

## AN EMPIRICAL ANALYSIS OF THE EFFECTS OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH IN CHINA AND INDIA

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### ABSTRACT

*Foreign Direct Investment (FDI) is money invested in the business of another country by companies or individuals from one country. Foreign direct investment has a positive impact on the growth of emerging economies. Foreign Direct Investment (FDI) inflows boost a country's worldwide commerce network while also providing financial support, and they are frequently viewed as essential accelerators for economic growth in the host countries. FDI stimulates domestic investment, increases human capital formation, and facilitates technology transfer in host nations, all of which contribute to economic growth. The purpose of this article is to examine the influence of FDI on India's and China's economic growth. Using regression analysis, it was discovered that whereas FDI has a major impact on the growth of the Chinese economy, it has a little or inconsequential impact on the development of the Indian economy for the study period of 1991 to 2020. In comparison to China, India's average FDI as a proportion of GDP is quite low. This is the explanation behind FDI's limited contribution to the Indian economy's growth.*

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**Keywords:** FDI, GDP, Economic Growth, Economy, Domestic Investment, Liberalization Process.

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### Introduction

China and India have had sustained high rates of economic growth in the last two decades as a result of liberalised internal economic policies, preferential treatment of foreign investment, and trade. It has become a major driver in economic development and transition. FDI is becoming increasingly important to emerging countries' economies. FDI inflows help most emerging and established countries grow their economies by increasing their share of the global market. Because FDI has a greater impact on the economy, most foreigners are investing their excess funds in other nations in order to increase their profits with fewer labour and lower beginning costs. The investors were able to acquire these inflows by just meeting their fundamental conditions and adhering to their regulations. Countries can only employ FDI if they meet some of the major requirements, such as capital transfer, a source of cash for overseas operations, investment control, and a balance of payments flow. Even though FDI inflows to developing nations are relatively low (about 5%), they have a greater impact on the economy in terms of development plans through the introduction of new technology. This alteration will be occurred only in the vicinity of investment areas. The FDI inflows between India and China are examined in this study by comparing the two countries. This study also describes the many factors that India and China evaluate in order to increase FDI inflows in the global market, as well as the strategies that China employs, as most investors prefer China to India. Finally, it suggests various policies and measures that the Indian government should do in order to increase FDI inflows. FDI has demonstrated its value in not just increasing domestic savings for investment, but also in supplying additional technologies and managerial skills that are necessary for a developing country to achieve rapid economic growth. Because of the spirits of economic development through the rapid and efficient transfer of resources and adoption of best practices, FDI is a critical component of successful economic growth and development in poor countries.

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FDI has been an important aspect of the Chinese economy since the 1980s. It has had a significant impact on China's economic growth and export success. In an effort to attract more foreign investment, the People's Republic of China's Ministry of Commerce produced a draught foreign investment law. China's economy was one of the most autarkic in the world prior to 1978. Beijing hosted the first joint venture in China in 1980. China's FDI policies have advanced in lockstep with its economic development and institutional capabilities. In the liberalization process, a methodical and careful approach has been used. China's study is focused on luring export-oriented manufacturing FDI to chosen coastal cities in special economic zones and industrial parks.

#### **The Problem's Definition**

In this study, the researcher focuses on the world's two most populous countries: India and China, both of which have a long history. These two countries are known to be among the world's fastest developing economies, with abundant resources and favourable environmental circumstances. These two countries are upgrading their economic standards in terms of technology and infrastructure development. China, on the other hand, is thought to be more favourable in terms of luring FDI, and is almost ahead of India in this regard. However, it has been observed that in India, only FDI laws vary from place to place, depending on local government rules and regulations. All key RBI and Government of India rules and regulations apply, and the investing corporation must also ensure that environmental and ethical issues are not disrupted by foreign investors in local and urban locations across India. Similarly, China is one of the world's largest countries, with a diverse range of ethnicities and backgrounds within the country. As a result of the above framework, it is clear that the primary goal of this study will be to examine the impact of FDI on these countries.

#### **The Study's Objectives**

- The purpose of this study is to look at the rise and trend of foreign direct investment (FDI) as well as economic growth.
- To investigate the link between FDI and economic growth.
- To investigate the impact of foreign direct investment on economic growth.

#### **The Study's Objectives**

This study primarily focuses on Foreign Direct Investment (FDI), the role of FDI in India and China, and the comparison of these two nations' FDI flows. This study was chosen to learn more about the investments made by developing countries and their participation in international markets in order to affect global and political elements. This research is mostly relevant for anyone interested in learning more about the impact of foreign direct investment (FDI) in fast-growing countries such as India and China, where the two countries' environmental conditions differ. When examining FDI in both countries, it is easy to see that China is more interested in attracting FDI and is leading its economy in comparison to India. So, in order to fully analyse this topic, this study also focuses on the elements and policies that the Indian government should create in order to attract investors and improve the overall performance of the economy by increasing inflows as compared to China.

#### **The Study's Purpose**

In an era of globalization and liberalizations, emerging countries encourage foreign investment in their own countries in order to achieve long-term economic growth through high technology, international competence, and professional management, among other things. For their economic development, the fastest rising economies, such as India and China, are concentrating significant international and domestic investment. The study report focuses on the trend of FDI and its impact on these countries' economic growth.

#### **Research Methodology**

The current research is analytic and empirical in nature, and it focuses on the link between FDI and GDP.

#### **Statistics Gathering and Analysis**

The majority of the data used in this study is secondary. From 1991 through 2020, the data was gathered from the World Bank database and [globaleconomy.com](http://globaleconomy.com). For the aforementioned time period, India's and China's foreign direct investment are treated as independent variables, while their growth rates are treated as dependent factors. The data on foreign direct investment is expressed in billions of dollars. The association between Foreign Direct Investment and India and China's economic growth is captured using regression analysis. The Ordinary Least Square approach is commonly used to estimate the impact of foreign direct investment on India's and China's economic growth.

### Literature Review

For developing countries that often lack the technology or cash to support sustained economic growth and development, foreign direct investment is seen as a driver of economic growth and development. FDI is often regarded as one of the key drivers of globalizations, as it has consistently increased with strong growth rates prior to the global financial crisis. Because there is no conclusive proof and the literature is lacking, the manner in which FDI fosters economic growth and development in countries is debatable. Even though there is no empirical evidence to reflect the influence of FDI on countries, there are certain theoretical explanations from which the consequences of FDI on developed and developing countries can be simply analysed. Bora [1] claims that FDI flows are growing at a far quicker rate than international trade flows, which are growing at a faster rate than global GDP. According to Alfaro et al (2003), FDI provides significant benefits to host countries because many scholars and policymakers feel that it has a significant positive impact on the development of host countries. FDI not only serves as a source of valuable technology, but it also assists countries in creating links with local businesses, which helps the country's economy grow indirectly. Because of these factors, most emerging and developed countries provide incentives to encourage FDI into their economy. Depending on the institutional and industrial context, the environmental impact of foreign direct investment can be positive, negative, or neutral. By comparing data from foreign-owned versus domestically held enterprises, Gorg and Greenwood [2] come to the conclusion that the effect of FDI is negative. However, Lipsey [3] supports the good effects of favoring FDI flows, which reached a new high level between 1990 and 2000. Then, starting in 2001, investment growth stalled, and global FDI flows began to drop steadily and sharply in subsequent years.

**At et al. [4], Frenkel** made a comparison between the Indian and Chinese economies. It wasn't until the 1990s, when China's development began to shift, that foreign capital began to pour in. Except for the United States of America, China received more FDI in 1995 than any other country. Over 90% of investment resources in India need be upgraded in order for the Indian economy to advance faster, but this can only be done through local efforts.

**Agrawal and Khan [5]** investigated the impact of FDI on China and India's economic growth. According to this study, a 1% increase in FDI would result in a 0.07 percent boost in China's GDP and a 0.02 percent increase in India's GDP. FDI has a greater impact on China's economy than it does on India's.

In India and China, **Sharma and Kaur [6, 7]** looked examined the causal relationship between FDI and trade individually. There is considerable evidence of a one-way relationship between FDI and imports and FDI and exports. At the macroeconomic level, FDI in China might be characterised as efficiency chasing, which boosts trade volume. The results for Indian FDI, exports, and imports show that FDI creates imports (import technologies), which causes exports, which causes FDI, and exports induce FDI.

**Himachalpathy [8]** looked studied the entrance of foreign direct investment into India from 1991 onwards, as well as the impact of liberalizations, privatization, and globalizations on FDI. The study's findings show that the economies of India and China have slowed as a result of the global financial crisis and economic slump. The shift in India's economy from agriculture to services could attract global FDI inflows in the manufacturing sector, speeding up industrial development.

Foreign Direct Investment (FDI) has exploded in post-reform India, according to Chakraborty and Nunnenkamp [9]. Similarly, since India's opening to global markets, the composition and nature of FDI has shifted dramatically. It turns out that the effects of FDI on growth fluctuate depending on the sector. In the manufacturing sector, FDI stocks and output are mutually reinforcing. In the primary sector, however, there is no causal relationship. The disparities in the FDI-growth relationship show that FDI could do wonders in India if existing laws were loosened and more industries were opened up to FDI.

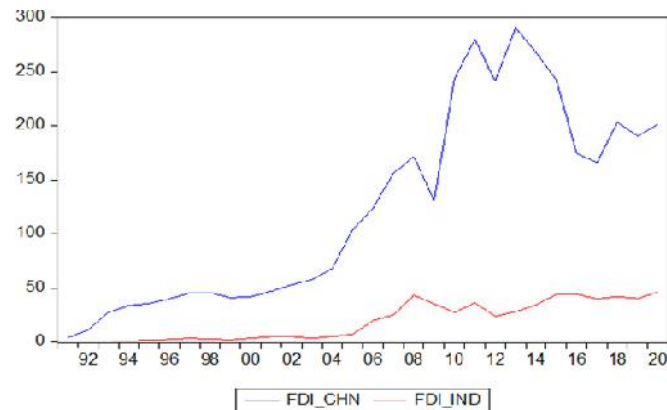
**Ray [10]** looked into the causal relationship between Foreign Direct Investment (FDI) and India's economic growth, as well as the impact of FDI on India's economy. Foreign Direct Investment (FDI) and GDP have a favorable association. This research also shown that FDI boosts economic growth. A sector-by-sector analysis of FDI inflow in India reveals that the service industry, which includes telecommunications, information technology, travel and tourism, and many others, has seen the most FDI investment. In terms of FDI, the service sector is followed by the manufacturing sector.

### Prototypical (Empirical)

The goal of this research is to determine the economic impact of foreign direct investment in India and China. This is a statistical analysis model in which annual data on FDI inflows are used as independent variables and GDP is used as a dependent variable for the years 1991 to 2020. For the aforementioned time, data was obtained from the World Bank database and globaleconomy.com. The influence of FDI on these countries' economic growth is assessed using regression analysis and least square approaches. From 1991 through 2020, Table 1 examines the growth and trajectory of FDI inflows into India and China. FDI inflows fluctuated significantly throughout the period. China's and India's FDI inflows were at their lowest in 1991 and at their highest in 2013 and 2016, respectively. For the aforementioned period, the average FDI flows in India and China were 15.73 and 114.67 billion dollars, respectively. Figure 1 shows that the volatility of FDI flows in China is much higher than in India.

**Table 1: FDI Inflows to India and China (in Billions of Dollars): Growth and Trends**

| Year | FDI India | FDI China |
|------|-----------|-----------|
| 1991 | 0.7       | 4.37      |
| 1992 | 0.28      | 11.16     |
| 1993 | 0.55      | 27.52     |
| 1994 | 0.97      | 33.79     |
| 1995 | 2.14      | 35.85     |
| 1996 | 2.43      | 40.18     |
| 1997 | 3.58      | 45.44     |
| 1998 | 2.68      | 45.64     |
| 1999 | 2.17      | 41.01     |
| 2000 | 3.58      | 42.10     |
| 2001 | 5.13      | 47.05     |
| 2002 | 5.21      | 53.07     |
| 2003 | 3.68      | 57.90     |
| 2004 | 5.43      | 68.12     |
| 2005 | 7.27      | 104.11    |
| 2006 | 20.03     | 124.08    |
| 2007 | 25.23     | 156.25    |
| 2008 | 43.41     | 171.53    |
| 2009 | 35.58     | 131.06    |
| 2010 | 27.40     | 243.7     |
| 2011 | 36.50     | 280.07    |
| 2012 | 24.00     | 241.21    |
| 2013 | 28.15     | 290.93    |
| 2014 | 34.58     | 268.10    |
| 2015 | 44.01     | 242.49    |
| 2016 | 44.46     | 174.75    |
| 2017 | 39.97     | 166.08    |
| 2018 | 42.12     | 203.49    |
| 2019 | 40.35     | 190.55    |
| 2020 | 40.50     | 201.54    |
| Mean | 15.73     | 114.67    |
| SD   | 16.12     | 94.40     |

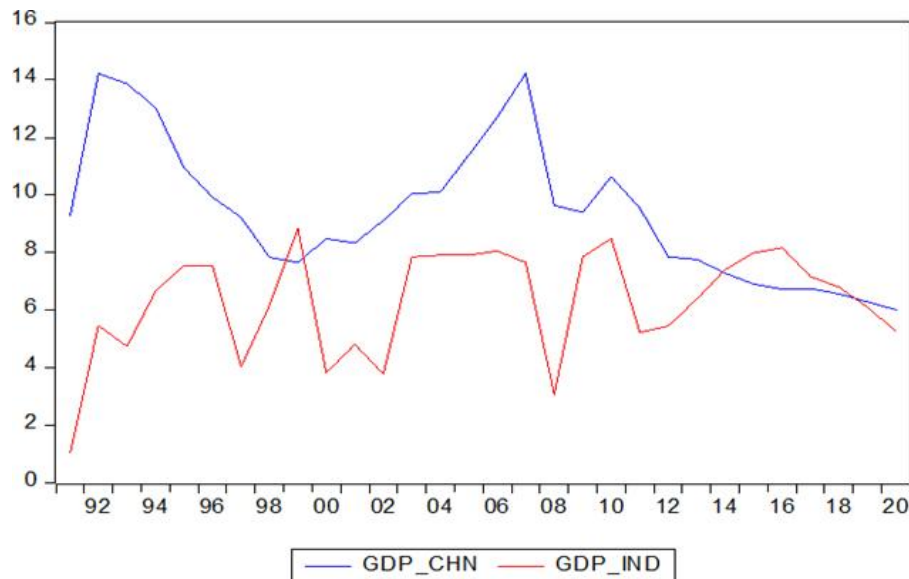


**Fig. 1: FDI Trends in India and China**

Table 2 depicts India's and China's economic growth rates and trends from 1991 to 2020. Throughout the era, the data shows a high level of instability. For India and China, the GDP is at its lowest point in 1991 and 2020, and at its highest point in 1999 and 2007. Figure 2 shows that the average GDP growth rates in India and China for the period in question were 6.31 and 9.85 percent, respectively. In comparison to the Chinese market, India's growth rate volatility is quite low.

**Table 2: India's and China's Economic Growth Rates and Tendencies**

| Year | GDP India | GDP China |
|------|-----------|-----------|
| 1991 | 1.06      | 9.29      |
| 1992 | 5.48      | 14.22     |
| 1993 | 4.75      | 13.87     |
| 1994 | 6.66      | 13.05     |
| 1995 | 7.57      | 10.95     |
| 1996 | 7.55      | 9.93      |
| 1997 | 4.05      | 9.23      |
| 1998 | 6.18      | 7.84      |
| 1999 | 8.85      | 7.67      |
| 2000 | 3.84      | 8.49      |
| 2001 | 4.82      | 8.34      |
| 2002 | 3.80      | 9.13      |
| 2003 | 7.86      | 10.04     |
| 2004 | 7.92      | 10.11     |
| 2005 | 7.92      | 11.40     |
| 2006 | 8.06      | 12.72     |
| 2007 | 7.66      | 14.23     |
| 2008 | 3.09      | 9.65      |
| 2009 | 7.86      | 9.40      |
| 2010 | 8.50      | 10.64     |
| 2011 | 5.24      | 9.55      |
| 2012 | 5.46      | 7.86      |
| 2013 | 6.39      | 7.77      |
| 2014 | 7.41      | 7.30      |
| 2015 | 8.0       | 6.91      |
| 2016 | 8.17      | 6.74      |
| 2017 | 7.17      | 6.76      |
| 2018 | 6.81      | 6.57      |
| 2019 | 6.11      | 6.30      |
| 2020 | 5.27      | 6.02      |
| Mean | 6.31      | 9.85      |
| SD   | 1.99      | 2.23      |



**Fig. 2: India's and China's Economic Growth Trends**

#### Regression Analysis of FDI's Impact on the Chinese Economy

The impact of FDI (the independent variable) on China's economic growth is statistically significant at the 5% level, since the p-value is less than 5%, according to the results of Regression Analysis (Refer Table:3). It is clear that FDI, which has played a significant role in the development of China's economy, contributes roughly 19 percent of economic growth. In summary, FDI has a strong beneficial impact on the Chinese market's growth rate.

#### Regression Analysis of Impact of FDI on Indian Economy

Table 4 shows the results of the Regression Analysis, which shows the impact of FDI on India's economic growth rate. This suggests that FDI has little impact on the Indian economy. The influx of FDI and India's market growth rate have a very low positive association. Political instability, rigid government rules, high tax rates, labour regulations, exchange rate volatility, and corruption are the key hurdles to FDI inflows into India when compared to China.

According to Table 5, India's average FDI as a percentage of GDP throughout that time period was 1.23 percent, with a low of 0.1 percent in 1991 and a high of 3.62 percent in 2008. FDI as a percentage of GDP in China averaged 3.41 percent over the period, with a low of 1.14 percent in 1991 and a high of 6.19 percent in 1993. In comparison to China, India's average FDI as a proportion of GDP is quite low. This argument demonstrates that FDI in India plays a little effect in the country's economic progress.

**Table 3: FDI's Impact on the Chinese Economy**

**Dependent Variable: GDP\_CHN**

**Method: Least Squares**

**Table 3: Impact of FDI on Chinese Economy**

| Variable          | Coefficient | Std.Error           | t-Statistic | Prob.    |
|-------------------|-------------|---------------------|-------------|----------|
| C                 | 10.82835    | 0.683169            | 15.85019    | 0.0000   |
| FDI_CHN           | 0.011453    | 0.004439            | 2.580163    | 0.0154   |
| R-squared         | 0.192088    | Meandependentvar    |             | 9.399333 |
| AdjustedR-squared | 0.163234    | S.D.dependentvar    |             | 2.394865 |
| S.E.ofregression  | 2.190701    | Akaikeinfocriterion |             | 4.470660 |
| Sumsquaredresid   | 134.3768    | Schwarzcriterion    |             | 4.564074 |
| Loglikelihood     | -65.05991   | Hannan-Quinncrier.  |             | 4.500544 |
| F-statistic       | 6.657242    | Durbin-Watsonstat   |             | 0.582299 |
| Prob(F-statistic) | 0.015413    |                     |             |          |

**Table 4: FDI's Impact on the Indian Economy****Dependent Variable:** GDP\_IND**Method:** Least Squares**Table 4: FDI's Impact on the Indian Economy**

| Variable          | Coefficient | Std.Error           | t-Statistic | Prob.    |
|-------------------|-------------|---------------------|-------------|----------|
| C                 | 5.946888    | 0.512374            | 11.60654    | 0.0000   |
| FDI_IND           | 0.019207    | 0.019790            | 0.970553    | 0.3401   |
| R-squared         | 0.032547    | Meandependentvar    |             | 6.317000 |
| AdjustedR-squared | -0.002005   | S.D.dependentvar    |             | 1.872467 |
| S.E.ofregression  | 1.874343    | Akaikeinfocriterion |             | 4.158734 |
| Sumsquaredresid   | 98.36853    | Schwarzcriterion    |             | 4.252147 |
| Loglikelihood     | -60.38101   | Hannan-Quinncrier.  |             | 4.188618 |
| F-statistic       | 0.941972    | Durbin-Watsonstat   |             | 1.608103 |
| Prob(F-statistic) | 0.340081    |                     |             |          |

Source: Secondary Data

**Table 5: India and China's Foreign Direct Investment as a Percentage of GDP**

| Year | FDI as a Percentage of GDP in India | FDI as a Percentage of GDP in China |
|------|-------------------------------------|-------------------------------------|
| 1991 | 0.1                                 | 1.14                                |
| 1992 | 0.1                                 | 2.61                                |
| 1993 | 0.2                                 | 6.19                                |
| 1994 | 0.3                                 | 5.99                                |
| 1995 | 0.59                                | 4.88                                |
| 1996 | 0.62                                | 4.65                                |
| 1997 | 0.86                                | 4.73                                |
| 1998 | 0.63                                | 4.44                                |
| 1999 | 0.47                                | 3.75                                |
| 2000 | 0.77                                | 3.48                                |
| 2001 | 1.06                                | 3.51                                |
| 2002 | 1.01                                | 3.61                                |
| 2003 | 0.61                                | 3.49                                |
| 2004 | 0.77                                | 3.48                                |
| 2005 | 0.89                                | 4.55                                |
| 2006 | 2.13                                | 4.51                                |
| 2007 | 2.07                                | 4.40                                |
| 2008 | 3.62                                | 3.73                                |
| 2009 | 2.65                                | 2.57                                |
| 2010 | 1.64                                | 4.0                                 |
| 2011 | 2.0                                 | 3.71                                |
| 2012 | 1.31                                | 2.83                                |
| 2013 | 1.52                                | 3.04                                |
| 2014 | 1.70                                | 2.57                                |
| 2015 | 2.09                                | 2.2                                 |
| 2016 | 1.94                                | 1.57                                |
| 2017 | 1.51                                | 1.37                                |
| 2018 | 1.55                                | 1.73                                |
| 2019 | 1.24                                | 1.28                                |
| 2020 | 1.17                                | 2.50                                |
| Mean | 1.23                                | 3.41                                |

**Outcomes and Suggestion**

The purpose of this study is to look at how FDI affects economic growth in India and China. It is apparent that the government must enhance its emphasis and reduce barriers in order to increase the possibility of increased FDI inflow. The purpose of this study is to assess India's and China's FDI policies and propose recommendations to policymakers to encourage FDI inflows in both countries. The following is a summary of the findings:

- FDI was discovered to be a significant factor on emerging market economic performance.
- The average FDI investment in India and China is \$15.7 billion and 114.67 billion dollars, respectively.
- India and China have average growth rates of 6.31 and 9.85 percent, respectively.
- In comparison to China, India's average FDI inflows as a percentage of GDP is quite low.
- FDI has had no substantial impact on India's economic growth.
- Foreign direct investment (FDI) has a substantial impact on China's economic growth.
- According to the study, there is a link between emerging economies and global markets.
- Investors should keep an eye on how much the domestic markets fluctuate.
- Reduced constraints should be used by the government to open up markets for FDI investments.
- For quality investors, adequate infrastructure facilities should be given.
- Strengthen the backward link between FDI and the indigenous economy.

### Conclusion

China's success will be determined by its ability to implement balanced reforms, open domestic markets, improve the performance of state-owned enterprises, protect intellectual property rights, and facilitate competition and judicial execution, all of which are necessary for China's markets to function effectively. In the liberalizations process, gradual and sensible approaches were used, which aided in the establishment of FDI policies in China, as well as economic development and enhanced institutional capacity. Because of insufficient infrastructure, security concerns, and the lack of an exit policy, India continues to lag behind China in terms of attracting FDI investment. If India is to meet its predetermined goals, it must attract greater FDI inflows for the country's development. Indian policymakers must recognise that goals and objectives alone are insufficient to attract FDI investment; instead, bold third-generation reforms are required for the country's development. In summary, India will be able to attract FDI and become a popular investment destination similar to China.

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