the standard 0.05 significance limit. The FDI_OUT variable is not statistically significant (p-value = 0.280), however the FDI_IN variable is (p-value = 0.034).

Multiple R (0.4045): The correlation coefficient, indicates the strength and direction of the linear relationship between the dependent variable (gfcf_usd) and the collection of independent variables (fdi_in and fdi_out) taken together. A score of 0.4045 indicates a moderately positive connection. This suggests that there is a weak association between changes in incoming and outbound foreign direct investment and changes in gross fixed capital production.

R Square (0.1636): The coefficient of determination is this. It shows the proportion of the variance in the dependent variable (gfc_usd) that can be explained by the independent variables (fdi_in and fdi_out). About 16.36% of the variance in gross fixed capital creation can be explained by the changes in inbound and outward foreign direct investment, according to an R-squared of 0.1636. This implies that a significant portion (about 83.64%) of the variation in gross fixed capital production can be explained by other factors not covered by this model.

Adjusted R-squared is a modified R-squared that accounts for the number of predictors in the model (0.1079). It is particularly useful for comparing models with different numbers of independent variables. In this case, the adjusted R-squared (0.1079) is little lower than the R-squared (0.1636). This decline indicates that, after accounting for the number of variables (in this case, two), the model explains approximately 10.79% of the variation in gross fixed capital production. In comparison to the increase in the number of predictors, the addition of the independent variables may not be providing a significant level of explanatory power, according to the difference between R-squared and modified R-squared.

Standard Error (295470.5239): The standard deviation of the residuals, or the variations between the values predicted by the regression model and the actual values, is measured by this statistic. A standard error of 295470.5239 indicates the average size of the prediction errors. In the context of gross fixed capital formation (which is likely measured in a currency like USD), this is a fairly large error, suggesting that the model's predictions can deviate considerably from the actual values.

According to the regression model, gross fixed capital creation and both inbound and outward foreign direct investment have a somewhat favorable connection. However, only around 16 percent of the variance in gross fixed capital creation can be explained by these two FDI factors. The adjusted R-squared further indicates that after accounting for the two predictor variables, the explanatory power is even lower (around 11%). The standard error of the regression is quite large, implying that the model's predictions might not be very precise. Finally, the analysis is based on 33 data points.

CHAPTER 5: RECOMENDATION

The regression study of GDP and GNI vs FDI inflows and outflows shows that while there is a positive correlation between FDI and economic growth, it is not very strong. With R-squared values ranging from around 0.13 to 0.17 from model to model, it is clear that FDI only accounts for a portion of the volatility in India's GDP and GNI. These findings imply that, despite its advantages, FDI is not the only factor influencing economic performance. In light of this finding, a multifaceted strategy is needed to optimize the financial gains from FDI. The following comprehensive recommendations are proposed for policymakers, industry stakeholders, and researchers:

1. Adopt a Holistic Economic Growth Strategy

It is crucial that the government does not rely exclusively on foreign investment as a growth engine because, according to statistical findings, FDI only moderately contributes to economic growth. Rather, it ought to take a multifaceted approach to development that incorporates skill development, improved educational systems, innovation-driven industries, strong infrastructure, and domestic investment. Strengthening these fundamental areas will build a resilient economic base that can absorb and amplify the benefits of FDI.

2. Enhance the Quality and Productivity of FDI

The government ought to enact laws that give equal weight to the amount and quality of foreign direct investment. This entails directing FDI toward fields like advanced manufacturing, renewable energy, high-tech industries, and infrastructure that present opportunities for long-term growth. Economic growth can be more sustainably impacted by rewarding value-added investments that foster innovation, employment creation, and technology transfers.

3. Streamline Regulatory and Administrative Processes

Many prospective foreign investors are put off by India's ongoing bureaucratic and regulatory obstacles. Reforms should concentrate on cutting red tape, increasing transparency, and guaranteeing quicker approval and clearance procedures in order to increase the efficacy of FDI. Increased ease of doing business will boost investor

confidence and long-term engagement in addition to drawing in more foreign direct investment.

4. Leverage Outward FDI Strategically

As Indian businesses make more and more foreign investments, it is crucial that these outflows be directed by strategic factors that advance national interests. India's global competitiveness can be increased by enticing businesses to invest in global value chains, purchase essential technologies, or open up shop in emerging markets. Indian businesses can make more successful foreign investments with government assistance in the form of advisory services, risk mitigation strategies, and bilateral investment treaties.

5. Integrate FDI with National Development Goals

FDI should be combined with national development objectives like lowering regional disparities, encouraging sustainable development, and enhancing rural infrastructure in order to optimize its socioeconomic advantages. More equitable and balanced economic growth can be achieved by directing foreign direct investment (FDI) into developing nations or underdeveloped areas with specific incentives.

6. Strengthen the FDI Monitoring and Evaluation Framework

Understanding the true impact of FDI requires accurate and detailed data. Better policymaking will be supported by strengthening the statistical infrastructure to include data collection and analysis at the sector, region, and purpose levels. Based on this information, regular reviews of FDI policies will aid in finding weaknesses and enhancing their efficacy.

7. Foster Stronger Linkages Between FDI and the Domestic Economy

Often, foreign investments remain isolated from the domestic economic framework. Policies should aim to create stronger linkages between foreign and local firms through joint ventures, technology transfer requirements, and local sourcing mandates. These connections can enhance the skill base, promote industrial upgrading, and boost local entrepreneurship.

8. Support Further Academic Research and Sector-Specific Analysis

The relatively low R-squared values indicate that FDI is not the only factor influencing economic growth. Academic and policy researchers should explore other potential explanatory variables such as exports, government expenditure, consumption patterns, domestic private investment, and institutional quality. Moreover, sector-specific regression models should be conducted to identify which industries or segments are most responsive to FDI. This will allow the formulation of more targeted investment promotion strategies.

9. Ensure Policy Stability and Investor Protection

Stability in economic policy is crucial to sustaining investor confidence. The government should ensure a predictable legal and regulatory environment, protect investor rights, and provide clear dispute resolution mechanisms. A stable and transparent policy framework encourages not just entry but also long-term retention of foreign investment.

10. Promote Sustainable and Green Investments

As India balances growth with environmental sustainability, FDI should be steered toward eco-friendly sectors and sustainable practices. Encouraging green FDI—investment that contributes to environmental protection and sustainable development—will help India meet its international climate obligations while simultaneously creating new growth opportunities.

CHAPTER 6: CONCLUSION

Analyzing the impact of foreign direct investment (FDI) on India's economic growth was the aim of this study. The study specifically used the GDP and GNI, two important macroeconomic metrics. The study employed regression analysis to investigate the relationship between these metrics and FDI inflows and outflows across time. The results show that although economic growth and foreign direct investment (FDI) are positively correlated, this link is not very strong in terms of statistical significance or intensity.

According to the regression models' R-squared values, FDI inflows and outflows together only account for a small portion of the overall volatility in GDP and GNI, about 13% to 17%. This implies that while foreign direct investment has a role in economic development, it is not the primary factor. The effect of additional macroeconomic factors that were not included in this model is also shown by the modest Adjusted R-squared values. This is in line with the economic realities of a diversified and intricate growth process, especially in an economy as vast and varied as India's.

The analysis further shows that incorporating both FDI inflows and outflows provides a slightly improved understanding of their impact on GNI compared to GDP alone. However, this improvement is marginal and implies that FDI alone cannot drive sustainable growth unless it is part of a larger ecosystem that supports productive investment, innovation, and institutional efficiency. The standard error values in the regression output also reinforce this, reflecting prediction uncertainties that must be reduced by integrating more explanatory variables in future models.

Furthermore, the Indian economy has a significant impact on how effective FDI is. Although India's sizable market, demographic dividend, and progressive policy liberalization make it a desirable location for foreign investment, enduring structural problems like regulatory bottlenecks, infrastructural constraints, and regional disparities may prevent FDI from reaching its full potential. Similar to this, external FDI has to be deliberately supported to facilitate the acquisition of knowledge and technology, even though its scope is expanding. However, its wider economic effects are still largely unknown.

This research highlights that FDI should not be seen as a panacea for economic growth but rather as a catalyst that needs to be integrated within a comprehensive and coherent development strategy. For FDI to significantly impact GDP and GNI, it must complement domestic efforts in strengthening infrastructure, improving governance, enhancing workforce productivity, and promoting innovation and entrepreneurship. To promote inclusive growth, the Indian government must also make sure that the advantages of FDI are dispersed fairly among industries and geographical areas.

Additionally, the need for additional study is highlighted by FDI's modest explanatory power on economic development. To establish a more thorough and sophisticated knowledge of growth drivers, future research should take into account additional factors including exports, trade openness, inflation rates, institutional quality, financial development, and human capital. Analysis of FDI by sector or area may also shed light on how investment acts differently in various states and sectors.

In conclusion, while FDI plays an important role in India's development journey, its impact on GDP and GNI—though positive—is limited without the support of a strong domestic economic framework. To unlock the full potential of FDI, India must adopt policies that are strategic, inclusive, data-driven, and long-term oriented. Only through such an integrated approach in the Indian context, FDI has emerged as a significant force behind innovation, long-term economic growth, and global competitiveness.

REFERENCES

- P. Sudhakar, and Dr. R. Velmurugan, Impact of foreign direct investment in Indian economic growth, E3S Web of Conferences 449, 02003 (2023).
- Abdulhamid Sukar, The Effects of Foreign Direct Investment on Economic Growth: The Case of Sub-Sahara Africa, Southwestern Economic Review, 61-73 (2007).
- Bhavya Malhotra, Global Journal of Business Management and Information Technology, 4 (1), 17-23 (2014).
- Khamis Hareb et al. Investment Management and Financial Innovations, 12 (3), 132- 141 (2015).
- Naveen Kumar Sharma et al., Journal of Emerging Technologies and Innovative Research, 6 (6), 36-42 (2019).
- Elena Pelinescu and Magdalena Radulescu, Romanian Journal of Economic Forecasting, 4, 153-169 (2009).
- Saswata Chaudhury et al. Review of Market Integration, 12 (1), 51-69 (2020).
- Susic et al., Foreign direct investments and their impact on the economic development of Bosnia and Herzegovina, IOP Conference Series: Material Science and Engineering, 1-16 (2019).
- Lina Bakawdah and Tahar Tayachi, Palarch's Journal of Archaeology of Egypt, 18 (13), 493-498 (2021).

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