

A STUDY OF EFFECT OF COVID 19 IN FDI INFLOW IN INDIA WITH SPECIAL REFERENCE TO SERVICE SECTOR AND COMPUTER HARDWARE & SOFTWARE SECTOR

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Abstract—This paper studies the effect of COVID 19 in the FDI inflows from Services Sector and Computer Hardware and Software sector. It studies the data pertaining to the FDI inflow in India for the last six years.

The research is based on secondary data derived from the official websites of the various government departments. The two sectors targeted in this paper are selected on the basis of their growing importance to the Indian economy. Also, the emergence of India as a knowledge hub and the emergence of Industry 4.0 with technology as one of the key factors in the growth of any economy.

The research methodology used is time series analysis and trend analysis. The data has been divided into pre-covid, during covid and post covid phase. The sectoral analysis of the FDI data has been done to verify the acceptance or rejection of hypotheses.

Keywords— foreign direct investment, service sector, computer sector, software and hardware sector, trend, automatic route, COVID.

INTRODUCTION

The Foreign Direct Investment Inflows act as a barometer of the investors perception on the long term resilience of an economy. The Indian Economy has been at the forefront of the world investment prospects. The COVID 19 has changed the world in its form and its perceptions. The investment avenues have changed and the flow of funds have been affected. The impact of COVID 19 has been enormous and long term on the various areas of the world economy.

The service sector, which is considered as the transport of growth for the Indian economy and the sector of computer hardware and software, which is considered to be the part of the modern knowledge economy, are the two drivers of growth and investments in recent times.

The study is based on the analysis of these two sectors and the impact that COVID 19 had on the performance of these sectors as far as the inflow of FDI in the Indian economy is considered. This paper takes these two sectors and analyzes the changes caused in these sectors during and post COVID era.

LITERATURE REVIEW

There is a positive correlation between the economic factors and the flow of FDI. Post liberalization, the FDI has remained as one the key factors in the development of the economy. The tertiary sector has remained the highest contributor in the FDI inflows. Mumbai, Delhi and Chennai contribute most of the FDI inflows in our country. (Sharma et al. (2016)).

The CAGR at the time of pre liberalization was 25.46% which was very minimal due to the inward looking strategy and dependence of external borrowings . By the time of post liberalization it increased by 34.73%. The author with the help of ARIMA model included 30 years 1980-81 to 2009- 2010. {Anitha (2012)}

The global inflow of FDI declined by 8% in the first half of the world economy with not compete with the other developed countries which affected in increase in the inflow of FDI that was not enough increase. By policy maker the author tried to deliver the lost lasting relationship ideas. { Prerna et al. (2013)}

The focal point was to examine the inflow of FDI in different sectors & states during 2000-2010 and by taking the CGR and semi log trend model in consideration, the change in the trends in FDI and foreign investment. Economic growth leads to the attraction of FDI and also shows that GDP & FDI have an inverse relationship, by using the regression equation, this is the relationship between FDI & GDP. {Jammu S. et al (2014)}

In India FDI has a notable role for the growth of economy and overall development of the country. Various sectors in the country can attain sustainable growth and development by manufacturing new industries & expanding the already existing industries, which will again lead to growth in job opportunities. From 2000 to 2015 the inflow of FDI in the service, construction & development sector has witnessed significant sustained growth in the economy and then development with the help of creation of jobs in India. FDI also showed an interest in the pharmaceuticals & drugs, software & hardware and computer sector. But the other sectors of the country were quite unhappy about the FDI. After the FDI in the service sector the sector now generates the proper employment with high perks. For the development of foreign exchange system and for the strength of the Indian economic situation, the banking and insurance sector provided the help with FDI. Impression on the world wide through liberalization and globalization and helping the small scale industry and also creating employment in the industry , all of these is done through FDI. (Vyas, A.V(2015)}

FDI, service trade, merchandise and economic growth shares a long term co-relationship with each other. The economic growth and merchandise trade overserve reciprocal causality. Whereas in case of FDI to economic and FDI to merchandise they observe a unidirectional causality , the same is observed between merchandise trade and service trade. { Bhattacharyya Jita, Bhattacharyya Mousumi (2012)}

By using the time series data during the time of 1970-2007 this study investigated the different trends of inflow of FDI. This paper in particular aims to study the fluctuation of inflow of FDI in India and to find the responsible factor for the fluctuation in the FDI trends. { Singh S., Singh M. (2011)}

The study shows the impact of fiscal incentive offered by FDI inflow in both developed and developing countries after the removal of restrictions and signing of bilateral and regional investment agreements. The aggregate impact on FDI is not very significant in case of fiscal incentives but on the other hand the removal of restrictions attracted the aggregate FDI. However, different selective policies attract FDI in developed and developing countries. These are the impact of government policies and investment agreements on FDI inflow. { Banga, Rashmi (2009)}

One of the important routes for inflow of FDI which in relation to increases the both main equity and Foreign

Institutional Investor and FDI. Financing , Insurance and Business services are the sector with the highest amount of FDI inflow which is 33.05%, whereas in relation to minimum cumulative inflow of FDI is 0.07% which goes to the research and scientific sector. { Singh et al. (2012)}

The writers review on economic growth and its relationship with FDI. She made both descriptive and analytical study. The time period taken for the same was 10 years i.e. 2003-2013. By using the CAGR and the Karl Pearson correlation and coefficient the author has presented its hypothesis. By this they came to the conclusion, that in the case of GDI with relation to FDI, coefficient is 0.87% which therefore will indicate that the economy moves toward FDI inflow and same with Gross National Profit. But where the coefficient is 0.46 , shows decrease in overall BOP which further will increase the inflow of FDI. { Kirthika et al. (2014)}.

RESEARCH GAP

COVID 19 has been a game changer in the flow of foreign funds in an economy. It has proved the resilience of the Indian economy through various parameters. It has projected India as one of the leading players in the world economy. There has been research on the FDI inflows in India from time to time but the impact of COVID 19 is very important to understand the strength of the FDI inflows in India. The gap exists in the study of FDI inflow during COVID 19.

RESEARCH OBJECTIVES

- To analyze the flow of FDI to various sectors of the Indian economy.
- To understand the trend of sectoral contribution on the flow of FDI in India with special reference to the Service Sector and Computer Hardware and Software sector.
- To understand the change in the share of total FDI contribution over the pre-COVID, during COVID and post COVID times.

HYPOTHESIS

Ho1: The contribution of percentage of FDI inflow in the “Computer Software and Hardware” sector in the total FDI inflow in India has significantly decreased during COVID 19 and post COVID 19.

Ho2: Total FDI inflow has reduced significantly during the COVID 19 period.

Ho3: The percentage contribution made by the service sector in the FDI inflows in India has increased during COVID 19 and post COVID 19.

Ho4: The FDI inflow in the service sector has increased in absolute terms over the time period.

Ho5: The FDI inflow in Computer - Hardware and Software Sector has been significantly adversely affected during and post COVID 19 period

RESEARCH METHODOLOGY

This research is based on secondary data derived from the published data of the Department for Promotion of Industry and Internal Trade, Government of India.

Time series analysis has been used to analyze the data on FDI inflow to various sectors over the years. The Pre-Covid year has been taken from 2016-17, 2017-18 and 2018-19. The Covid phase has been considered between 2019-20 and 2020-21. The post Covid phase has been considered as 2021-22. Hence , the data considered for research is of six years.

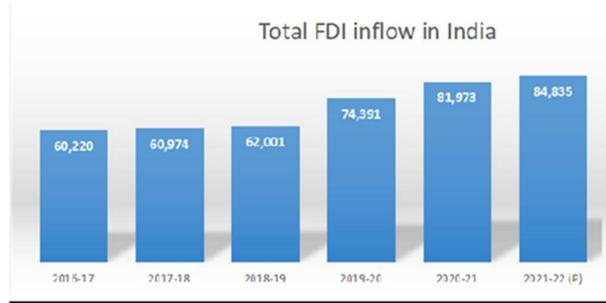
Trend Analysis has been used to analyze the data of FDI inflow in India from 2010 to 2022.. Hence FDI inflow has been analyzed for 13 years.

Nine sectors of the economy have been taken into consideration. They include Services, Computer Software and Hardware, Telecommunication, Trading, Automobile, Construction (Infrastructure), Construction (Development), Chemicals (other than fertilizers) and Drugs & Pharmaceuticals.

The analysis of data has been done in two forms: a) Sector Wise Movement of FDI and b) Yearly flow of FDI through both FIPB Route and through automatic route.

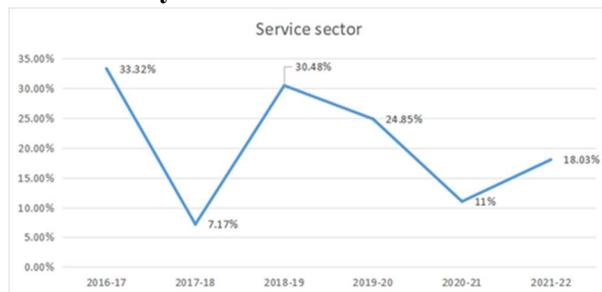
DATA ANALYSIS

The total FDI inflow in India has been increasing over the years and it can be seen from the above graph that there has been an increase in the inflow of FDI during COVID times also. Contribution of each sector to FDI inflow:



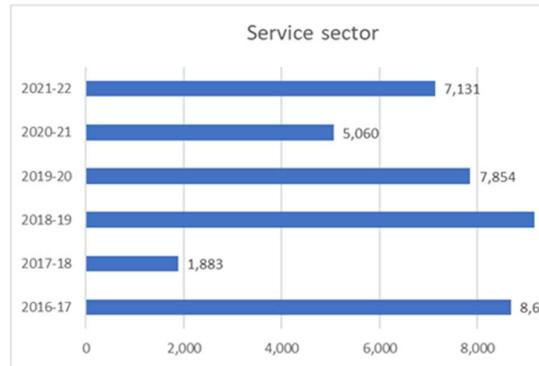
Sector	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Servicesector	33.32%	7.17%	30.48%	24.85%	11%	18.03%
Computer software and hardware	14.01%	23.42%	21.35%	24.28%	56%	36.57%
Telecommunication	21.35%	23.64%	8.88%	14.06%	1%	1.69%
Trading	8.97%	16.55%	14.85%	14.47%	6%	11.48%
Automobile Industry	6.17%	7.95%	8.73%	8.94%	4%	17.69%
Construction (infra activity)	7.14%	10.39%	7.52%	6.46%	17%	8.21%
Construction (development)	0.40%	2.06%	0.71%	1.95%	1%	0.32%
Chemicals (other than fertilizer)	5.34%	4.98%	6.59%	3.35%	2%	2.44%
Drugs and pharmaceuticals	3.29%	3.84%	0.89%	1.64%	3%	3.58%

1. Analysis of Service Sector:



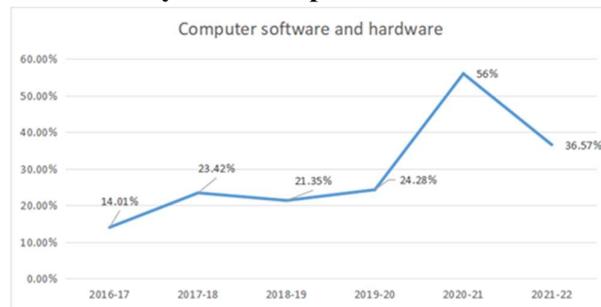
The percentage contribution made by the service sector to the total FDI inflow in India has decreased over the year. However, it has remained cyclical in its contribution. The

FDI inflow in the service sector during COVID times has shown decline but it has recovered well in the year 2021-22.

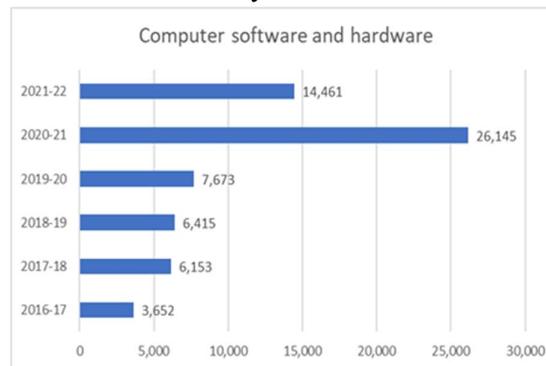


In absolute dollar terms, there has been a decrease in the total FDI inflow from the service sector by 17.88% over the last six years. There was a drastic decline in the FDI to this sector in the year 2017-18. However, the same bounced back with a record FDI inflow in the year 2018-19.

2. Analysis of Computer Software and Hardware:



The percentage contribution of the “Computer Software and Hardware” sector in the total FDI has increased from 14.01% in 2016-17 to 29.83% in 2022. From the above graph it can be seen that FDI inflow from this sector has seen a spike during the COVID times. Also, the percentage contribution made by this sector in FDI inflow during the year 2020-21 has been at 56%.



In absolute dollar terms, the FDI inflow from this sector has declined in the year 2021-22 but it is appearing only due to the sudden spike in the year 2020-21. However, if we look into the overall growth the sector's contribution to the overall FDI inflow has increased over the years.

FINDINGS

S.N	Null Hypothesis	Accepted/ Rejected
H01	The contribution percentage of FDI inflow in the "Computer Software and Hardware" sector in the total FDI inflow in India has significantly decreased during COVID 19 and post COVID 19.	Rejected
H02	Total FDI inflow has reduced significantly during and post COVID 19 period.	Rejected
H03	The percentage contribution made by the service sector in the FDI inflows in India has increased during COVID 19 and post COVID 19.	Rejected
H04	The FDI inflow in the service sector has increased in dollar terms over the time period.	Rejected
H05 :	The FDI inflow in Computer - Hardware and Software Sector has been significantly adversely affected during and post COVID 19 period	Rejected

- The contribution of FDI inflow in the "Computer Hardware and Software" Sector has increased during and post COVID 19.
- Total FDI inflow in India has increased during the COVID 19 period.
- The percentage contribution made by the service sector in the FDI inflows in India has decreased during COVID 19 and post COVID 19.

- The FDI inflow in the service sector has decreased in dollar terms over the time period.
- The FDI inflow in Computer - Hardware and Software Sector has not been significantly adversely affected during and post COVID 19 period

CONCLUSION AND RECOMMENDATION

The FDI inflow in India has been on growing trend irrespective of market conditions due to COVID 19. The increasing trend in the FDI inflow in the Indian economy points towards the resilience of the economy and the deep rooted foundation.

The service sector which contributed about one third of the FDI inflow in India in 2016-17, has seen decline in the percentage contribution of the same to the FDI. Also, in dollar terms there has been a decline in the FDI inflow in the service sector. It has been adversely affected during the COVID 19 and post COVID 19 period.

The computer software and hardware sector however has remained resilient to the impact of COVID 19. The contribution of the sector has increased both in terms of dollar amount and percentage contribution in the total FDI inflow in India.

There is a necessity to leverage the potential of both these sectors through proper government support and active role played by the private players.

REFERENCES

- Sharma M. (Jan 2016). Impact of FDI on Indian Economy. International journal of innovative research, 5(2), pp. 202-04. (Retrieved from www.ijird.com)
- Deeptirani Rath and Biswajit Bhoi Deeptirani Rath and Biswajit Bhoi (Faculty), DE, CUO, Koraput, (Aug 2018), CRITICAL REVIEW OF LITERATURE OF FDI IN INDIA: PRELIMINARY OBSERVATION, JETIR, Volume 5, Issue 8.
- Anitha R. (2012). FDI & Economic growth in India. International journal of marketing financial services & management research, 1(8), pp 108-114.
- Jammu S. & Welling J.S. (2014). FDI in India, International journal of econometrics & financial management, 2(3). Pp 95-101.
- RAKHI (2020). FOREIGN DIRECT INVESTMENT (FDI) IN INDIA. International Journal of Creative Research Thoughts(IJCRT) , Volume 8, Issue 8 August 2020.
- Kirthika M. & Nirmala S. (Oct 2014). A study on the effect of India's FDI inflows & its economic growth. International Journal of Informative & Futuristic Research, 2(2), pp.350-359.

WEBSITES

- <http://pib.gov.in>
- <https://dpiit.gov.in/publications/fdi-statistics>
- <http://shodhgangotri.inflibnet.ac.in>
- <https://deliverypdf.ssrn.com>