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# A Study of Economic Growth Led by Foreign Direct Investment in Context of India: An Empirical Analysis

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***Abstract:*** *This study undertaken analyses the relation between FDI (Foreign Direct Investment), economic growth, and openness of trade in context of India using empirical analysis. FDI is considered a key driver of development through capital formation, technology transfer, and employment generation, yet its actual impact on economic growth remains debated. Using secondary time-series data from 2012–2024, the study analyzes FDI inflows trend, GDP growth, and trade openness through the techniques of correlation, ANOVA, and also the methods of regression. The findings indicate that there is a weak but positive relation between FDI and the growth of GDP, which suggests that foreign investment alone does not significantly influence economic expansion. Regression results show that there is an impact of FDI on GDP growth is statistically insignificant, highlighting the role of other macroeconomic and structural factors. Trade openness demonstrates negative and significant relation with FDI inflows, reflecting the complexity of investment dynamics. The analysis of the study concludes that FDI supports economic development, its effectiveness depends on policy stability, infrastructure, institutional quality, and overall economic conditions.*

***Key Words:*** *FDI, Trade Openness, Economic Growth, GDP Growth Rate, India.*

## 1. INTRODUCTION

FDI has been a critical component of global economic integration since the World War I (Alam & Zubayer, 2010). FDI has grown significantly, with global inflows rising from $10.18 billion in 1970 to $1,195 billion in 2018 (IMF). According to (Crespo & Fontura, 2007) both the nations host as well as home country gains economic strength through the FDI as it provides technology, capital, management practices and others which promotes firm competition. Through resource transfers, it facilitates creation of job opportunities and economic linkages across countries (Ho & Rashid, 2011), serving as driver of economic growth (Adhikar, 2011). Recent data highlights FDI's growing importance in 2022, global FDI increased by 45% (OECD), with GDP growth at 9.1% (IMF), and Asia receiving $662 billion in inflows (UNCTAD, 2023). FDI and GDP has a positive correlation (Hansen & Rand, 2006), mobilizing skilled labour, foreign capital, natural resources, and latest technologies for economic growth (Todaro & Smith, 2003; Akinola & Omolade, 2013). The amount of FDI volumes varies among nations because of some factors like labour market conditions, infrastructure, financial depth, governance, educational quality, and political stability (Walsh & Yu, 2010; Singh & Jun, 1995). Cultural dimensions, including uncertainty avoidance and host country's trust, also influence FDI (Bhardwaj et al., 2007; Hofstede, 1980).

Globalization, inflation, trade openness, HDI (Human Development Index), size of the market, infrastructural facilities, and gross formation of the capital are additional determinants (Sridharan & Rao, 2010). Globalization fosters the circulation of goods, foreign capital, technology, and services, creating interdependence and enhancing economic development (Friedman, 2005). Effective governance including political stability, law structure, and control over the corruption also positively impacts FDI inflows (Rodrik, 2008; Stiglitz, 2002). FDI plays multiple roles in economic growth- it generates employment, develops infrastructure, improves human capital, enhances competitiveness, encourages domestic investment, increases revenue, promotes innovation, boosts exports, and strengthens international relations (Shiralashetti & Hugar, 2009). FDI types include horizontal, vertical, and conglomerate (Caves, 1971), while

host-country perspectives distinguish import-substituting, export-increasing, and government-initiated FDI. FDI may also be classified by entry type—greenfield or brownfield—and by flow direction—inward or outward.

The motivation of the study is to explore the effect of economic growth in developing nations due to the flow of FDI in developing nations and focusing on Asian countries. Disparities in domestic capital necessitate foreign capital inflows to stimulate skilled labour, growth of the economy, technological transfers, globalization. Policy measures, such as tax incentives and infrastructure development, further encourage FDI (Adhikary, 2017; Dunning, 2002). Comparative examples of China, Singapore, and India illustrate varying FDI trajectories and economic outcomes, highlighting the importance of understanding key determinants and environmental factors influencing FDI inflows.

The study's scope encompasses macro- and microeconomic factors affecting FDI inflows, including size of the market, formation of gross capital, governance, globalization, inflation, infrastructure, and socio-economic stability. It aims to analyze the FDI role in economic development, comparing trends across developed and developing nations.

## 2.PAST LITERATURE

FDI has become a critical driver of growth and development of any developing nations by facilitating capital inflows, technology transfer, and managerial expertise (Alam & Zubayer, 2010). According to UNCTAD (1998), FDI is defined as a long-term aim of establishing an interest through investment in any foreign country enterprises, reflecting its strategic role in enhancing host economies. Research findings based on empirical analysis indicates that inflows of FDI has contributed significantly to the growth of GDP by mobilizing domestic resources and bridging capital gaps (Hansen & Rand, 2006; Todaro & Smith, 2003). Research by Akinola & Omolade (2013) further establishes a correlation between capital formation and GDP, demonstrating that FDI complements domestic investment in fostering economic development.

Crespo & Fontura (2007) argue that beyond financial capital, FDI strengthens competition and efficiency among domestic enterprises. Ho & Rashid (2011) emphasize its role in job creation, technology transfer, and integrates the value chains globally, which is particularly vital for developing nations seeking accelerated economic growth. Athukorala (2003) categorizes FDI motives as market-seeking and resource-seeking, noting that developing countries often attract resource-seeking investments due to their abundant natural resources. Factors influencing FDI inflows include macroeconomic stability, labor efficiency, infrastructure quality, political stability, and export performance (Walsh & Yu, 2010; Singh & Jun, 1995). Cultural dimensions, such as uncertainty avoidance and trust in host nations, also affect foreign investors' decisions (Bhardwaj et al., 2007), aligning with Hofstede's framework of power distance, individualism, masculinity, long-term orientation, and indulgence.

Globalization is a key determinant of FDI, facilitating the cross-border flow of capital, goods, technology, and services (Friedman, 2005; Dreher, 2006). Economic globalization increases resource mobility and technology access, while social globalization enhances knowledge transfer and human capital development (Shangquan, 2000; Weidenbaum, 2003). Political globalization, through dissemination of governance and policy frameworks, influences investor confidence and regulatory quality (Dreher, 2006). Empirical studies also highlight the role of macroeconomic indicators such as trade openness, inflation, and the Human Development Index (HDI) in shaping FDI inflows (Baum et al., 1999; Datta & Shing, 2019; Sagar & Najam, 1998). Governance quality, including rule of law, government effectiveness, and control of corruption, has been shown to enhance FDI by creating a stable business environment conducive to investment (Rodrik, 2008; Kaufmann et al., 1999).

FDI plays multiple roles in host economies, including employment generation, infrastructure development, technological upgrading, and promotion of competitive advantages (Shiralashetti & Hugar, 2009; Markusen, 1995). It encourages economic diversification, stimulates domestic investment, and strengthens international trade through export enhancement (Adhikary, 2017). FDI is classified in three forms vertical, horizontal, and conglomerate forms on the basis of investors' strategies (Caves, 1971), and from the host country perspective as import-substituting, export-increasing, or government-initiated (UNCTAD, 2009). Greenfield investments establish new production facilities and generate employment, whereas brownfield investments through mergers or acquisitions enhance operational efficiency. Studies based on comparing nations reveals that countries with higher inflows of FDI, such as China and Singapore, achieve

accelerated GDP growth, highlighting the critical influence of policy frameworks, governance, and institutional quality (Lucke & Eichler, 2016; UN Report, 2020).

Despite these benefits, the magnitude of FDI's impact depends on the host country's economic and institutional environment. Size of the market, infrastructural facilities, skilled labour are the factors that mediate the relation between economic development and FDI and economic development (Rodrik, 2008; Saidi et al., 2013). Overall, the literature underscores that FDI is a catalyst for growth in developing nations, providing capital, technology, employment opportunities, and integration into global markets, contingent upon favourable economic policies, effective governance, and institutional efficiency.

## 3.OBJEECTIVES

Based on the past literature and the need to understand the determinants of economic effects of (FDI) in developing nations, the study aims to achieve the following objectives:

- To examine the effect of FDI inflows on economic growth is measured in terms of GDP growth rate in developing countries.
- To analyze openness in trade on inflows of FDI and determine whether more open trade policies significantly attract foreign investment.
- To identify and evaluate key macroeconomic, structural, and institutional determinants of FDI inflows, including market size, infrastructure, governance quality, inflation, and globalization.
- To compare FDI inflow patterns and their economic contributions across selected developing nations, highlighting variations in policy frameworks, institutional quality, and economic performance.
- To assess how FDI—such as horizontal, vertical, greenfield, and brownfield—affect host economies.

## 4.RESEARCH METHODOLOGY

The study will focus on inflows of FDI and growth of economy in developing nations for a given period of time. The research will primarily employ panel data analysis to examine multiple countries simultaneously for both cross-sectional and time-series variations. Secondary data will be utilized from reliable sources like World Bank, UNCTAD, IMF, OECD, and national statistical agencies. The data includes the variables such as: GDP growth rate, FDI inflows, and Trade Openess

Based on the research objectives and literature review, the following hypotheses will be tested:

Null Hypotheses

1. There is a significant and positive correlation between inflows of FDI and growth of GDP rate.
2. There is a significant and positive correlation between the openness of trade and inflows of FDI in an economy.

## 5.ANALYSIS OF THE STUDY

The selection of FDI inflow, GDP growth rate, and trade openness as the main variables under the study which is based on their fundamental importance in understanding the drivers of economic progress in developing nations, particularly within Asia. The GDP growth rate is chosen as the dependent variable because it provides the most comprehensive measure of a country's economic health and development. It captures changes in national income, output levels, productivity improvements, and the economy's overall capacity to generate employment and prosperity. Evaluating GDP growth allows the study to directly assess the extent to which FDI contributes to economic expansion and whether foreign investments translate into meaningful development outcomes. Trade openness is selected as another key explanatory variable because it constitutes a crucial element of a country's economic policy framework.

**$H_0$: There is a significant and positive correlation between inflows of FDI and growth of GDP rate.**

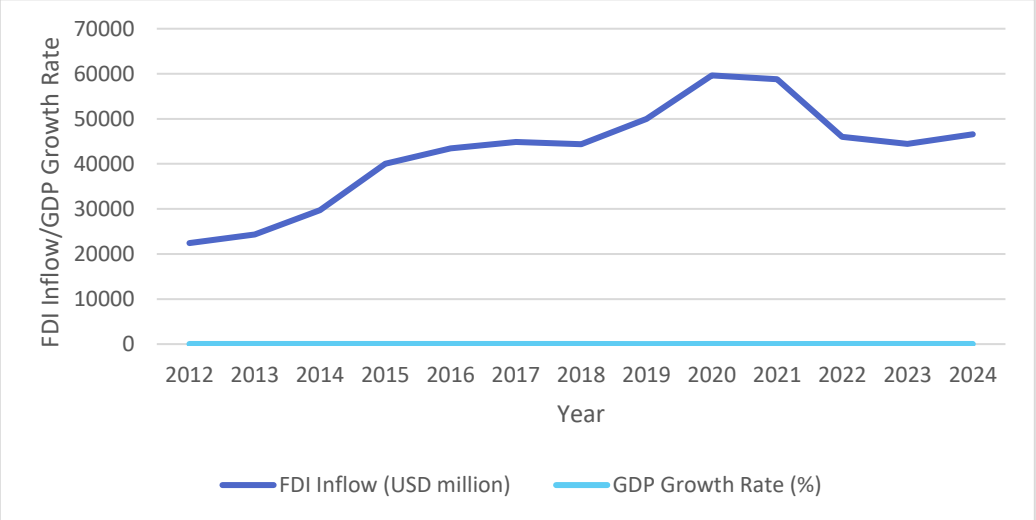
**Table 1**

| Year | FDI Inflow (USD million) | GDP Growth Rate (%) |
|---|---|---|
| 2012 | 22423 | 5.46 |
| 2013 | 24299 | 6.39 |
| 2014 | 29737 | 7.41 |
| 2015 | 40001 | 8 |
| 2016 | 43478 | 8.26 |
| 2017 | 44857 | 6.8 |
| 2018 | 44366 | 6.45 |
| 2019 | 49977 | 3.87 |
| 2020 | 59636 | 5.78 |
| 2021 | 58773 | 9.69 |
| 2022 | 46034 | 6.99 |
| 2023 | 44423 | 8.15 |
| 2024 | 46560 | 6.48 |

(Source: World Bank, UNCTAD, IMF databases)

The data from 2012 to 2024 shows notable fluctuations in both inflows of FDI and growth of GDP, reflecting changing economic conditions over the years. FDI inflows generally increased from USD 22,423 million in 2012 to a peak of USD 59,636 million in 2020, indicating rising foreign investor confidence and a strengthening investment climate, especially during the early to mid-2010s. After 2020, however, FDI inflows declined gradually before stabilizing in 2024. GDP growth followed a somewhat similar pattern during the initial years, rising steadily from 5.46% in 2012 to a high of 8.26% in 2016, suggesting that rising investment and economic expansion were mutually reinforcing. However, after 2016, GDP growth experienced a slowdown, falling significantly to 3.87% in 2019 despite continued increases in FDI, indicating that other domestic or global factors may have constrained economic performance. The pandemic years produced unique dynamics: in 2020, FDI increased sharply while GDP improved only moderately, and in 2021 GDP surged to 9.69% due to post-pandemic recovery effects even though FDI slightly declined. Subsequent years show moderate stabilization, with GDP growth remaining between 6% and 8% despite inflows of FDI fluctuations. The data indicates that while growth of GDP and FDI generally move in the same direction, their relationship is not perfectly linear; economic growth is influenced by multiple factors beyond foreign investment alone, such as domestic policy conditions, structural reforms, global shocks, and trade dynamics.

**Figure 1**



The graph suggests that while FDI inflows have increased over the period, growth rates of GDP do not consistently follow the same pattern, indicating that GDP growth may be influenced by multiple factors beyond just FDI inflows. This reinforces the understanding that FDI is important but not the only driver of economic growth.

**Table 1.1**

| | FDI Inflow (USD million) | GDP Growth Rate (%) |
|---|---|---|
| FDI Inflow (USD million) | 1 | |
| GDP Growth Rate (%) | 0.168143225 | 1 |

The correlation coefficient between FDI inflow and GDP growth rate is approximately **0.168**. This indicates a **weak positive correlation** between the two variables. In other words, there is a slight tendency for GDP growth rates to increase as FDI inflows increase, but the relationship is not strong or definitive. A correlation of 0.168 suggests that other factors beyond FDI inflows significantly influence GDP growth. While FDI contributes to economic growth, its impact alone is limited and must be considered alongside other economic variables.

**Table 1.2**

| Regression Statistics | |
|---|---|
| Multiple R | 0.168143225 |
| R Square | 0.028272144 |
| Adjusted R Square | -0.060066752 |
| Standard Error | 11739.93502 |
| Observations | 13 |

**ANOVA**

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| Regression | 1 | 44110112.4 | 44110112.39 | 0.32004 | 0.582938226 |
| Residual | 11 | 1516086816 | 137826074.2 | | |
| Total | 12 | 1560196928 | | | |

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 33639.26967 | 16272.4244 | 2.06725616 | 0.06307 | -2176.09505 | 69454.6 | -2176.1 | 69454.6 |
| X Variable 1 | 1306.736814 | 2309.8551 | 0.565722418 | 0.58294 | -3777.21999 | 6390.69 | -3777.2 | 6390.69 |

Analysis of regression for inflow of FDI and growth rate reveals a very weak correlation but positive with the value of coefficient as 0.168. The R-squared value of 0.028 indicates that only about 2.8% of the growth rate variation is explained by changes in FDI inflow, suggesting a poor model fit. Furthermore, the F-test shows a p-value of 0.583, which is much higher than the conventional 0.05 threshold, representing the model of regression is not statistically significant.

Thus, there is a very weak and positive impact of FDI inflow on economic growth on India.

**$H_0$: There is a significant and positive correlation between the openness of trade and inflows of FDI in an economy.**

**Table 2**

| Year | Trade Openness (%) | FDI Inflow (USD million) |
|---|---|---|
| 2012 | 55.79 | 22423 |
| 2013 | 53.84 | 24299 |
| 2014 | 48.92 | 29737 |
| 2015 | 41.92 | 40001 |
| 2016 | 40.08 | 43478 |
| 2017 | 40.74 | 44857 |
| 2018 | 43.62 | 44366 |
| 2019 | 39.91 | 49977 |
| 2020 | 37.76 | 59636 |
| 2021 | 45.42 | 58773 |
| 2022 | 50.08 | 46034 |
| 2023 | 44.99 | 44423 |
| 2024 | 44.67 | 46560 |

Source: World Bank, UNCTAD, IMF databases

The data reveals an interesting inverse relation between openness of trade and FDI inflows over the years. The data suggests a complex and non-linear relation between openness of trade and FDI inflows, highlighting the importance of considering multiple economic dimensions when analyzing foreign investment trends.

**Figure 2**

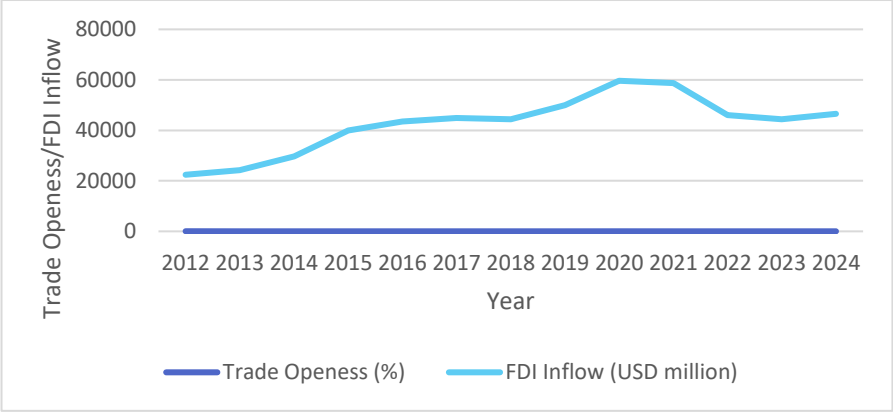



**Table 2.1**

| | FDI Inflow (USD million) | GDP Growth Rate (%) |
|---|---|---|
| FDI Inflow (USD million) | 1 | |
| GDP Growth Rate (%) | 0.168143225 | 1 |

The coefficient of correlation between inflows of FDI and GDP growth rate is approximately **0.168**, indicating a relationship between two variables which is weak. This suggests that, while GDP growth tends to increase slightly as FDI inflows rise, the relationship is not strong or statistically significant. In practical terms, FDI alone does not explain much of the GDP growth variation, implying that other factors—such as domestic policies, infrastructure, governance, and trade dynamics—play a more substantial role in driving economic growth.

**Table 2.2**

| Regression Statistics | |
|---|---|
| Multiple R | 0.761214889 |
| R Square | 0.579448107 |
| Adjusted R Square | 0.541216117 |
| Standard Error | 7723.30459 |
| Observations | 13 |

**ANOVA**

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| Regression | 1 | 904053157 | 904053156.6 | 15.1561 | 0.00251 |
| Residual | 11 | 656143772 | 59649433.79 | | |
| Total | 12 | 1560196928 | | | |

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 113567.1982 | 18339.4723 | 6.192500874 | 6.8E-05 | 73202.3 | 153932 | 73202.3 | 153932 |
| X Variable 1 | -1568.396871 | 402.867419 | -3.89308441 | 0.00251 | -2455.1 | -681.69 | -2455.1 | -681.69 |

The analysis of regression that analyses the relation between openness of trade and inflow of FDI in India indicates a strong correlation, with a Multiple R of 0.761 and an R-squared of 0.579, meaning that approximately 57.9% of the variation for inflow of FDI is explained by trade openness. The ANOVA results show that the model is statistically significant (F = 15.156, p = 0.0025), confirming that trade openness has a significant impact on FDI inflows. However, the coefficient for trade openness is negative (-1,568.40) and statistically significant (p = 0.0025), suggesting that higher trade openness is associated with a decrease in FDI inflows during this period. This finding contradicts the original hypothesis that trade openness would have a positive effect on FDI, indicating that other factors such as domestic policies, sectoral investment trends, or economic conditions may have influenced foreign investment in India. Overall, while trade openness is an important determinant of FDI inflows, the relationship appears to be complex and may not always follow the expected positive pattern.

## 6.CONCLUSION

The study assessed the relationship between Foreign Direct Investment (FDI), GDP growth, and trade openness in India using empirical analysis. The findings reveal that FDI has a weak but positive association with economic growth, indicating that foreign investment alone does not significantly drive GDP expansion. Regression results show that the

relationship between FDI and GDP growth is statistically insignificant, suggesting the influence of other structural and macroeconomic factors. However, trade openness demonstrates a significant but negative relationship with FDI inflows, highlighting the complexity of investment dynamics in India. Overall, FDI contributes to economic development, but its effectiveness depends on supportive policies, infrastructure, institutional quality, and broader economic conditions.

**REFERENCES**

1. Ausloos, M., Eskandary, A., Kaur, P., & Dhesi, G. (2019). Time-Delay Dependent Correlation between FDI and GDP: Evidence for Lags.
2. Cui, J. (2025). Entrepreneurial Motivations and ESG Performance: Evidence from Chinese Automobile Companies.
3. Das, N., Ruf, B., Chatterjee, S., & Sunder, A. (2018). Performance of Socially Responsible Mutual Funds: Do ESG Ratings Matter
4. Das, P. (2024). A Study on Role of Foreign Direct Investment on Indian Economic Growth with Special Reference to Service Sector. Business, Management and Economics Engineering.
5. Das, P. (2024). FDI, Trade Openness and Growth – Panel Study of India and China. IRJEMS.
6. Das, P. (2024). The Relationship between Trade Openness, FDI and Economic Growth: Evidence from China and India. International Research Journal of Economics and Management Studies.
7. Das, P. (2024). Trade Openness and FDI in India and China: An Econometric Analysis. IRJEMS.
8. Das, P. R. (2020). Foreign Direct Investment (FDI) and Economic Growth in India: A Review. International Journal of Social Science and Economic Research.
9. de Franco, C., Geissler, C., Margot, V., & Monnier, B. (2020). ESG Investments: Filtering Versus Machine Learning Approaches.
10. Friede, G., Busch, T., & Bassen, A. (2015). ESG and Financial Performance: Aggregated Evidence from More Than 2,000 Empirical Studies. Journal of Sustainable Finance & Investment.
11. Friede, G., Busch, T., & Bassen, A. (2015). Meta-analysis of ESG and Financial Performance. Journal of Sustainable Finance & Investment.
12. Furmolly, M. (2023). The Effects of Foreign Direct Investment on Economic Growth: An Empirical Study on the Indian Economy. International Journal of Multicultural and Multireligious Understanding.
13. GGS (Global Governance Services). (2020). Measuring Stakeholder Capitalism – Metrics Overview. GGS Website.
14. Gupta, P. (2023). FDI in Developing vs Developed Economies: Growth Impact Comparison. IERJ.
15. Gupta, P. (2023). Foreign Direct Investment and Economic Growth: A Comparative Analysis of Developed and Developing Economies. International Education and Research Journal.
16. How far is FDI relevant to India's foreign trade growth? (2020). Journal of Economic Structures, 9(30).
17. IJSER (2021). Foreign Direct Investment and Macroeconomic Growth: Comparative Study for India. IJSER Journal.
18. Katyal, S., & Geetika, G. (2018). FDI and Long-Run Growth in Emerging Economies. Focus Journal.
19. Katyal, S., & Geetika, G. (2022). Impact of Foreign Direct Investment on Economic Growth: Evidence from EAGLE Economies. Focus: Journal of International Business.
20. KPMG & World Economic Forum. (2021). Common Metrics: Measuring Stakeholder Capitalism – Implementation Guide. WEF / KPMG.
21. Kulkarni, K. G., & Shivaprasad, H. N., & Munshi, M. M. (2021). Impact of Foreign Direct Investment on Economic Growth of India. International Journal of Scientific Research and Management.
22. Kulkarni, K. G., Shivaprasad, H. N., & Munshi, M. M. (2021). Long-Run and Short-Run Effects of FDI on India's Economy (1991–2019). International Journal of Scientific Research and Management.
23. Mahapatra, R., & Patra, S. (2014). Impact of Foreign Direct Investment (FDI) Inflow on Gross Domestic Product (GDP) of India: An Empirical Study (1990–2012). International Journal of Business and Management Invention.