Research Article

Study Of The Impact Of Foreign Dırect Investment On Industrıal Productıvıty

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Abstract

According to a recent survey, Foreign Direct Investment (FDI) in India has received a phased improvement and has impacted the industrial productivity. There was an incredible increase in FDI inflows (40 percent) from October 2014 to June 2019, particularly in the manufacturing sector. One of the dominant sectors contributing to the major Indian GDP is considered to be the industrial sector. India has been ranked fourteenth in the world's factory output. This was attributable to the introduction of an effort to encourage development divisions and to be a magnet for international investment. In the whole country, more than 56 industrial units have benefited. In recent years, industrial output has tilted to 3.1 percent between 2014 and 2019, largely because of improvement and to promote skill growth for the different sectors of the economy. This paper highlights the government's recent attempts to promote FDI in different sectors and how it has built a course. India has seen a huge growth in foreign direct investment in different sectors of the economy in the last ten years. Although the Government of India has built a route to attract FDI in different industries, this paper focuses on understanding the effect on FDI of making in India scheme. A duration of five years has been regarded for the study in this article. For data processing, statistical methods such as Karl Pearson's Coefficient Correlation and One - Way ANOVA were used. Data processing is used to study the interaction between the association between FDI and IIP.

Keywords: GDP, FDI,, Industrial Growth, Manufacturing units.

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Introduction

Foreign Direct Investment (FDI) plays an important role in the promotion of exports and in the transformation of the Indian economy. Foreign Direct Investment (FDI) is an imperative instrument for the development of exports from many countries. FDI in India has historically increased, with a big spike in FDI inflows between October 2014 and June 2018. The magnets used to attract the FDI were most of the output devices. The Make idea has already worked in India and some of the domestic goods depend on rising demand. The job opportunities are created in large numbers across the different sectors in India. Through growing competitiveness and production potential, FDI is arguing that exports and technology transfer are also essential for enhancing local workers training. The make in India initiative has helped the host countries to export by making it easier to accept the latest and big foreign markets. Since the 1980s, India has witnessed a big increase in the flow of FDIs, and particularly the liberalisation of the Indian economy since the 1990s.

Around 56 processing facilities are run by private players to support further FDIs, and over 90 percent of the FDI is seen. The Indian scheme has given for a state-of-the-art study of FDI inflows through the economic survey and has shown that over the last decade Haryana, Delhi, Karnataka, Gujarat, Tamil Nadu and Andhra Pradesh has drawn more than 70% of the overall FDI inflows to India. The Indian government has listed in the top 10 striking diversified investment destinations. It has been a participant in international investment. The Government of India has taken some important measures and improvements to the FDI strategy are being made to ease the company and to prepare the FDI in the coming years. FDI is also a vehicle for foreign economic integration. India is claimed to be the second most populated region, with consumer expenditure increasing between 2006 and 2011 from US$ 549 million to US$ 1.06 billion. India is therefore one of the top consumer markets in the world by 2015. The intake of India is projected to rise annually over the next 20 years. The rising population of the high middle classes in the country renders India a 'consumption centre' in the nation. The increase in the middle class of India is critical in rising output ability in terms of demand (i.e. Made for India).

Need For The Study

There have been several studies in this study, however this study focuses on the impact of FDI in industrial productivity. The population increases at a binomial pace, and development units depend on the delivery of products and services to the population. This research analyses the attractiveness and efficiency of FDI in different production units. For this analysis, the researcher used cumulative compound growth rates to evaluate the annual growth trend. The FDI initiative in India gave way and several sectors were defined according to the scheme. The researchers have chosen for study during the last six years, and certain diminutive industries are prohibited from the FDI.

The Objective Of The Study

1)   To analyze the Trend of Industrial growth rate in India.

2)   To examine the trend of FDI inflow in Manufacturing sector.

Research Methodology

The writer used secondary data for this analysis in this review paper. Data gathered from different outlets such as the Indian official site, the DIPP, the EXIM bank and other papers. This report is focused on the consolidated policy structure of the FDI, the Ministry of Commerce and the government of India. In this report, an extensive review, reasons why India has been chosen as a hub in the development and the link between FDI and IIP (Index of Industrial Production).

Knowledge sources: statistical evidence are obtained from secondary sources, released and unpublished data from different types such as newspapers, departments and public organizations. Statistical techniques and methods: Certain statistical instruments such as Karl Pearson's Correlation Coefficient and One – Way ANOVA were used for the research of this report.

Period Of The Study

This study has been conducted for the period of five years from 2013 - 2014 to 2018 -2019. Researcher has gathered the secondary data for the analyzing the FDI inflows into the selected sectors in India.

Review Of Literature

The literature review was compiled on the basis of past studies carried out in this area and. Prasad, and. Al. (2007)1 The findings enabling FDI and international cooperation have been discussed in their paper. At the beginning, international investment has drawn mainly the production and service sectors. Their research also explored the fields where regulations such as cultivation, real estate, rail transport, etc. have been implemented by the government. Any parts of the economy appear to be funded by the government which use international investments.

Dunning, Lundan (2008)2, illustrated the spillover impact of the linkage between the FDI and the economic agents of the host nation. In terms of further investment in the developing market, the FDI has produced industrial growth.

In his research paper, Narayana (2013)3 notes that the key policymakers draw more foreign direct investment. Direct international inflows were attracted. In vast numbers and in general certain underlying limits and foreign direct investment.

Singh, Gupta (2013)4, addressed India's foreign capital strategy in their analysis and noticed that India's policy structure has changed from the numerous problems of the Indian foreign trade policy from 1948-1966 and the selective stringent 1967-1979 policy. The liberal investment climate was established only in 1991.

Lakshmana Rao, Ravikanth (2016)5, has been researching how the key reason behind the goal is to concentrate on heavy industrial units, state-owned firms, work development, etc. It

is mentioned that the investment company in the overseas market can invest in any international subsidiary or affiliate country. The business can invest for the acquisition of shares and title in different sectors.

Trend Of Industrial Growth

According to the National Accounts Statistics reproduced by the Government of India in 2018 - 2019, the industrial growth was stood at 9.6%, the below table represents the Trend of Industrial Growth.

Table 1:TREND OF INDUSTRIAL GROWTH

SECTORS	2013 - 2014	2014 - 2015	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019
Mining and Quarying	5.13	5.32	5.47	6.12	6.17	7.25
Automobile	8.24	8.65	8.87	9.22	9.32	10.14
Chemicals	2.47	3.12	3.78	4.27	4.32	5.14
Telecommunication	6.3	6.57	6.84	7.84	7.89	8.33

Source: Central Statistical Office, Government of India.

From the above Table 1, according to the NAS (National Accounts Statistics) which is circulated by Government of India, from 2013 - 2014 to 2018 - 2019, the growth in the Industrial Index was at 2.64% and 5.23% during the year 2016 - 2017 to 2018 - 2019. Among the Industries the Automobile and Telecommunication has shown the Growth at steady rate. This is very clear from the above Table 1 that the Index of Industrial Production (IIP) is getting recovered in slow nut with the average growth rate of 2.12%.

TREND OF INDUSTRIAL GROWTH RATE

The Index of Industrial Production (IIP) is considered to be an indicators which shows the flow of FDI in industrial sector and it is a crucial measure to see the industrial output of country. FDI inflows into India and IIP of the corresponding period for the six years is represented in the below table to understand the relation.

YEAR	TOTAL FDI (in US $ Million)	INDEX OF INDUSTRIAL PRODUCTION
2013 - 14	36396.00	172.03
2014 - 15	37854.00	184.25
2015 - 16	38274.00	177.22
2016 - 17	37892.00	187.06
2017 - 18	39147.00	188.67
2018 - 19	39894.00	190.24

S.D	**1202.49**	**7.16**	
CAGR	1.54	1.69	

Source: DIPP Fact Sheet, updated up to march 2020

INTERPRETATION

During the Study period 2013 - 19, from the Table 2 explains that the India's Total FDI and Index of Industrial Production, has been increased from US $ 36396.00 to US$ 39894.00 for the past six years. During the year 2014 - 15 and on this the total steel has reported at 0.08% growth for the year 2014 - 15. The Coefficient of variation for the total exports was at 0.26 percent and the steel exports stood at 0.30 percent. The CAGR for the total FDI stood at 1.54% and the CAGR for Index of Industrial Production stood at 1.69%. This shows the positive growth trend and the covariance of the above is 5820.01.

During the study period 2014- 2019, the standard deviation for the Total FDI is 1202.09 and the Standard Deviation for the IIP is 7.16. The high value in the SD shows the stagnant growth in the FDI inflows. During the year 2018 -19, the value of Total FDI was higher and it was US$ 39894Millions and the IIP was also higher during the year 2018 - 19 and it was 7.16. The FDI inflow during 2014 - 2016 shown a fluctuating trend. The recovery in the Industrial index is seen in some of the major sectors that include Coal and mining. There is an immense progress seen in many of thesectors such as Automobile, Telecommunication and chemicals. In India the industrial production is highly fluctuating. As per the Industrial Index, the Industrial Production has been slow down to 2.98% each year. The Industrial Growth has achieved a steady growth due to the recovery in the mining industries and followed by manufacturing industries.

KARL PEARSON'S CORRELATION

		Total FDI	Index of Industrial Production
Total FDI	Pearson Correlation	1	.265
	Sig. (2-tailed)		.483
	N	6	6
Index of Industrial Production	Pearson Correlation	.226	1
	Sig. (2-tailed)	.414	
	N	6	6

Source: SPSS, Computed.

A correlation coefficient of + 0.483 suggests that a rise in FDI influxes is related to an increase in the industry performance index (IIP). This study indicates that FDI inflows and

IIP are positive. Foreign Direct Investment (FDI) improves the manufacturing sector and contributes to economic growth in the region. In view of the pervasive use of non-tariff barriers in Indian trade policy, the level of protection given to the Indian industry cannot be measured. The Industrial Production Index (IIP) indicates that the manufacturing sector has undergone sluggish yet steady growth and has registered steady growth at a percentage of 12.22 in production.

The relation indicates a link between two variables, independent of their presence. Correlation is not a factor. The connection is rendered for the determination of significance and value N = 6, the significance of correlation was 0.226, which implies it is far smaller than the link between two variables, 'poor.' Analysis shows that the correlation between the variables is negative (since nearer the value to zero the relationship is weak). Statistically significant are 0.226, and also 0.414 with a sample size of 6. The relation between overall FDI and IIP inflows is negligible, whereas the relationship between FDI and FDI inflows is small. A correlation coefficient of + 0.483 suggests that a rise in FDI influxes is related to an increase in the industry performance index (IIP). This study indicates that FDI inflows and IIP are positive. Foreign Direct Investment (FDI) improves the manufacturing sector and contributes to economic growth in the region. In view of the pervasive use of non-tariff barriers in Indian trade policy, the level of protection given to the Indian industry cannot be measured. The Industrial Production Index (IIP) indicates that the manufacturing sector has undergone sluggish yet steady growth and has registered steady growth at a percentage of 12.22 in production.

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FOREIGN INVESTMENT IN INDIAN

MANUFACTURING

The below Table 3 represents the value of Total FDI and Foreign Investments in Manufacturing.

TABLE 3:FOREIGN INVESTMENT IN INDIAN MANUFACTURING

YEAR	TOTAL FDI (in US $ Million)	FOREIGN INVESTMENT IN MANUFACTURING (IN US $ MILLION)
2013 - 14	36396.00	47.90
2014 - 15	37854.00	93.40
2015 - 16	38274.00	65.30
2016 - 17	37892.00	63.80
2017 - 18	39147.00	96.10
2018 - 19	39894.00	84.40
S.D	**1202.49**	**19.11**
CAGR	1.54	9.90

Source: DIPP, Computed.

INTERPRETATION

During the period of the study i.e. from 2013 - 2014 to 2018 - 2019, from the Table 2 it may be inferred that the Total FDI of FDI inflows has been increasing from US $ 37854 Million from US $ 36396 Million and the Foreign investment in Manufacturing could also seen inclining during the year 2014 - 2015, as it has inclined to US $ 93.40 Million. The trend of Foreign investment in Manufacturing has been seen in fluctuating trend. The CAGR of Total FDI stood at 1.54% and the CAGR of Foreign investment in Manufacturing stood at 9.90%, which has given a clear picture of positive trend during the period of the study. Total FDI was at higher during the year 2018 - 2019 and it was US$ 39894 Million, and the highest Foreign Investment In Manufacturing was during the year 2017 - 2018 and it was US $96.10 Million.

KARL PEARSON'S CORRELATION

The below table brings the correlation between the two variables i.e. FDI and Manufacturing.

Upon the results the discussions have been done below.

H_0 . There is a significant relationship between the value of FDI and IIP.

H_1 . There is no significant relationship between the value of FDI and IIP.

CORRELATION ANALYSIS

Correlations

		FDI	MANUFACTURING
FDI	Pearson Correlation	1	.706
	Sig. (2-tailed)		.117
	Sum of Squares and Cross-products	7229908.833	81120.550
	Covariance	1445981.767	16224.110
	N	6	6
Manufg	Pearson Correlation	.706	1
	Sig. (2-tailed)	.117	
	Sum of Squares and Cross-products	81120.550	1825.935
	Covariance	16224.110	365.187
	N	6	6

Source: SPSS, Computed.

Correlation Coefficient of + *0.117* indicates that there is a weak correlation between FDI inflows and the manufacturing sector. According to this study, there is a long term relation

Table 4:Percentage Change in Industrial Growth (in Percentage)

Sectors	2013- 14	2014 - 15	2015 - 16	2016 - 17	2017 -18	2018 - 19
Mining and Quarrying	-0.78	5.84	5.98	6.21	6.37	7.23
Manufacturing	2.10	4.12	4.35	4.89	5.14	6.40
Electricity, Gas	2.22	2.33	2.78	3.27	3.65	4.80
Industry	2.17	2.56	2.68	3.87	4.25	4.95
Construction	1.89	2.11	2.74	2.98	3.97	5.23

Source: CSO, Government of India.

From the above Table 4, it is concluded that base year from 2013 -14 to 2018 -19 by applying the methods in the statistical part, there are some improvements in methodology, in the table the data are noted with respect to the Indian industrial sector. The industrial development in the mining and quarrying sector from 2013-2014 to 2018-2019 could be seen by the shift in the GDP from negative 0.78% to positive 7.23%. A tremendous increase in the manufacturing sector has taken place It was announced that the manufacturing sector saw a gradual rise in the development from 2.10 percent to 6.40 percent throughout the year 2013 - 14.

between inbound FDI and manufacturing sector. The FDI inflows stabilize the manufacturing sector and stimulate growth of the country's industrial performance since a few factories have shown a strong index of industrial production. The Indian Industry security was unable to be adequately assessed because of the influence of nontariff barriers used in Indian trade policy. It is discovered that the industrial sector has a slow rise, but in a steady manner, and has reported a but steady manner with a percentage of 9.90% growth in the manufacturing sector.

The association shows a connection between two factors, regardless of the existence of the relationship. Causation is not correlation. Correlation is done to evaluate the importance and the Value N= 6, the value of correlation stood at 0.706, Because, the value is far lesser than the interaction between the two variables are 'bad'. Analysis has shown that the relationship between the variables is bad (since nearer the value to zero the relationship is weak). The correlation coefficients called are 0.117 and 0.706, and the sample size is six. .The relationship between overall FDI inflows and the IIP is claimed to be weak while the relationship between the value of FDI inflows and the IIP is expected to be only weak.

GROWTH OF INDUSTRIAL INDEX

The below Table 4 represents the Percentage Growth of Industrial Index from 2013 - 14 to 2018 - 19. Statistical Tools like One - Way ANOVA has been used to analyze the mean significance between the selected variables. 2018 - 19. The manufacturing sector has proven the increase in the Industrial growth consistently.

ONE - WAY ANOVA

The One - Way ANOVA has been conducted to see the mean significance between the variables.

Data in the below tables provide the data for the calculation, for the f and p values in the calculation.

Source	SS	df	MS	
Between - treatments	19.314	4	4.8285	
Within -Treatments	71.9705	25	2.8788	f= 1.67725
Total	91.2875	29		

Source: Computed

The above results show that the **f-ratio value is 0.67725**. The **p-value is 0.186697**. The result is not significant at p < 0.05. Hence it is concluded that there is no significant difference in the computed values for the year wise FDI inflows and the Industrial Growth during the study period 2013 - 2014 to 2018 - 2019. The Industrial growth has clearly shown that there is a tremendous increase of FDI inflows and more certainly it has encouraged the FDI.

Findings

One credible recommendation which can be derived from these results are that domestic firms can reap rich dividends if the FDI inflows are evenly distributed across the states, particularly concentrating the efforts on attracting FDI into non-industrial states. As we have shown earlier that there is uneven distribution with respect to FDI inflows within Indian regions, as a consequence, policies that have been successful in one region should not be blindly replicated in other regions. This sometimes is unlikely to be successful, particularly for poor and North-Eastern regions of India. Rather, our results have shown that a marginal attempt to attract FDI inflows and foreign technical collaborations in these so called non-industrial states can affect local firms positively. Thus, minor contributions do make a difference, and ultimately lead to inflows of FDI leading to technology diffusion. Finally, the insignificant effect of foreign technical collaborations unless controlled for FDI inflows shows that mere signing of the collaborations with

foreign firms will not be of any beneficiary for the domestic firms. The collaborations must be followed by significant investments in plant and production by foreign entities if they were to make an impact on local firms in terms of technology transfers.

The above findings demand logical interpretations and point out policy consequences. First, when the contribution of FDI is compared across models, the coefficient values are lower. However, caution should be exercised in analysing these findings, since they cannot be interpreted to mean that international capital is not playing a larger role in the diffusion of technology in Indian regions. This is because a far more detailed examination of the real net effect of international firms' participation and penetration on local company competitiveness in each sector and area is needed.

This kind of micro-level investigation will expose the true impact of foreign acquisitions on Indian companies. Second, tables summarise the temporal structure of the impact of FDI and international technological partnerships on industry production per worker in Indian regions.

To begin with, the partial results of FDI inflows suggest that FDI is becoming increasingly significant not just for industrial regions but also for non-industrial regions. In comparison to nonindustrial systems, the partial effects coefficient for industrial nations is smaller. Although FDI inflows benefited industrialised countries, they benefited non-industrialized countries even more. Industrial states gained 0.58 percent from FDI inflows, while non-industrial states gained 0.87 percent.

Suggestions

One reliable conclusion that can be drawn from these findings is that domestic businesses can benefit greatly if FDI inflows are uniformly spread through states, with a special focus on attracting FDI to non-industrial states.

Since there is an unequal distribution of FDI inflows within Indian regions, policies that have been effective in one area should not be blindly repeated in other regions, as we have seen previously. This is not always effective, particularly in India's poorest and north-eastern regions.

Rather, our findings suggest that even a minor effort to draw FDI inflows and international technological partnerships in these so-called non-industrial states may have a beneficial impact on local firms. As a result, even small inputs will make a difference, contributing to FDI inflows and technology diffusion.

Finally, the lack of significance of international technological partnerships because they are monitored for FDI inflows demonstrates that simply signing collaborations with foreign companies would not benefit domestic firms. If international companies want to have an effect on local businesses in terms of technological transitions, they must follow up with substantial investments in plant and development.

Conclusion

This paper analyses the influx of foreign capital in the form of FDIs and how it impacts the economic development in India by using methodological techniques from 2013-2014 to 2018-2019. The study time is quite important after the post-recession phase is over, and it is evident that India has drawn higher FDI inflows into the manufacturing industry. The findings of the Karl Pearson correlation suggest that the FDI-Industrial Development partnership has seen an optimistic pattern over the following years. India's competitive investment environment has led to FDI inflows into India and the competitive climate is the base for FDI to join the economy and for industrial potential expansion. Different primary policy steps must be implemented to boost the manufacturing infrastructure and maximize internal absorption potential. To make the FDI the best influx and promote industrial growth, to enrich local entrepreneurship, secure macroeconomic conditions and to strengthen the development phase.

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