International Research Journal on Advanced Engineering Hub (IRJAEH)
e ISSN: 2584-2137
Vol. 03 Issue: 04 April 2025
Page No: 1634-1643
https://irjaeh.com
https://doi.org/10.47392/IRJAEH.2025.0232

Macroeconomic Indicators of Selected Developed Nations and Its Influence on Indian Economy

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Abstract
This study examines how macroeconomic indicators from the United States and Japan influence the Indian economy, emphasizing global financial interconnections. It focuses on key variables such as GDP growth, interest rates, inflation, and exchange rates, analyzing their effects on India's FDI inflows, currency fluctuations, inflation, and monetary policy. The study finds a strong positive correlation between US interest rates and India's FDI inflows, highlighting India's attractiveness as an investment destination despite rising US rates, driven by structural reforms and economic growth. In contrast, Japan's interest rate changes show a weak negative correlation with India's FDI, indicating minimal impact due to Japan's policy-driven investments. US GDP growth strengthens the Indian rupee, while Japan's GDP growth contributes to rupee depreciation, likely due to trade imbalances and capital flows. US inflation significantly affects India's inflation and monetary policy through capital movements and currency depreciation, while Japan's inflation mainly impacts import-dependent sectors. Using a quantitative research design, the study employs regression analysis, correlation analysis, and the Augmented Dickey-Fuller Test (ADFT) on secondary data, offering insights for policymakers to mitigate external economic shocks.

Keywords: *Macroeconomic Indicators, Foreign Direct Investment (FDI), Exchange Rate ,Inflation, Monetary policy.*

1. Introduction
In today's interconnected world, the economies of major developed nations, such as the United States and Japan, play a crucial role in shaping emerging markets like India. Macroeconomic indicators—including GDP growth, inflation, interest rates, and exchange rates act as key signals of economic stability, influencing trade, investment, and monetary policies. As one of the fastest-growing economies, India is deeply integrated into global markets, engaging in extensive trade and capital flows with these developed nations. The US is one of India's largest economic partners, particularly in IT and pharmaceuticals, while Japan significantly contributes to India's infrastructure, automotive, and technology sectors through long-term investments. Shifts in the economic policies of these nations have widespread implications for India. For instance, when GDP growth in the US and Japan is strong, demand for Indian exports rises, boosting India's trade balance. Conversely, economic downturns in these countries reduce demand, negatively impacting India's growth. Additionally, higher GDP in developed nations encourages greater foreign direct investment (FDI) in India, strengthening industries such as manufacturing and services. Inflation in developed economies also affects India, particularly through imported inflation. Rising global commodity prices, driven by inflation in the US and Japan, increase India's import costs, raising domestic inflation. When these nations tighten monetary policy

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to control inflation, their currencies strengthen, leading to capital outflows from India and a weaker rupee [1][3]. Interest rate hikes in developed economies attract global investors, causing capital flight from India, depreciation of the rupee, and increased borrowing costs for businesses. Furthermore, exchange rate fluctuations impact India's trade balance, inflation, and foreign debt obligations. A stronger dollar makes Indian exports more competitive but increases import costs, affecting inflation and forex reserves. Given these interdependencies, closely monitoring global macroeconomic trends is essential for India's economic stability and growth.

2. Review of Literature

2.1 Foreign Portfolio Investment in Some Developing Countries: A Study of Determinants and Macroeconomic Impact Author

R.N. Agarwal (2020) This study investigates the key factors influencing FPI inflows in six developing Asian economies. Regression analysis reveals that inflation rate, real exchange rate, economic activity index, and domestic capital market participation in global stock market capitalization significantly affect FPI inflows. A higher inflation rate discourages FPI, whereas the other three variables encourage investment. The study finds that FDI, foreign trade, and the current account deficit have minimal impact on FPI inflows. Additionally, while FPI positively influences economic activity, it also contributes to inflation. However, excessive FPI inflows raise concerns about debt sustainability, especially for India and Indonesia, which surpass recommended debt-to-GDP ratios. The findings emphasize the necessity of stable macroeconomic conditions to attract sustainable FPI [2].

2.2 Impact of Macroeconomic Variables on Sectoral Indices in India Author

Dr. L.K. Tripathi (2014) This research explores the long-term relationship between macroeconomic variables and sectoral indices on India's National Stock Exchange (NSE). Using data from April 2005 to March 2013, the study employs a multiple regression model to analyze the effects of exchange rates, crude oil prices, foreign institutional investment (FII), current account balance, and foreign exchange reserves on NSE sectoral indices. The results indicate a strong correlation among these variables, with FII exerting the most significant influence on all sectoral indices. Other variables exhibit selective effects on specific sectors, demonstrating the varying sensitivity of different industries to external economic conditions. The findings suggest that maintaining favorable macroeconomic indicators is essential to sustaining investor confidence in India's financial markets.

2.3 Capital Flows and Their Macroeconomic Effects in India Author

Renu Kohl (2021) This study examines capital flows into India, their composition, and their impact on key macroeconomic variables. The research finds that foreign capital inflows result in a real appreciation of the domestic currency and significantly influence the domestic money supply. During periods of excessive capital inflows, authorities have employed intervention and sterilization strategies to mitigate adverse effects. However, these policies come at a cost, as they may reduce monetary policy effectiveness. The study highlights the challenges associated with managing large-scale foreign capital inflows and underscores the need for policy measures that balance capital inflows with economic stability.

2.4 Exchange Rate Volatility and Its Impact on Macroeconomic Factors with Respect to the Indian Economy Authors

Megaravalli, A. V., & Vikram, K. (2016) This research investigates the relationship between exchange rate volatility and key macroeconomic variables in India, including inflation, interest rates, GDP, and FDI inflows. Using annual data from 1996 to 2014, the study applies linear regression analysis to assess the impact of these variables on exchange rate fluctuations. The findings indicate that interest rates have a significant negative impact on exchange rate volatility, while inflation and GDP exhibit a weak negative correlation. FDI shows a positive but insignificant relationship with exchange rate movements. These results suggest that while interest rates play a crucial role in stabilizing exchange rate fluctuations, other macroeconomic factors have a

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limited effect. The study highlights the importance of maintaining a stable interest rate environment to mitigate exchange rate volatility and enhance macroeconomic stability.

2.5 Effectiveness of Monetary Policy Under the High and Low Economic Uncertainty States

Evidence from Major Asian Economies Author: Mehmet Balcilar (2022) This study evaluates the effectiveness of monetary policy in China, Hong Kong, India, Japan, and South Korea under different levels of economic uncertainty. Utilizing a quantile vector autoregression (QVAR) model, the research analyzes spillover effects from interest rates to industrial production and consumer price indices. The findings suggest that monetary policy effectiveness diminishes during periods of high economic uncertainty. Moreover, interest rate shocks and external uncertainty factors (such as those from the US and EU) exhibit asymmetric effects on macroeconomic indicators. The study underscores the importance of adapting monetary policies to changing economic conditions, particularly in times of heightened uncertainty, to ensure stable economic growth and investor confidence [4].

3. Objectives of The Study

3.1 Primary Objective

- To analyze the macroeconomic indicators of selected developed nations and their influence on the Indian economy.

3.2 Secondary Objectives

- To examine the impact of interest rate changes in the US and Japan on India's FDI.
- To analyze how GDP growth trends in the US and Japan affect India's exchange rate.
- To study the effect of inflation in the US and Japan on India's inflation.
- To assess the influence of US and Japan's inflation on India's monetary policy decisions, particularly the repo rate.

3.3 Research Methodology

The study on "Macroeconomic Indicators of Selected Developed Nations and Their Influence on the Indian Economy" adopts a mixed-method approach, combining quantitative analysis of macroeconomic data with qualitative insights. Time-series data from 2010 to 2024 will be analyzed to assess the impact of US and Japan's interest rates, GDP growth, and inflation on India's FDI, exchange rate, and monetary policy. Statistical techniques such as regression analysis and correlation models will be used to identify trends and causality. Additionally, expert opinions from economists and policymakers will be incorporated to enhance understanding. The findings will provide valuable insights for policymakers, investors, and businesses, aiding in strategic decision-making and risk management in a globally interconnected economy.

3.4 Period of the study

The study employs a mixed-method approach, analyzing time-series data (2010–2024) to assess how US and Japan's macroeconomic indicators impact India's FDI, exchange rate, and monetary policy. Regression and correlation models will identify trends, while expert insights provide qualitative depth. The research aims to offer data-driven insights for policymakers, businesses, and investors to navigate global economic fluctuations and enhance strategic decision-making.

4. Analysis and Interpretation

4.1 Correlation analysis

Foreign Direct Investment (FDI) plays a crucial role in India's economic growth, bringing capital, technology, and employment opportunities. However, global interest rates, particularly those set by major economies like the United States and Japan, can significantly influence FDI inflows into India. When the US Federal Reserve raises interest rates, returns on US assets such as bonds and savings increase, making investors prefer the US over emerging markets like India, leading to a potential decline in FDI inflows [5]. Conversely, when US rates decrease, investors seek higher returns in developing countries, boosting FDI in India. Similarly, Japan's interest rates, which have been historically low or even negative, impact global capital flows. Figure 1 shows US INTEREST RATE – 1st Difference. A lower interest rate in Japan encourages investors to seek better returns in foreign markets, increasing FDI in India. However, if Japan raises interest rates, capital may flow back to its domestic economy, reducing FDI inflows into India. Understanding the correlation between these interest

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rate movements and India's FDI is crucial for assessing how global monetary policies impact investment decisions in emerging markets. Table 1 shows Interest Rate Trends and FDI Inflows.

Table 1 Interest Rate Trends and FDI Inflows

Year	US Interest rate (%)	Japan Interest Rate (%)	Foreign Direct Investment (FDI) Inflows (USD Billion)
2010	0.25	0.1	24.6
2011	0.25	0.1	46.8
2012	0.25	0.1	22.4
2013	0.25	0.1	22.4
2014	0.25	0.1	36
2015	0.5	0.1	55.6
2016	0.75	-0.1	44
2017	1.5	-0.1	60
2018	2.5	-0.1	62
2019	1.75	-0.1	49
2020	0.25	-0.1	57
2021	0.25	-0.1	81
2022	4.5	-0.1	85
2023	5.5	-0.1	90
2024	5.5	0.25	95

4.1.1 Augmented Dickey -Fuller Unit Root Test

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.507535	0.0229
Test critical values:	1% level	-5.124875	
	5% level	-3.933364	
	10% level	-3.420030	

Figure 1 US INTEREST RATE – 1st Difference

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.293830	0.0034
Test critical values:	1% level	-2.771926	
	5% level	-1.974028	
	10% level	-1.602922	

Figure 2 JAPAN INTEREST RATE- 1st Difference

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.172781	0.0325
Test critical values:	1% level	-4.992279	
	5% level	-3.875302	
	10% level	-3.388330	

Figure 3 FDI- 1st Difference

4.1.2 The Impact of US Interest Rate Changes on India's FDI

Correlation

	US_INTERE	FDI
US_INT	1.000000	0.784544
FDI	0.784544	1.000000

Figure 4 US Interest Rate and FDI Inflows

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Interpretation

A correlation of **0.78** indicates a strong positive relationship between the **US interest rate** and **FDI inflows** into India. This suggests that an increase in US interest rates is generally associated with higher FDI inflows, while a decrease in interest rates corresponds to lower FDI inflows. Figure 4 shows US Interest Rate and FDI Inflows. This positive correlation highlights the significant influence of US monetary policy on foreign investment patterns in India, reflecting the interconnected nature of global financial markets. Figure 2 shows JAPAN INTEREST RATE- 1st Difference.

4.1.3 The impact of Japan interest rate changes on India's FDI

Correlation

	JAPAN_INT	FDI
JAPAN_	1.000000	-0.272486
FDI	-0.272486	1.000000

Figure 5 Japan's Interest Rate (BOJ Interest Rate) And FDI Inflows

Interpretation:

The correlation coefficient of **-0.27** between **interest rate (BOJ Interest Rate)** and **FDI inflows** indicates a weak negative relationship. This suggests that an increase in Japan's interest rate is generally associated with a slight decline in FDI inflows, while a decrease in interest rates corresponds to a marginal increase in FDI. However, given the weak correlation, this relationship is not strong, implying that other economic and market factors play a more significant role in influencing FDI inflows beyond interest rate fluctuations. Figure 5 shows Japan's interest rate (BOJ Interest Rate) and FDI inflows.

4.2 Regression Analysis

The GDP growth trends of the United States and Japan play a crucial role in influencing India's exchange rate due to trade relations, capital flows, and investor sentiment. A rise in US GDP growth often strengthens the US dollar, leading to depreciation pressure on the Indian rupee as capital outflows increase due to higher returns in US markets. Similarly, Japan's GDP growth affects the yen, which in turn impacts India's trade balance and currency value, given the significant trade ties between India and Japan. Fluctuations in these economies also impact foreign direct investment (FDI) and portfolio investments in India, leading to variations in exchange rate movements. Figure 3 shows FDI- 1st Difference [6]. The interplay between GDP growth trends in these developed nations and India's currency value reflects global economic integration, making it essential to analyze their effects before interpreting the regression results. Table 2 shows GDP Growth Trends.

Table 2 GDP Growth Trends

Year	GDP (%) US	GDP (%) JPY	Exchange rate $ of India
2010	2.7	4.1	46.02
2011	1.56	0.02	44.65
2012	2.29	1.37	53.06
2013	2.12	2.01	54.78
2014	2.52	0.3	60.95
2015	2.95	1.56	66.79
2016	1.82	0.75	67.63
2017	2.46	1.68	64.94
2018	2.97	0.64	70.64
2019	2.47	-0.4	72.15
2021	6.1	2.56	75.45
2022	2.5	0.95	81.62
2023	2.9	1.92	83.28

4.2.1 Augmented Dickey -Fuller Unit Root Test

All three variables (US GDP Growth , Japan GDP Growth , India's Exchange rate) become stationary at the first-difference level, indicating they are each integrated of order 1 (I(1)).

4.2.2 GDP growth trends in the US and Japan influence Exchange rate of India

Null Hypothesis (H_0):

- **H_{01}:** The US GDP has no significant impact on India's exchange rate.

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- **H_{02}:** The Japan GDP has no significant impact on India's exchange rate.

Alternative Hypothesis (H_1):

- **H_{11}:** The US GDP has a significant impact on India's exchange rate.
- **H_{12}:** The Japan GDP has a significant impact on India's exchange rate. Table 3 shows Model fit measures.

Table 3 Model fit measures

Model	R	R^2
1	0.58	0.64

Table 4 Model Coefficients- Exchange rate $

Predictor	Estimate	SE	t	p
Intercept	50.12	12.59	3.98	< .001
GDP US	2.75	0.94	2.93	0.009
GDP Japan	-3.25	1.28	-2.55	0.018

Interpretation:

The regression model shows that about 64% of the changes in India's exchange rate can be explained by the factors in the model (R^2 = 0.64). The overall model is a good fit, as indicated by the F-statistic (9.45, p = 0.002). Initially, the null hypothesis assumed that US GDP and Japan GDP do not affect India's exchange rate, but the results tell a different story. The US GDP coefficient (2.75, p = 0.009) is statistically significant, meaning we can reject the null hypothesis (H_{01}). This confirms that US GDP does impact India's exchange rate, and the positive coefficient suggests that as the US economy grows, the Indian exchange rate tends to appreciate, possibly due to increased global demand and capital inflows. Similarly, the Japan GDP coefficient (-3.25, p = 0.018) is also significant, leading to the rejection of H_{02}. The negative coefficient means that as Japan's GDP increases, India's exchange rate depreciates, which could be due to shifts in trade balances, investment flows, or broader market sentiment [7].

4.3 Granger Causality Test

Inflation in the US and Japan has a significant impact on India's inflation due to global trade linkages, capital flows, and exchange rate fluctuations. When inflation rises in the US, the Federal Reserve often increases interest rates, leading to capital outflows from emerging markets like India. This weakens the Indian rupee, making imports especially crude oil—more expensive, which in turn fuels domestic inflation. Similarly, Japan's inflation influences global supply chains, particularly in sectors like automobiles and electronics, where India relies on imports. Table 5 shows Annual Inflation Rates of the US, Japan, and India. A rise in Japanese inflation can lead to higher costs for raw materials and finished goods, further adding to India's inflationary pressures. Additionally, changes in monetary policies in these economies affect commodity prices globally, impacting India's import costs and overall price stability. To manage these effects, India must focus on maintaining exchange rate stability, diversifying energy sources, and strengthening domestic production to reduce dependence on imports. Table 4shows Model Coefficients- Exchange rate $.

Table 5 Annual Inflation Rates of the US, Japan, and India

Year	US inflation rate	JAPAN inflation rate	INDIA inflation rate (%)
2010	1.5	-0.74	11.99
2011	3.00	-0.28	8.91
2012	1.70	-0.05	9.48
2013	1.50	0.33	10.02
2014	0.80	2.76	6.67
2015	0.70	0.80	4.91
2016	2.10	-0.12	4.95
2017	2.10	0.49	3.33
2018	1.90	0.99	3.94
2019	2.30	0.47	3.73
2020	1.40	-0.03	6.62
2021	7	-0.24	5.13
2022	6.50	2.50	6.7
2023	3.40	3.27	5.65
2024	2.90	2.23	5.22

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4.3.1 Augmented Dickey -Fuller Unit Root Test

All three variables (inflation rate of US, Japan and India) become stationary at the first-difference level, indicating they are each integrated of order 1 (I (1)). Figure 6 shows Granger Causality Test.

Null hypothesis	*F-Statistic*	*Prob.*
US Inflation does not Granger Cause India Inflation	*5.12*	*0.015*
India Inflation does not Granger Cause US Inflation	*1.75*	*0.213*
Japan Inflation does not Granger Cause India Inflation	*4.89*	*0.020*
India Inflation does not Granger Cause Japan Inflation	*3.85*	*0.030*

Figure 6 Granger Causality Test

Interpretation:

The US Inflation rate Granger-causes India's Inflation rate (p = 0.015), indicating that past values of US inflation significantly help predict India's inflation. Similarly, the Japan Inflation rate Granger-causes India's Inflation rate (p = 0.020), suggesting that Japan's inflation has a predictive influence on India's inflation trends. Additionally, India's Inflation rate Granger-causes Japan's Inflation rate (p = 0.030), indicating that India's inflation trends significantly impact Japan's future inflation levels. However, India's Inflation rate does not significantly Granger-cause the US Inflation rate (p > 0.05), meaning past values of India's inflation do not provide strong predictive power for inflation trends in the US.

4.4 Correlation Analysis

Inflation trends in the US and Japan significantly influence India's monetary policy decisions, particularly the repo rate and other liquidity measures set by the Reserve Bank of India (RBI). When US inflation rises, the US Federal Reserve often responds by increasing interest rates to curb inflation. This, in turn, leads to capital outflows from India as foreign investors shift funds to higher-yielding US assets. To stabilize the rupee and control imported inflation, the RBI may raise the repo rate, making borrowing costlier in India. A notable example occurred in 2022 when the US Fed's aggressive rate hikes led the RBI to increase the repo rate multiple times to counter the impact on the Indian rupee and inflation On the other hand, Japan has historically experienced low or negative inflation, leading to ultra-low interest rates. However, if Japan's inflation rises, the Bank of Japan (BoJ) may tighten its monetary policy, making Japanese investments in Indian markets less attractive. This could reduce capital inflows, putting pressure on India's forex reserves and the rupee. In response, the RBI might adjust interest rates or manage liquidity to maintain economic stability. Table 6 shows Correlation Analysis.

Table 6 Correlation Analysis

YEAR	US inflation rate	JAPAN inflation rate	REPO RATE
2010	1.5	-0.74	5.65
2011	3.00	-0.28	6.65
2012	1.70	-0.05	8
2013	1.50	0.33	7.53
2014	0.80	2.76	8
2015	0.70	0.80	7.35
2016	2.10	-0.12	6.4
2017	2.10	0.49	6
2018	1.90	0.99	6.30
2019	2.30	0.47	5.65
2020	1.40	-0.03	4.3
2021	7	-0.24	4
2022	6.50	2.50	5
2023	3.40	3.27	6.5
2024	2.90	2.23	6.5

4.1.1 Augmented Dickey -Fuller Unit Root Test

All three variables (inflation rate of US, Japan and Repo rate of India) become **stationary at the first-difference level**, indicating they are each **integrated of order 1 (I(1))**. Table 7 shows Stationary at The First- Difference Level.

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Table 7 Stationary at The First- Difference Level

	US Inflation Rate	Japan Inflation Rate	Repo Rate
US Inflation Rate	—	-0.617	-0.617
df	—	13	13
p-value	—	0.014	0.014
Japan Inflation Rate	0.155	—	0.224
df	13	—	13
p-value	0.582	—	0.421
Repo Rate	-0.617	0.224	—
df	13	13	—
p-value	0.014	0.421	—

Interpretation:

The correlation matrix provides insights into the relationships between the US inflation rate, Japan's inflation rate, and India's repo rate. The Pearson correlation coefficient between the US inflation rate and India's repo rate is -0.617, with a p-value of 0.014, indicating a statistically significant negative relationship. This suggests that when US inflation rises, India's repo rate tends to decrease, possibly due to global monetary policy adjustments or capital flows affecting India's monetary decisions. In contrast, the correlation between Japan's inflation rate and India's repo rate is 0.224, with a p-value of 0.421, indicating a weak and statistically insignificant relationship, meaning Japan's inflation does not have a strong or reliable impact on India's repo rate. Overall, the analysis highlights that US inflation has a significant impact on India's repo rate, with higher US inflation associated with a lower repo rate in India, whereas Japan's inflation has minimal influence on India's monetary policy decisions.

5. Results and Discussion

5.1 Results

5.1.1 US Interest Rate and FDI Inflows into India

A strong positive correlation (0.78) exists between US interest rates and Foreign Direct Investment (FDI) inflows into India, suggesting that rising US interest rates are associated with increased FDI in India. This contradicts conventional economic theory, which suggests that higher US rates would lead to capital outflows from emerging markets like India. However, this trend highlights that global investors view India as a strategic, long-term investment destination due to factors such as structural reforms, high GDP growth, and business-friendly policies. The sustained investments from US-based companies, especially in sectors like IT, e- commerce, and renewable energy, indicate confidence in India's economic potential despite tightening monetary conditions in the US.

5.1.2 Japan Interest Rate and FDI Inflows into India

A weak negative correlation (-0.27) is observed between Japan's interest rates and India's FDI inflows, signifying that fluctuations in Japan's interest rates have minimal influence on investment flows into India. Unlike US investments, which respond to interest rate changes, Japanese investments in India are largely policy-driven. Japan's FDI in India focuses on long-term projects in infrastructure, automobile manufacturing, and technology partnerships, which are guided by strategic collaborations rather than short-term monetary policy shifts.

5.1.3 Impact of US and Japan GDP Growth on India's Exchange Rate

US GDP growth significantly impacts India's exchange rate, with a positive relationship indicating that as the US economy expands, the Indian rupee tends to appreciate. This appreciation is likely due to increased investor confidence, capital inflows, and trade linkages that strengthen India's financial position [8]. In contrast, Japan's GDP growth has a negative impact on the rupee, leading to depreciation. This trend is likely driven by trade imbalances, as higher Japanese GDP growth may result in increased imports from India, widening India's trade deficit and exerting downward pressure on the rupee.

5.1.4 Inflation in the US and Japan Affects India's Inflation

US inflation trends have a predictive impact on

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India's inflation, as evidenced by the Granger causality test. Rising US inflation often results in capital outflows from India, leading to rupee depreciation and higher imported inflation. Additionally, Japan's inflation influences India's inflation, particularly in sectors reliant on Japanese imports, such as automobiles and electronics. Thus, inflationary trends in these economies indirectly shape India's price levels through trade and capital flow channels.

5.1.5 Impact of US and Japan's Inflation on India's Monetary Policy (Repo Rate)

A statistically significant negative correlation (-0.617) exists between US inflation and India's repo rate, meaning that when US inflation rises, the Reserve Bank of India (RBI) tends to lower the repo rate to ensure liquidity and mitigate capital outflows. This suggests that India's monetary policy is closely aligned with US inflation trends and Federal Reserve rate hikes. Conversely, Japan's inflation has a weak correlation (0.224) with India's repo rate, indicating that it does not significantly impact RBI's monetary decisions. The findings highlight that RBI's policy adjustments are largely influenced by US inflation and global capital flow movements rather than Japan's inflationary conditions.

5.2 Discussion

5.2.1 US Interest Rate and FDI in India

A strong positive correlation (0.78) exists between US interest rates and FDI inflows into India, contradicting the conventional expectation that higher US rates lead to capital outflows from emerging markets. This trend highlights India's long- term investment appeal, driven by structural reforms, rapid GDP growth, and a business-friendly environment. Key sectors attracting US investments include IT, e-commerce, and renewable energy.

5.2.2 Japan Interest Rate and FDI in India

Japan's interest rate fluctuations have a weak negative correlation (-0.27) with India's FDI inflows, indicating minimal influence. Japanese investments in India are primarily policy-driven, focusing on long-term projects in infrastructure, automobiles, and technology rather than reacting to interest rate changes.

5.2.3 Impact of US and Japan GDP Growth on India's Exchange Rate

US GDP growth positively impacts the Indian rupee, leading to appreciation due to increased investor confidence and capital inflows. In contrast, Japan's GDP growth negatively affects the rupee, causing depreciation. This is likely due to trade imbalances, where higher Japanese GDP growth increases imports from India, widening India's trade deficit and exerting downward pressure on the rupee.

5.2.4 Impact of US and Japan Inflation on India's Inflation

US inflation significantly influences India's inflation, as past trends in US inflation (Granger causality) predict India's inflation movements. Rising US inflation often results in rupee depreciation and imported inflation. Japan's inflation, though less influential, affects Indian industries dependent on Japanese imports, such as automobiles and electronics.

5.2.5 Impact of US and Japan Inflation on India's Monetary Policy

A strong negative correlation (-0.617) exists between US inflation and India's repo rate, suggesting that when US inflation rises, the RBI lowers interest rates to maintain liquidity. Japan's inflation has a weak correlation (0.224) with India's repo rate, indicating a limited impact. The RBI's monetary policy aligns more with US inflation trends and Federal Reserve.

Conclusion

India's economic linkages with global financial trends reveal distinct patterns, particularly concerning US and Japanese economic indicators. The strong positive correlation between US interest rates and FDI inflows into India challenges conventional expectations, highlighting India's robust economic fundamentals, structural reforms, and investor-friendly policies. Key sectors such as IT, e-commerce, and renewable energy continue to attract US investments. In contrast, Japan's interest rate fluctuations have minimal impact on India's FDI inflows, as Japanese investments are largely policy-driven, focusing on infrastructure,

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https://doi.org/10.47392/IRJAEH.2025.0232

automobiles, and technology. US GDP growth strengthens the Indian rupee due to increased investor confidence and capital inflows, whereas Japan's GDP growth contributes to rupee depreciation due to trade imbalances. US inflation significantly influences India's inflation and monetary policy, with rising US inflation causing rupee depreciation and prompting RBI rate adjustments. The RBI closely aligns its policies with US economic trends, particularly Federal Reserve decisions, to maintain financial stability. Japan's inflation, however, has a weaker impact, primarily affecting industries dependent on Japanese imports. Overall, India's economic dynamics are more closely tied to the US than Japan, with US financial trends shaping FDI inflows, exchange rates, inflation, and monetary policies, making the US a key driver of India's financial environment.

Acknowledgements

It is with great enthusiasm and learning spirit that I am bringing out this project report. I also feel that it is the right opportunity to acknowledge the support and guidance that came from various quarters during the period of my project.

- I express my sincere gratitude to Dr. K. Porkumaran, Principal. Sri Krishna College of Engineering and Technology, Coimbatore for providing excellent opportunity to undergo the project work.
- I extend my sincere thanks to Dr. S. Jaisankar, Professor and Head, School of Management, Sri Krishna College of Engineering and Technology, Coimbatore for his support and encouragement to undertake the project work.
- I am thankful to my guide, Dr. C. Vinotha, Associate Professor, School of Management, Sri Krishna College of Engineering and Technology, Coimbatore for guiding me throughout the Project work.

Finally, I thank all my family members and friends who supported me for the successful completion of my project.

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