



IMPACT OF MACROECONOMIC INDICATORS ON FDI INFLOWS IN PRE & POSTIMPLEMENTATION OF MAKE IN INDIA

Dr. M. Sumathy¹, Shallini. V²

¹Professor, Dept. of Commerce, Bharathiar University, Coimbatore, Tamil Nadu, India

²M. Phil. Research Scholar, Dept. of Commerce, Bharathiar University, Coimbatore, Tamil Nadu, India

ABSTRACT

This study reveals the Foreign direct Investment inflows on macroeconomic indicators in Pre and Post of Make in India. The main objective of the study is to find the relationship between FDI inflows on macroeconomic indicators during pre and post of make in India and also analyse the impact of FDI on the Indian economy during pre and post of make in India. From the study period were segregated on the basis of pre and post of Make in India (2010 -11 to 2019-20). Augmented Dickey Fuller Unit Root Test is used for checking the stationarity of the Macroeconomic indicators. Correlation matrix is used to find the relationship between Foreign direct investment on macroeconomic variables during pre and post of Make in India proposal and Granger causality is employed for the impact of Foreign direct Investment on macroeconomic indicators such as Balance of Payment, GDP, Exchange rate, inflation and export in pre and post of Make in India. The results show the strength of shows between the FDI inflows and exchange rate. The pairwise granger causality analysis of Foreign Direct Investment inflows and select macro-economic variables reveals the unidirectional casualty between the FDI and export in post Make in India implementation.

KEY WORDS: *Augmented Dickey Fuller Unit Root Test, Granger Casualty, unidirectional casualty*

INTRODUCTION

Make in India is a flagship national initiative of the Government of India designed to facilitate investment, nurture innovation, enhance capacity building, protect intellectual property and create the best in the class production infrastructure in the country. The primary objective of this initiative is to attract investment from all over the world and strengthen India's manufacturing sector. It is headed by the Department of Industrial and Domestic Trade Promotion (DPIIT), Ministry of Commerce and Industry, Government of India. This project aims to improve India's standards in the easy trade code by eliminating unnecessary laws and regulations, facilitating bureaucratic processes and making the government more transparent, perceptive and accountable. Foreign direct investment (FDI) is considered to be the lifeblood of economic growth, especially for developing and underdeveloped countries. Foreign direct investment is seen as a

development tool that helps to develop the economy by creating employment, revenue in the form of taxes and incomes, financial stability for the government, infrastructure development, productivity, business infrastructure and the financial system. Make in India mainly focus on 25 sectors to attract the FDI towards Indian country. it also creates a open to foreign direct investment under the automated route, thus significantly increasing foreign direct investment through automation Path. Reports suggest that more than 90% 2 of the total foreign direct investment received in April-December 2016 via automatic path. After the launch of the 'Make in India' initiative (until December 2015) the equity flow through the automated route and the approval route is 90.24% and 9.76%, respectively.

REVIEW OF LITERATURE

Ashutosh D. Gaur et al (2017)¹ examined the 'Make in India' campaign focuses on the growing trend of



foreign direct investment (FDI) in the IT and BPM sector and the trend of the previous 5 years. This article reviews the strategy and measures taken by the Chinese government to attract massive foreign direct investment and compare it with the measures taken by the Indian government. This paper explores different trends, strategies and challenges by analyzing secondary data for India to attract foreign direct investment. Hence The result concludes that has been a steady increase in foreign direct investment in the country over the past three years.

Namita Srivastava (2017)² studied the current of FDI in India and also to study the sector-wise analysis of Foreign Direct Investment in India. FDI has a significant role to play in India's economic development. The researcher concludes that the inflow of FDI into the service sector and the construction and development sector, from April 2000 to 21 June 2015, delivered significant sustained economic growth and development through job creation in India, but the demanding manufacturing sector, where there are maximum job creation prospects, is still waiting for sustained development.

Rishabh Bhatia (2018)³ analysed the association between FDI and other macroeconomic variables such as GDP, Exports, Imports, Index of Industrial production using basic econometric tools. The researcher also endeavours that FDI is highly correlated when compared to other macro-economic variables. Although trade openness shows a low association in FDI. This study seeks to develop some recommendations based on government and shows that the future of the campaign continues with the current vigour. The study concludes that the campaign has been successful so far because it is supported by major legislative and bureaucratic reforms and has great potential to succeed in the future.

Tshepo (2018)⁴ attempted to explore was to determine the nexus between inflows of foreign direct investment (FDI) and economic growth between 1980 and 2014. To determine and estimate the long-run relationship between the variables in the model, the vector error correction model is used. It was found from the results that economic growth shares a positive relationship with both FDIs and the actual effective exchange rate while sharing a negative relationship with FDIs.

Muthusamy (2019)⁵ studied the trend of industrial growth rate in India and also exploring the trend of foreign direct investment in the manufacturing sector by using statistical tools like One - Way ANOVA

and Karl Pearson's Coefficient Correlation has been used for the analysis. The results conclude that the growth of the industrial index was 2.64% and 5.23% from 2016 - 2017 to 2018 - 2019. Has shown a steady rate of growth in the automobile and telecommunications industries. The Industrial Production Index (IIP) is recovering at a slower pace, with an average growth rate of 2.12%. The relationship between total foreign direct investment and the value of IIP and foreign direct investment is said to be 0.226 and 0.414, where the relationship between foreign direct investment and IIP is weak.

Mafruz sultana et al (2019)⁶ examined the impact of FDI not only on Indian growth variables but also on other factors such as human development index and population to determine how much FDI is responsible for changing their variance. The methodology used in this study is the researcher has clubbed the FDI factors such as foreign exchange reserves, exchange rate, export and import into one through that the impact upon which they had on Indian economic variables. The findings reveal that there is a significant impact of FDI on the HDI, population and Sensex index. Although there is also, but not to that extent, an impact on import exports

Mahindra Dev and Rajeshwari Sengupta (2020)⁷ had highlighted the impact of Coronavirus on the overall economy by comparing the situations before the crisis and after the crisis. This paper especially talked about Informal Sector, Banking Sector, MSMEs, Financial Markets and Limited policy space. The Government announced various policies to handle the situation of crisis and how these policies are successful and implemented in the real world is also the main component of the paper. It has discussed how the country lockdown has brought all economic activities to an abrupt halt and in turn will have further spillover effects on investment, employment, income and consumption, pulling down the aggregate Growth of the economy. In last, it has discussed the measures that the Reserve Bank of India, State and Central Government could adopt to improve the economic situations simultaneously controlling this virus.

Bharat Kumar Meher (2020)⁸ analysed the Impact of COVID19 on Price volatility of Crude Oil and Natural Gas Listed on Multi Commodity Exchange of India. In this study, an attempt has been made to estimate the price volatility of crude oil and natural gas listed on multi commodity exchange of India (MCX). We measured the leverage effect of COVID-19 on price volatility of crude oil and natural gas by using the daily prices of crude oil and natural gas



from May 01, 2017 to April 30, 2020. The findings of the study reveal that there is a presence of leverage effect of COVID-19 on the price volatility of crude oil. However, this leverage effect is not present on the price volatility of natural gas. The findings of the study will help investors to develop investment strategies and to the policymakers to formulate appropriate policies to overcome or minimise the impact of COVID-19. The forecasting graphs of crude oil prices indicate that there is a possibility that price volatility will be higher in the future. However, it is difficult to forecast the expected price volatility of natural gas for the future because the price volatility graph is extremely fluctuating.

STATEMENT OF THE PROBLEM

Make in India is a proposal is mainly started as a significant one to boost up the economic growth by increasing the manufacturing concerns. This can be done by implementing the major sources of income for the economy. FDI has significant growth and it is considered as the lifeblood of economic development especially for the developing and underdeveloped countries. It is a helpful tool for economic growth through the strengthening of domestic level, productivity and employment through the up-gradation of technology skills and managerial capabilities in various sectors of the economy. After liberalization FDI has a major impact on economic development as a whole. For this purpose, specifically, the government has implemented the "Make in India" scheme as a tool to elevate FDI inflows to increase the growth of a country. The make in India initiatives has specifically chosen 25 sectors to increase the level of FDI inflows to create viability across these sectors and to create more employment opportunities in the country. Thus, the researcher attempted to find the impact of macroeconomic indicators on FDI inflows and sectoral analysis with special reference to pre & post-implementation of the Make in India proposal.

OBJECTIVES

The paper fulfills the following objective:

1. To know whether the select Macroeconomic indicators in Pre and Post is stationary or not
2. To study the relationship between FDI inflows on macroeconomic indicators during pre and post of make in India.
3. To analyse the impact of FDI on the Indian economy during pre and post of make in India.

HYPOTHESIS OF THE STUDY

Based on the identified objectives, the following hypothesis are framed:

H₀₁: There is no significant relationship between FDI inflows and macro-economic indicators.

H₀₂: There is no significant impact of Foreign equity inflows on macroeconomic indicators.

METHODOLOGY

The study is mainly based on secondary data. The study emphasizes the relationship between the Foreign Direct investment inflows on Macroeconomic indicators during the pre and post implementation of Make in India. The annual inflows of foreign direct investment and economic growth in India. There are 25 sectors were selected in Make in India among them, the top ten highest equity inflows were selected. The present study covers the period from 2010-11 to 2019-20. The study period was segregated as the pre and post of Make in India. Augmented Dickey Fuller Unit Root Test is used for checking the stationarity of macroeconomic indicators. Correlation Analysis is used for finding the relationship between FDI on macroeconomic variables during pre and post implementation of Make in India and Granger Causality test is used to study the impact of FDI on the Indian economy during pre and post of make in India.

**RESULTS AND DISCUSSION****TABLE 1****Results of Augmented dickey-fuller test unit root test for macroeconomic variables**

	LEVEL		1 st Difference		2 nd Difference	
	t-Statistics	Probability	t-Statistics	Probability	t-Statistics	Probability
Balance of Payment	-2.494	0.0548	-	-	-	-
Exchange rate	-2.481	0.0421	-	-	-	-
Export	-1.960	0.0907	-2.593	0.0410	-	-
GDP	-3.841	0.0121	-	-	-	-
Inflation	-1.946	0.0927	-2.529	0.0447	-	-

Table 1 reveals the Augmented Dickey-Fuller Unit Root Test to test the stationarity of macroeconomic variables during the period from April 2010 to March 2020. The stationarity of the Balance of Payment (-2.494), the Exchange rate (-2.481) proved at the level with an at-static value which is higher

than the critical values. Export (-1.960) and Inflation (-1.946) stationarity is proved at the first difference with t-static which is higher than the critical values. Hence the stationarity is proved at both levels t-static value and the first difference.

CORRELATION**Table 2****Correlation matrix for the FDI inflows on Macroeconomic variables in Pre-implementation of Make in India**

	Total Fdi Inflows	Balance Of Payment	Exchange Rate	Export	Gdp	Inflation
Total Fdi Inflows	1					
Balance Of Payment	0.127	1				
Exchange Rate	0.254	0.158	1			
Export	0.213	0.237	0.980	1		
Gdp	0.302	0.419	0.952	0.931	1	
Inflation	-0.735	0.010	-0.686	-0.567	-0.696	1

Source: Compiled and computed from secondary data

Table 2 represents the correlations matrix for the macroeconomic variables in pre of Make in India. Correlation is a technique for investigating the relationship between any two quantitative, continuous variables. The association between the FDI inflows and GDP shows moderate i.e., 0.302 while compared to the other variables. Followed by

the associations with Exchange rate and FDI inflows with 0.254. Association between Export and FDI inflows stands third with 0.213 and the relationship occurs in fourth with 0.217 between Balance of Payment and FDI inflows. The value of negative correlation is found between foreign direct investment and inflation with -0.735.



Table 3
Correlation matrix for the FDI inflows on Macroeconomic variables in Post implementation of Make in India

	Total Fdi Inflows	Balance Of Payment	Exchange Rate	Export	Gdp	Inflation
Total Fdi Inflows	1					
Balance Of Payment	-0.001	1				
Exchange Rate	0.857	-0.328	1			
Export	0.689	-0.641	0.785	1		
Gdp	0.854	-0.502	0.851	0.942	1	
Inflation	0.560	0.475	0.525	0.215	0.223	1

Source: Compiled and computed from secondary data

Table 3 represents the correlations matrix for the macroeconomic variables in the post of Make in India. Correlation is a technique for investigating the relationship between any two quantitative, continuous variables. The strength of association shows between the FDI inflows and Exchange rate shows high i.e., 0.857 while compared to the other

variables. Followed by the associations with GDP and FDI inflows with 0.854. Association between Export and FDI inflows stands third with 0.689 and the relationship occurs in fourth with 0.560 between Inflation and FDI inflows. The value of negative correlation is found between foreign direct investment and Balance of payment with -0.001.

GRANGER CAUSALITY TEST

Table 4
Pair-wise Granger Causality test result on FDI inflows on Macroeconomic variables on pre-Make in India.

Pairwise Hypothesis:	Obs	F-Statistic	Prob.	Decision	Types of Causality
TOTAL_FDI_INFLOWS does not Granger Cause BALANCE_OF_PAYMENT	4	1.34103	0.4535	DNR Ho	No Causality
BALANCE_OF_PAYMENT does not Granger Cause TOTAL_FDI_INFLOWS		34.5585	0.1073	DNR Ho	
TOTAL_FDI_INFLOWS does not Granger Cause EXCHANGE_RATE	4	0.18093	0.744	DNR Ho	No Causality
EXCHANGE_RATE does not Granger Cause TOTAL_FDI_INFLOWS		0.17475	0.7479	DNR Ho	
TOTAL_FDI_INFLOWS does not Granger Cause EXPORT	4	0.30780	0.6775	DNR Ho	No Causality
EXPORT does not Granger Cause TOTAL_FDI_INFLOWS		0.04180	0.8716	DNR Ho	
TOTAL_FDI_INFLOWS does not Granger Cause GDP	4	1.52481	0.4333	DNR Ho	No Causality
GDP does not Granger Cause TOTAL_FDI_INFLOWS		0.02147	0.9074	DNR Ho	
TOTAL_FDI_INFLOWS does not Granger Cause INFLATION	4	0.19166	0.7373	DNR Ho	No Causality
INFLATION does not Granger Cause TOTAL_FDI_INFLOWS		12.6537	0.1745	DNR Ho	

Source: Compiled and computed from secondary data



Table 4 reveals the pairwise granger causality analysis of Foreign Direct Investment inflows and select macro-economic variables from April 2010 to March 2020. It is inferred from the table the pairwise analysis exhibits the results of the Granger causality test to determine the relationship between FDI and

Select Macroeconomic variables. However, it can be ascertained from the table that, No Causality exists between Balance of payment, exchange rate, inflation, GDP and export for the pre-Make in India implementation.

Table 5

Pair-wise Granger Causality test result on FDI inflows on Macroeconomic variables in post Make in India.

PairWise Hypothesis	Obs	F-Statistics	Probability	Decision	Types of Causality
BALANCE_OF_PAYMENT does not Granger Cause TOTAL_FDI_INFLOWS	4	0.86420	0.5232	DNR Ho	No Causality
TOTAL_FDI_INFLOWS does not Granger Cause BALANCE_OF_PAYMENT		0.97959	0.5033	DNR Ho	
EXCHANGE_RATE does not Granger Cause TOTAL_FDI_INFLOWS	4	1.53666	0.4321	DNR Ho	No Causality
TOTAL_FDI_INFLOWS does not Granger Cause EXCHANGE_RATE		19.5503	0.1416	DNR Ho	
EXPORT does not Granger Cause TOTAL_FDI_INFLOWS	4	42.8802	0.0965	Reject Ho	Uni-directional causality
TOTAL_FDI_INFLOWS does not Granger Cause EXPORT		0.49055	0.611	DNR Ho	
GDP does not Granger Cause TOTAL_FDI_INFLOWS	4	2.13234	0.3823	DNR Ho	No Causality
TOTAL_FDI_INFLOWS does not Granger Cause GDP		0.53786	0.5972	DNR Ho	
INFLATION does not Granger Cause TOTAL_FDI_INFLOWS	4	0.65535	0.5668	DNR Ho	No Causality
TOTAL_FDI_INFLOWS does not Granger Cause INFLATION		0.12811	0.7812	DNR Ho	

Source: Compiled and computed from secondary data

Table 5 reveals the pairwise granger causality analysis of Foreign Direct Investment inflows and select macro-economic variables from April 2010 to March 2020. It is inferred from the table the pairwise analysis exhibits the results of Granger causality However, it can be ascertained from the table that, No Causality exists between

GDP, inflation, exchange rate and balance of payment. The export results reveal that there is unidirectional causality between Foreign Direct Investment and export in post Make in India implementation.



CONCLUSION

Foreign direct investment is considered as the lifeblood of the economic growth. Make in India is a flash grip initiative to enhance the foreign direct investment. So this paper analysed the correlation matrix between FDI and macroeconomic variables and the impact of FDI on macro economic variables in pre and post of Make in India proposal. The

findings shows that the correlation matrix is analysed between FDI inflows and Macroeconomic variables. The strength of association shows between the FDI inflows and Exchange rate shows high in the post period of Make in India. The Granger causality results that there is unidirectional causality between Foreign Direct Investment and export in post Make in India implementation.