Foreign Direct Investment in India: Regional and Sectoral Dimensions

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Abstract
The paper aims to evaluate the sector and state wise distribution of Foreign Direct Investment (FDI) in India from 1991 to 2021. Decadal comparison has been made to compare sector and state-wise distribution of FDI inflow. The analysis shows that there has been an upward rising trend in overall FDI in the last thirty years. The three sectors that attracted the highest cumulative FDI in thirty years include the Services Sector, Computer Software and Hardware, and Telecommunications. The three major states where the highest amount of FDI inflow has been reported are Maharashtra, Delhi, and Karnataka. Gradual expansion in sectoral demand along with liberalized government regulation helped to attract foreign equity inflow in different sectors. Unlike the sectoral distribution of FDI, regional distribution has remained almost unchanged with Maharashtra, Delhi, Karnataka, Tamil Nadu, Gujarat, and Haryana remaining major destinations of FDI inflow. Thus, it was found that sector-wise concentration is coming down while regional concentration has increased.

Keywords: Foreign Direct Investment (FDI), Telecommunication Sector, Service Sector, Computer Software, Concentration

1. Introduction

Foreign Direct Investment plays an important role as a source of capital, especially for developing countries like India. As per the definition of International Monetary Fund, FDI refers to a form of investment, that shows an investor's interest in an enterprise/business operating in a country other than his own country, with the purpose of having an effective role in managerial decision of the said business [3]. One primary determinant of demand for foreign capital in a country is the difference between the rate of saving and investment demand of the economy. Inflow of FDI helps to mitigate this gap between saving and investment. The foreign equity inflows help to fasten the pace of economic development by supplying foreign capital along with access to advanced technology which enhances the productive efficiency of inputs resulting in higher growth and development.

For India, the history of FDI dates to the entry of East India Company during 17th century, which developed further as the British took direct control of the sub-continent. Before independence, the primary source of foreign investment in India was mainly British companies. However, the pattern of investment followed the much-discussed structural model of metropole-periphery and the interest of the colonial rulers was dominant. The companies set up their business units mainly in the mining & plantation sectors and in areas that were suitable for their own business and financial interests. The exploitation of natural resources for the supply of raw materials to British manufacturing industries was the main objective of any British investment, including that in Indian Railways. Despite the entry of

Japanese companies into India after World War II, Britain remained the major foreign investor in India. Because of the exploitation of Indian economy by Britain, so eloquently written in the works of Dadabhai Naoroji and RC Dutt, there was a feeling of fear regarding foreign capital initially after independence [1]. This was reflected in the restrictive policies that were designed to stop the outflow of capital in the form of profits, which limited the inflow of foreign capital. However, over time, the need for foreign capital was felt due to inadequate domestic capital formation, especially in the public sector, and the growing investment needs of a developing country with rising aspirations. This resulted in the gradual relaxation of FDI policies since late 1980s. At the beginning of the 1990s, after the Structural Adjustment Program taken by the Indian government (broadly named LPG – Liberalization-Privatization-Globalization Policies) in response to the Balance of Payment crisis, FDI policies was further relaxed and FDI inflow began to increase significantly almost in all sectors. The two important policies introduced during 1991-2000 that supported foreign investment in India are Industrial Policy in 1991 and Foreign Exchange and Management Act (FEMA) in 1999. In 2000, to increase investment inflow in the nation, government allowed investment for almost all activities with only a few exceptions under automatic route. In 2005, investment limit in the telecommunication sector increased to 74% from 49%. Up to 51% FDI had been allowed in 2006 for single brand retailing. Under the Make in India initiatives in 2016, up to 74% FDI in automatic route was allowed for pharma sector. In the existing airport projects 100 percent FDI under automatic route has been allowed. FDI limit has also been increased for defence sector with government allowing FDI beyond 49% and up to 100% through government approval [2].

The distribution of FDI across different sectors and states in India varies depending on economic and political factors. The paper aims to analyse sector and state-wise distribution of FDI in India for the last thirty years ranging from 1991 to 2021 to understand how this distribution has changed over time.

2. Why We Need FDI?

One of the primary reasons for allowing the inflow of foreign capital in India is to attain a high level of investment to support the economic development [4, 6, 7]. Being a developing country, there is a gap between domestic saving and investment needs in India, especially in capital-intensive infrastructure and technology-intensive manufacturing & services, which is expected to be filled by foreign capital. Besides capital, to attain a high level of economic development, a country needs to have advanced technology to achieve maximum production capacity. This technology gap can also be filled by the inflow of foreign capital. When foreign companies enter the host country, technology transfers take place which results in technological improvement in the host country [5]. Foreign capital also helps in exploiting the natural resources of the host country. India is rich in natural resources. However, these resources cannot be utilized fully due to a lack of technical skill and sufficient expertise to exploit the resources. India therefore needs the support of FDI to have full access to its natural resources. The foreign capital is also important for India to develop its infrastructure to support economic growth and development.

3. FDI Routes into India

Foreign capital can enter India following two primary routes. One is the automatic route following which investment can occur without any form of government intervention. The other route is the Government route following which any form of investment requires prior approval from regulator bodies as determined by the Ministry of Finance and Foreign Investment Promotion Board (FIPB)/ Secretariat of Industrial Assistance (SIA).

Government regulation is one of the primary determinants of foreign equity inflow in any country. There is a significant difference in policy framework in India towards Foreign Direct Investment between the pre-liberalization and post-liberalization periods. As per the Foreign Exchange and Regulatory Act (FERA) enforced in 1973, in any joint venture maximum limit of foreign equity holding was 40%. Over time the government allowed the extension of this limit in case of some specific business related to high technology, export, and some areas identified as high priorities. The Industrial Policy of 1980 and 1982 along with the Technology Policy in 1983 signified a liberal attitude of the Government towards Foreign Direct Investment. The economic reform that occurred in 1991 brought a major shift in this direction. To attract foreign equity, several measures were undertaken. During this time, the Government introduced two routes for FDI approval- Automatic route of Reserve Bank of India (RBI) and Government Approval route through FIPB or SIA. For high-priority industries, automatic permissions were given for technology agreements. The government allowed 100 percent equity holding for Overseas Corporate Bodies and Non-resident Indians in the high-priority sectors. For the existing companies, there was a hike in equity holding limit up to 51 percent. With the objective of creating a secure environment for foreign investors, the Government signed the Multilateral Investment Guarantee Agency (MIGA). In 1999, a more liberal Foreign Exchange Management Act (FEMA) replaced FERA. The Government permitted 100 percent foreign investment for businesses involved in the business of wholesale cash and carry. In 2006, foreign equity holding for a single brand in retailing was allowed up to 51%. This was increased to 100% in 2012 while of multiple brands retailing the limit was up to 51% [17] Again, in August 2017, the Department of Industrial Policy and Promotion (DIPP) updated the FDI policy. The new policy increased the FDI limit up to 100 percent for some sectors like the Banking Sector, Aviation, Single Brand Retail, Construction, Power Exchange, Medical Devices, Defence, Insurance, Pension, Trading, other Financial Services, Asset Reconstruction, Pharmaceuticals and Broadcasting [20]. Though most sectors of India are now open to FDI, however, there are certain sectors where FDI is still not allowed. These sectors include Atomic Energy, Lotteries business, Betting and Gambling casinos, Chit-fund businesses, Trading in Transferable Development Rights, Real estate business like construction of farmhouses, and Manufacturing of addictive items like Cigars, Cigarettes, Cigarillos, and others.

4. Existing Studies

There are several international studies that focus on the importance of FDI for a country and related issues like determinants of FDI, impacts of FDI, distribution of FDI, and others. These include works by Oscar et al., (1994) on Spain, Narayanamurthy et al., (2010) on BRICS countries, Catherine et al., (2011) for ASEAN countries, Mohammed et al., (2015) for Malaysia, Rebecca et al., (2019) for Ghana, and cross-country studies by Bruce et al., (2014), Laura et al., (2010), Cem (2012).

After India adopted the Structural Adjustment Programme and liberalised its economic policy, several researchers studied the flow of FDI in India and its related issues. Some of them are Sanjaya (2019), Mamta et al., (2013), Nithya et al., (2018), Muthusamy et al., (2019), Muneeswaran et al., (2022), and Komal (2022). However, very few of them have looked at the sectoral and regional distribution of FDI for a long period of three decades. Neither have the studies tried to understand the trends and patterns separately for the three decades. The paper has attempted to add value to existing body of knowledge by looking at these issues in this paper.

5. Objective, Database and Methodology

The main objectives of this paper are as follows:

1. To examine the overall trend in FDI inflow in India during the three decades of 1991-2021.
2. To examine how the inflow of FDI in different sectors has changed over time.
3. To identify whether any pattern is visible in the sectoral distribution of FDI.
4. To examine how the inflow of FDI in different states has changed over time.
5. To identify whether any pattern is visible in the state-wise distribution of FDI.
6. To measure the degree of concentration in the distribution of FDI both across sectors and different states of India.

The selected sample period for the study is 1991-2021. The sector and state-wise data on foreign equity inflow has been collected from the official website of the Department for Promotion of Industry and Internal Trade (DPIIT). Data has been collected for the selected period from FDI Newsletters published by DPIIT. The reported FDI inflow in different regional offices across India has been considered to evaluate the state-wise distribution of FDI. To compare the data published in different years a common deflator has been used to convert the FDI figures into real terms taking the base year as 2011-2012. The common deflator has been calculated using the annual data on real and nominal GDP. For converting state-wise data, deflator has been calculated by considering nominal and real State Domestic Product (SDP) of respective states. The data on both GDP and SDP have been collected from the official website of the Ministry of Statistics and Programme Implementation (MoSPI). The collected data on FDI in different sectors and states have been analysed with the help of tables and charts. To measure concentration in the distribution of FDI across sectors and states "Herfindahl–Hirschman Index (HHI)" has been computed. The index has been computed using the following formula.

$$H = \sum_{i=1}^{n} Si^2$$

Here,
n: Number of sectors (or states);
i: individual sector or state.
Si: share of i^{th} sector (or state) in total FDI.

There can be two versions of the index. If S_i is taken in percentage form, then the index produces a score and ranges from 0 to 10,000. If, on other hand, S_i is taken in proportion form, the value ranges from 0 to 1. The degree of concentration is categorized depending on the computed value of the index. A score below 100 (or an index below 0.01) indicates a highly competitive environment. Scores between 100 and 1000 (index between 0.01 and 0.10) generally indicates no concentration. Scores between 1000 and 2500 (index between 0.10 and 0.25) indicates moderate concentration whereas scores above 2500 (index above 0.25) indicates high concentration.

6. FDI Inflow into India: National Overview

Total FDI inflow shows an overall rising trend during the three decades (Table 1 & Figure 1). While during the first decade of 1990s, FDI inflow was just over Rs. 53 billion (at constant 2011-2012 prices), during the next decade it increased to over Rs. 77 billion. However, the highest jump came in the second decade of this millennium when FDI inflow almost trebled to over Rs. 219 billion. Looking at the annual data, which is available from 2000 onwards, it was found that total FDI in the year 2000 was Rs.

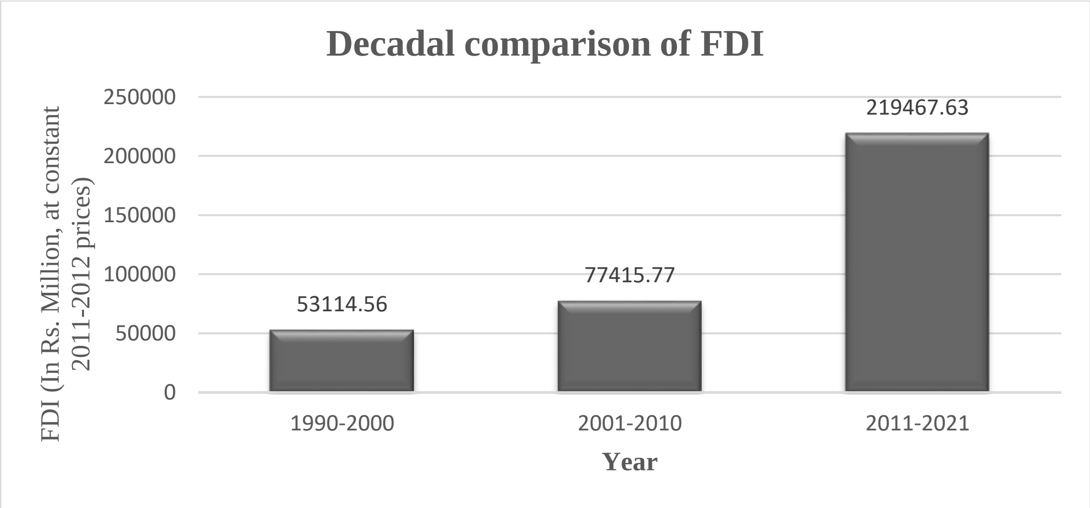
2252.34 million. Since then, FDI has continued to increase consistently except dropping in few years (2003, 2009, 2010, 2012, 2017, 2018 and 2021). FDI as a share of GDP has also increased from a minuscule 0.05% in 2000 to about 0.16% in 2021. The growth rate of FDI inflow follows a fluctuating trend with a varying rate of growth. The growth rate of FDI was the highest in the year 2005-2006 and the lowest in the year 2002-2003.

Table 1:Total And Annual Average FDI Inflow in India (In Rs. Million, at Constant 2011-2012 Price)

Period	Total FDI Inflow	Annual Average
1991-2000	53114.66	5311.47
2001-2010	77415.77	7741.58
2011-2021	219471.63	21947.16

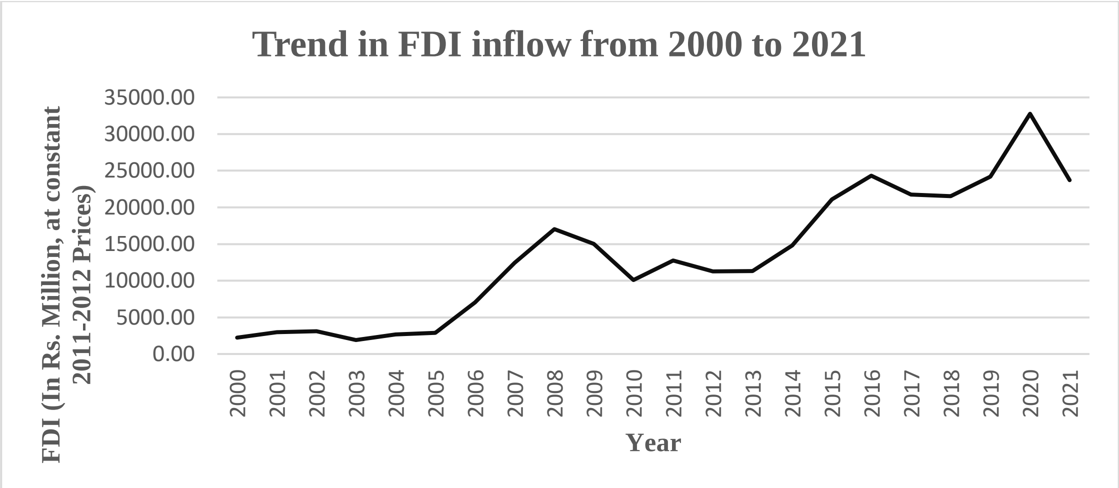
(Source: SIA News Letter, DPIIT)

Figure 1: FDI In India Over the Three Decades



(Source: SIA News Letter, DPIIT)

Figure 2: Trends in FDI in India Since 2000: Annual Data



(Source: SIA News Letter, DPIIT)

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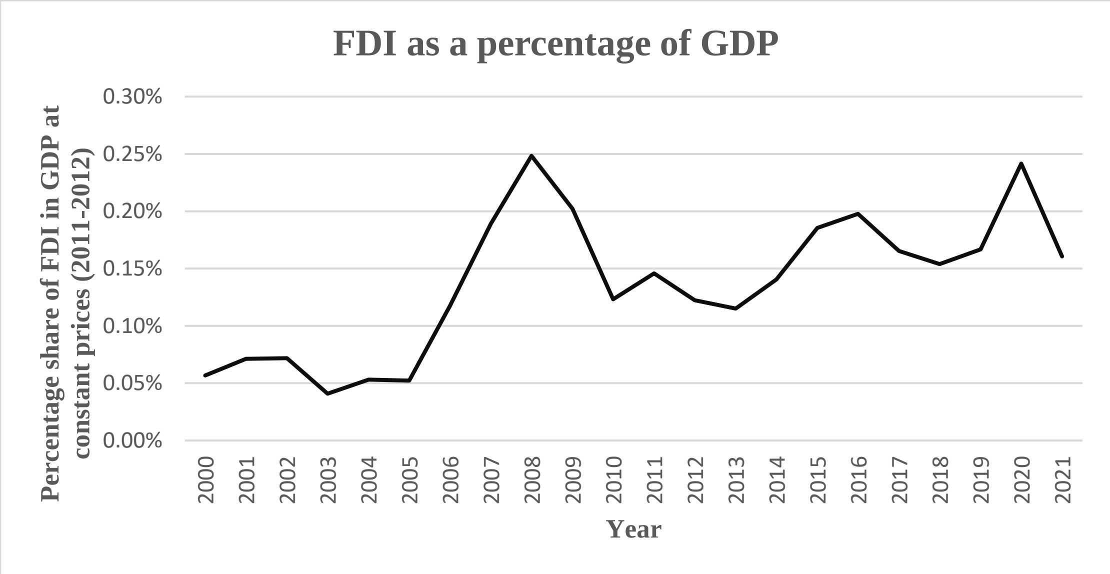
Figure 3: Share of FDI in GDP from 2000 to 2021



(Source: SIA News Letter, DPIIT; MoSPI,)

Table 2: Top Ten Sectors in Terms of Total FDI from 1991-2021 (In Rs. Million, at Constant 2011-2012 Prices)

Sector	**1991 to 2021**	**Percentage share**
Services sector	51457.89	14.70%
Computer Software & Hardware	38934.04	11.12%
Telecommunications	29307.73	8.37%
Fuels & Power	24356.65	6.96%
Trading	17307.34	4.94%
Construction (infrastructure) activities	15477.80	4.42%
Automobile industry	15155.03	4.33%
Electrical equipment	12201.34	3.49%
Miscellaneous industries	11488.58	3.28%

(Source: SIA News Letter, DPIIT)

Table 3: Top Ten Regional Offices in Terms of Total FDI from 1991-2021 (In Rs. Million, Constant Prices at 2011-2012)

Regional Offices of RBI	**States Covered**	**Total FDI (In Rs. Million)**	**Percentage Share**
Mumbai	Maharashtra, Dadra & Nagar Haveli, Daman & Diu	100083.53	28.28%
New Delhi	Delhi, Part of UP and Haryana	68235.25	19.28%
Bangalore	Karnataka	44480.22	12.57%
Ahmedabad	Gujarat	32285.33	9.12%
Chennai	Tamil Nadu, Pondicherry	26416.26	7.46%

Hyderabad	Andhra Pradesh	15549.78	4.39%
Chandigarh	Chandigarh, Punjab, Haryana, Himachal Pradesh	5975.66	1.69%
Kolkata	West Bengal, Sikkim, Andaman & Nicobar Islands	5472.07	1.55%
Bhopal	Madhya Pradesh, Chhattisgarh	3701.21	1.05%
Bhubaneshwar	Orissa	2373.89	0.67%

(Source: SIA News Letter, DPIIT)

Considering the sectoral distribution of FDI, it was found that ten sectors account for close to two-third of total FDI inflow over the three decades in aggregate (Table 2). Top three sectors attracting the highest amount of FDI inflow are Services sector, Computer Software & Hardware, and Telecommunications with a cumulative share of approximately 34%. At the regional level almost 86% percent of total accumulated investment during 1991-2021 was concentrated in ten regional offices (Table 3). Top three states attracting the highest amount of FDI inflow are Maharashtra, Delhi, and Karnataka, accounting for almost 60% of the total FDI during this period. However, this pattern of FDI inflow was not uniform across sectors, regions or time. We shall now discuss these patterns.

7. Sectoral Trends of FDI Inflow over Decades

a) Sectoral Distribution of FDI from 1991-2000

The cumulative FDI for the period from 1991 to 2000 was more than Rs. 53 billion and most of the investment went into sectors like Fuels (Power & Oil Refinery), Telecommunication, Transport industry, Service sector (which include services related to Finance, banking, insurance, non-finance/business, outsourcing, R&D, courier, Technology Testing and Analysis and other services), Electrical equipment, Metallurgical industries, Chemicals, Food Processing industries, Miscellaneous industries and Hotel & Tourism (Table 4). More than half of the total FDI during this period went to the top three sectors of Fuels (Power & Oil Refinery), Telecommunication and Transport industries.

Table 4: Sectoral Shift in Distribution of FDI

	1991-2000	**2001-2010**		**2011-2021**	
Sectors	**Amount of FDI**	**Amount of FDI**	**Growth rate (%)**	**Amount of FDI**	**Growth Rate (%)**
Automobile Industries	0.0 (0)	2129.1 (2.8)	-	13026.0 (5.94)	511.8
Chemicals (Other than fertilizers)	3019.0 (5.7)	1740.8 (2.3)	-42.3	5756.0 (2.6)	230.7
Computer Software & Hardware	0.00 (0)	3176.0 (4.1)	-	**35758.1 (16.3)**	1025.9

Construction (Infrastructure) Activities	0.00 (0)	2095.5 (2.7)	-	13382.3 (6.1)	538.6
Drugs & Pharmaceutical	251.8 (0.5)	1158.2 (1.5)	359.9	6458.8 (2.9)	457.7
Electrical equipment	3145.2 (5.9)	4895.1 (6.3)	55.6	4161.1 (1.9)	-15.0
Food processing industries	2098.2 (4.0)	749.3 (1.0)	-64.3	5106.0 (2.3)	581.5
Fuels & Power	**15481.4 (29.2)**	3652.2 (4.7)	-76.4	5223.1 (2.4)	43.0
Hotel & Tourism	1046.7 (2.0)	1262.8 (1.6)	20.7	7093.8 (3.2)	461.8
Housing & Real Estate	0.00 (0)	4677.2 (6.0)	-	302.4 (0.1)	-93.5
Metallurgical industries	3056.4 (5.8)	2233.6 (2.9)	-26.9	5906.8 (2.7)	164.4
Miscellaneous industries	1538.6 (2.9)	**6782.5 (8.8)**	340.8	3167.4 (1.4)	-53.3
Service Sector	3395.6 (6.4)	**14820.5 (19.1)**	336.5	**33241.7 (15.2)**	124.3
Telecommunication	**9014.2 (17.0)**	**6141.1 (8.0)**	-31.9	14152.5 (6.5)	130.5
Trading	376.1 (0.7)	1388.9 (1.8)	269.3	**15542.3 (7.1)**	1019.0
Transportation industry	**4450.5 (8.4)**	2168.3 (2.8)	-51.3	3368.6 (1.5)	55.4

Note: Amount of FDI is given in Rs. Million, at constant 2011-2012 prices; Figures in the parentheses reflect the percentage share of respective sector in total FDI; Top three sectors in each period are highlighted in bold.

Source: SIA News Letter, DPIIT (Various Issues)

b) Sectoral Distribution of FDI from 2001-2010

Foreign equity inflow increased to more than Rs.77 billion during 2001-2010 period, about 46% higher compared to the previous decade. Top ten sectors included Services sector, Miscellaneous industries, Telecommunication, Electrical Equipment, Housing & Real Estate, Computer Software & Hardware, Power, Metallurgical industries, Transportation, and Automobile industry where close to two-third of the total investments accrued. In case of Service sector, Electrical equipment and Miscellaneous industries foreign equity inflow increased compared to the previous decade. However, for Telecommunication, Power, Metallurgical and Transportation industries, there had been a decline in foreign equity flow. A shift in sectorial composition of FDI during this period had been observed for sectors like Housing & Real Estate, Computer software & hardware, Automobile industry and Construction (Infrastructure) activities. FDI started to enter these sectors during this decade.

c) Sectoral Distribution of FDI from 2011-2021

The FDI inflow has been the highest in the last decade (2011-2021) compared to the previous two decades. The total recorded FDI in the last decade was Rs. 219 billion in real terms (at constant 2011-2012 prices), almost three times that of the previous decade. The top ten sectors attracting highest amount of FDI equity include Computer Hardware & Software, Service sector, Trading, Telecommunication, Construction activities, Automobile industry, Hotel & Tourism, Drugs & Pharmaceuticals, Metallurgical industries and Chemicals. Of these, Computer Hardware & Software attracted the highest amount of FDI of more than Rs. 35 billion, about 16 per cent of the total. This is 10 times the amount of the previous decade and almost 4 times the share in the previous decade. This was followed by Service sector with 15% share. In absolute term though foreign equity inflow had increased for sectors like Telecommunication and Metallurgical industries, there were not much change in share of these two sectors. In case of Construction sector, along with increase in foreign equity inflow in absolute term, there had been a significant increase in share of this sector in total FDI from a mere 2.71% in the previous decade to 6.10% in this decade. Similar trend had also been observed for Automobile industry. A major shift had been observed in sectors like Trading, Hotel & Tourism, Drugs& Pharmaceuticals and Chemicals. In these sectors, FDI had increased by almost four times in comparison to the previous decade.

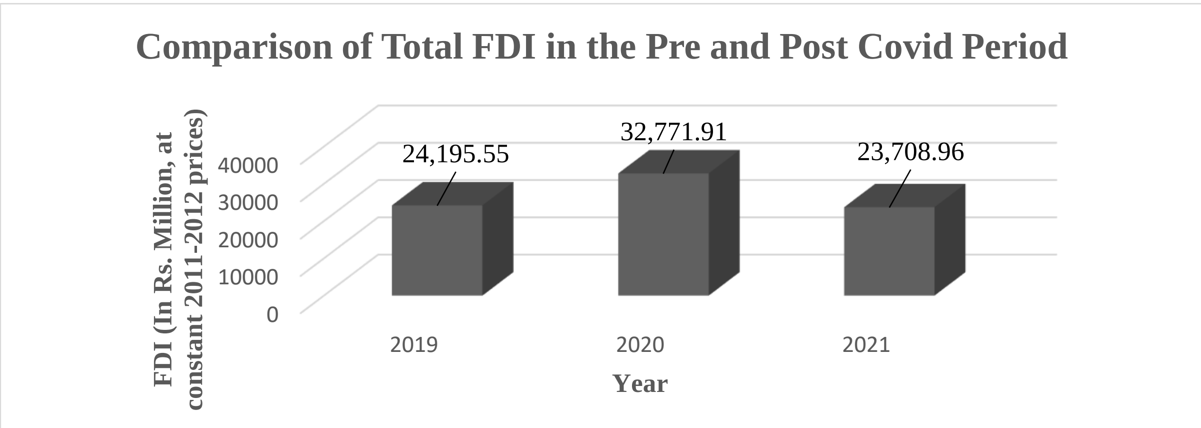
d) Shift in Sectoral Distribution of FDI

Table 4 also indicates some major shift in sectoral distribution of FDI in India. Sectors experiencing a continuous increase in FDI inflow include Service sector, Hotel & Tourism, Computer Software & Hardware, Power, Automobile industries, Construction (infrastructure activities), Trading, Drugs & Pharmaceutical. Sectors that gradually lose importance in terms of FDI inflow include Transportation industry, Fuels (power and refinery) and Housing & Real estate. The most significant growth in FDI inflow has been observed for sectors such as Service sector, Computer Software & Hardware, Food Processing industries, Hotel & Tourism, Automobile, Construction, Trading and Drugs & Pharmaceutical industries.

e) Sectoral Distribution of FDI in the Pre and Post COVID Period

During the phase of COVID-19 pandemic, almost all economies across the world have undergone several challenges. The governments all over the world have taken several administrative measures affecting the cross-border flow of funds. Figure 4 shows the year wise comparison of total inflow of foreign equity in the pre and post COVID period.

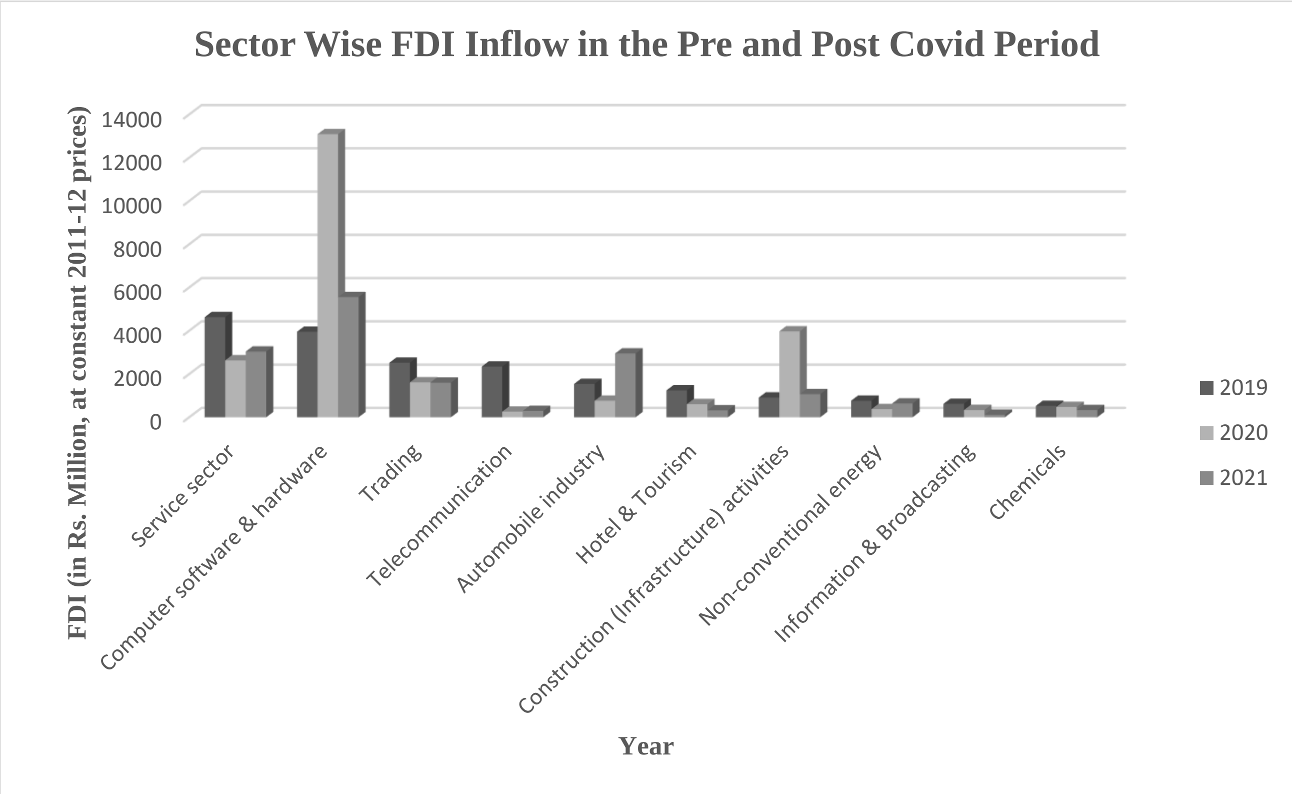
Figure 4: Comparison of Foreign Equity Inflow in the Pre and Post COVID Era



(Source: SIA News Letter, DPIIT)

Total FDI in the year 2019 was Rs.24195.55 million. During 2020, despite the hit of COVID 19 pandemic the total FDI increased mainly due to increase in investment in some sectors such as Computer Software & Hardware, Construction, Drugs & Pharmaceutical, Power, Electrical Equipment, Education and Medical and Surgical Appliances. However, in 2021 there was an overall decline in FDI inflow with reported FDI being Rs. 23708.96 million. One possible cause for overall decrease in FDI inflow during 2021 was the decline in cross border mergers and acquisition which were one major forces behind surge in FDI in previous year. Cross border mergers and acquisition increased to $27 billion in 2020 in healthcare, infrastructure, ICT and energy resulting in an increase in overall FDI. This declined to $8 billion in the subsequent year.

Figure 5: Sector Wise Comparison of FDI in 2019, 2020 And 2021



(Source: SIA News Letter, DPIIT)

In terms of foreign equity inflow, the top ten sectors in India during 2019 were Service Sector, Computer Software & Hardware, Trading, Telecommunication, Automobile Industry, Hotel & Tourism, Construction (Infrastructure) Activities, Non-Conventional Energy, Information & Broadcasting (Including Print Media) and Chemicals (Other than fertilizers). During 2020, foreign equity inflow decreased in almost for all these sectors except Computer Software & Hardware and Construction (Instruction) Activities. Considering the Computer Software & Hardware, FDI increased by more than 200% with amount of FDI increased from Rs. 3949.36 million in 2019 to Rs. 13084.78 million in 2020. For Construction (Infrastructural) Activities, FDI increased by more than 300 percent. The reported FDI in this sector in 2019 was Rs. 909.71 million, which increased to Rs. 3967.91 million in 2020. Other sectors that had experienced a significant increase in FDI during 2020 include Metallurgical Industries, Retail Trading, Electrical equipment, Drugs & Pharmaceutical and Education. Because of increase in investment in some specific sectors, overall inflow of FDI in 2020 was increased despite the overall economic crisis.

8. Regional Trend of FDI Inflow, Shares and Growth Rates

The distribution of FDI across different regions of India is found to be heterogenous. The level of investment varies widely across different states. The varying investment in different states of India is explained by differences in state government policies, availability of natural resources and different economic and social factors. The regional inequality leads to regional imbalances in the distribution of FDI. To examine the extent to which FDI varies across different regions of India, the section analyses the state wise distribution of FDI over time.

Table 5: Distribution of FDI Across States over Decades

		1991-2000	**2001-2010**		**2011-2021**	
Regional Office	**States Covered**	**Amount of FDI**	**Amount of FDI**	**Growth Rate (%)**	**Amount of FDI**	**Growth Rate (%)**
Ahmedabad	Gujarat	2882.2 (5.0)	5209.7 (7.2)	80.8	24193.4 (10.9)	364.4
Bangalore	Karnataka	**6874.2 (11.9)**	**6486.6 (8.9)**	-5.6	**31119.4 (14.0)**	379.8
Bhopal	Madhya Pradesh, Chhattisgarh	2789.1 (4.8)	368.3 (0.5)	-86.8	543.8 (0.2)	47.6
Bhubaneshwar	Orissa	2723.3 (4.7)	224.0 (0.3)	-91.8	205.7 (0.1)	-8.2
Chandigarh	Chandigarh, Punjab, Haryana, Himachal Pradesh	1577.0 (2.7)	822.8 (1.1)	-47.8	3575.9 (1.6)	334.6
Chennai	Tamil Nadu, Pondicherry	5916.3 (10.2)	5163.7 (7.1)	-12.7	15336.3 (6.9)	197.0
Hyderabad	Andhra Pradesh	3613.2 (6.2)	3664.6 (5.0)	1.4	8272.0 (3.7)	125.7
Jaipur	Rajasthan	793.5 (1.4)	436.9 (0.6)	-44.9	1214.3 (0.5)	177.9
Kochi	Kerala, Lakshadweep	414.9 (0.7)	262.3 (0.4)	-36.8	1264.8 (0.6)	382.2
Kolkata	West Bengal, Sikkim, Andaman & Nicobar Islands	2024.2 (3.5)	948.9 (1.3)	-53.1	2499.0 (1.1)	163.3

Mumbai	Maharashtra, Dadra & Nagar Haveli, Daman & Diu	**11362.0 (19.6)**	**26518.0 (36.4)**	133.4	**62203.6 (27.9)**	134.6
New Delhi	Delhi, Part of Uttar Pradesh and Haryana	**9403.1 (16.2)**	**14857.2 (20.4)**	58.00	**43974.9 (19.7)**	196
Panaji	Goa	168.9 (0.3)	438.4 (0.6)	159.5	191.8 (0.1)	-56.3
Patna	Bihar, Jharkhand	269.2 (0.5)	8.07 (0.0)	-97.0	1446.40 (0.7)	17819.22

Note: Amount of FDI is given in Rs. Million, at 2011-12 constant prices; Figures in the parentheses reflect the percentage share of respective regions in total FDI. Top three regions in each period are highlighted in bold.

Source: SIA News Letter, DPIIT (Various Issues)

a) State Wise FDI Inflow from 1991-2000

For the decade 1991-2000, almost 85% of FDI went to Maharashtra, Delhi, Karnataka, Tamil Nadu, Andhra Pradesh, Gujarat, Madhya Pradesh, Orissa, West Bengal, Punjab and Haryana. Maharashtra was at the top with 19.6% of total FDI during this decade, followed by Delhi (16.2%) and Karnataka (11.9%). Lowest amount of FDI was recorded in the regional office of Jammu (covering the state Jammu & Kashmir) and Guwahati (covering states Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Mizoram, Nagaland, Tripura).

b) State Wise FDI Inflow from 2001-2010

Like the previous decade, Maharashtra, Delhi, Karnataka, Gujarat, Tamil Nadu, Andhra Pradesh, West Bengal, Punjab and Haryana attracted highest amount of FDI inflow, together covering almost 89% of total FDI. The cumulative share of the three top destinations - Maharashtra, New Delhi and Karnataka increased to 66%. However, there is a significant decline in FDI inflow in Orissa and Madhya Pradesh. On the other hand, notable increase in FDI inflow has been observed in the state of Goa and Rajasthan. Regions recording the lowest amount of FDI inflow during this decade were Bihar and Jammu.

c) State Wise FDI Inflow from 2011-2021

During the last decade also Maharashtra, Delhi, Karnataka, Gujarat, Tamil Nadu, Andhra Pradesh, Punjab and West Bengal remained the major destinations of FDI in the country. There was a rapid increase in FDI inflow in almost all the states during this decade. The highest amount of FDI went to Maharashtra followed by Delhi and Karnataka region (Bangalore office).

d) Shifts in Regional Distribution of FDI Inflow

In case of regional distribution of FDI, there was no major shift. States like Maharashtra, Delhi, Karnataka, Tamil Nadu, Andhra Pradesh, Gujrat, West Bengal, Punjab, Haryana, Himachal Pradesh remained major destinations of foreign investment for the past three decades. The cumulative share of three major states such as Maharashtra, Delhi and Karnataka in total FDI inflow increased over time, indicating an increasing concentration of foreign investment in these states.

It can thus be inferred that the majority of FDI has been concentrated in relatively rich states such as Maharashtra, Delhi, Karnataka, Tamil Nadu, Andhra Pradesh and Gujarat. Investment remained relatively low in lagging states like Rajasthan, Madhya Pradesh, Orissa and Bihar compared to the richer states. Several reasons can be proposed to explain the variation in FDI inflow in different states. Favourable geographical locations such as the supply of natural resources, proximity to market areas, coastline with port facilities, abundant manpower helped in attracting foreign investment in states like Maharashtra, Andra Pradesh, Karnataka, and Tamil Nadu. Cities like Mumbai, Pune, Hyderabad, Bangalore, Chennai and Ahmedabad have attracted foreign investors. On the other hand, lack of proper infrastructure in states like Bihar, Rajasthan, Orissa, and Madhya Pradesh forced investment to remain at a relatively low level. Haryana has been another important destination of FDI mainly because of availability of transportation (roads, railways) and communication networks and infrastructural facilities and the closeness to the policy epicentre at Delhi. West Bengal has also made significant progress in attracting foreign investment in the state mainly because of assured power facilities, abundant skilled manpower and Kolkata acting as a hub for the north eastern region.

e) Impact of COVID 19 on Distribution of FDI Across States

From Table 6, it can be observed that for Karnataka, Tamil Nadu, Punjab and Haryana the FDI inflow increased in the post COVID period (2021). In case of Karnataka, Punjab and Haryana investment more than doubled in 2021 compared to 2020. The recorded growth in FDI inflow in Chennai in 2021 was 29.10%. In case of Maharashtra, Gujarat and West Bengal level of foreign investment declined in the post COVID period. For Delhi, despite 22.54% percent growth of investment in 2021, it is still lower compared to the total investment during pre-COVID period (2019).

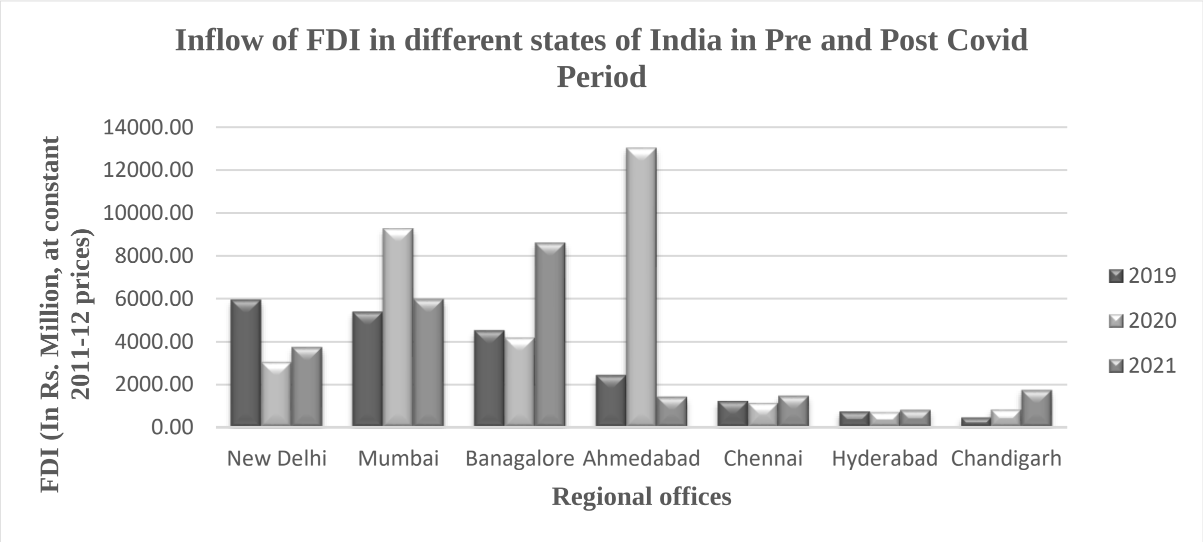
Table 6: Inflow of Foreign Investment in Different States in Pre and Post COVID Period

Regional Offices of RBI	States Covered	Amount of FDI (in Rs. Million, at constant 2011-2012 prices)		
		2019	2020	2021
New Delhi	Delhi, Part of UP and Haryana	5952.21	3044.63	3731.04
Mumbai	Maharashtra, Dadra & Nagar Haveli, Daman & Diu	5377.68	9272.73	5957.88
Bangalore	Karnataka	4518.26	4171.73	8585.76
Ahmedabad	Gujarat	2431.96	13028.61	1416.88
Chennai	Tamil Nadu, Pondicherry	1222.98	1132.12	1461.65
Hyderabad	Andhra Pradesh	720.34	689.38	792.88
Chandigarh	Chandigarh, Punjab, Haryana, Himachal Pradesh	441.12	816.16	1718.79
Kolkata	West Bengal, Sikkim, Andaman & Nicobar Islands	243.75	239.72	145.86

Jaipur	Rajasthan	163.59	90.85	278.65
Kochi	Kerala, Lakshadweep	160.89	115.48	146.37
Kanpur	Uttar Pradesh, Uttaranchal	30.11	259.82	153.64
Patna	Bihar, Jharkhand	0.56	1315.95	73.56

(Source: SIA News Letter, DPIIT)

Figure 6: Inflow of Foreign Investment in Pre and Post COVID Period



(Source: SIA News Letter, DPIIT)

9. Concentration of FDI across Sectors and Regions

Previous two sections of the paper have discussed the sectoral and regional distribution of FDI in India over a long period of thirty years. It appears from the descriptive study that FDI entered the selected sectors and regions in the country constituting some changes in the distribution of the investment over time. To analyse concentration of FDI across sectors and regions, Herfindahl- Hirschman Index (HHI) of concentration has been computed as mentioned in the methodology section earlier. The estimated HHI score is presented in Table 7.

Table 7: Concentration of FDI in India: HHI Index 1991-2021

Period	Sectoral HHI Score	Regional HHI Score
1991-2000	1337.02	1021.73
2001-2011	631.21	1948.03
2011-2021	692.29	1543.92

(Authors' calculation)

During 1991-2000, the estimated HHI for sectoral distribution was 1377.02 showing moderate concentration. However, for the next two decades, with increases in investment inflow in other sectors as well due to liberal government policies and growth in sectoral output, concentration of investment decreased to 631.21 during 2001-2011 and 692.29 during 2011-2021.

The situation however is different when concentration is measured across states. In case of regional distribution of FDI inflow, concentration has increased over the decades. The computed HHI for the decade 1991-2000 was 1021.73, indicating moderate level of concentration. Concentration however increased over time with estimated HHI increasing to 1948.03 in 2001-2010 period before decreasing marginally to 1543.92 during 2011-2021.

10. Conclusion

The paper has attempted to analyse the sectoral and state-wise distribution of FDI in India during the last thirty years (1991-2021). The primary objectives were to examine the overall trend in FDI inflow in India, to examine how the inflow of FDI in different sectors and states has changed over time, and finally to measure the degree of concentration in the distribution of FDI across states and sectors. It appears from our analysis that FDI inflow has followed an overall increasing trend for the period 1991 to 2021. The Services Sector has attracted the highest amount of FDI inflow followed by Computer Software & Hardware and Telecommunication, along with Construction, Automobile manufacturing and Pharmaceuticals. It is to be noted that most of these sectors are the same that has shown considerable growth in terms of both GDP and share in GDP during the last twenty years. For Computer Software and Hardware, there has been a large wave of FDI in the last decade particularly during 2020-21, possibly because of the shift towards digitalization of a host of sectors like education, banking, and administration due to the COVID-19 pandemic. Regional analysis showed that though foreign investment increased in all the states of India during the last three decades, priority states have remained almost the same over time. This pattern also matches with economic condition of the states where high growth and good infrastructure states like Maharashtra, Delhi, Karnataka, Tamil Nadu, Andhra Pradesh, Haryana, and Gujarat continue to remain favourites. Thus, sectoral concentration has reduced but regional concentration has increased. What this implies for balanced (or unbalanced) regional development in India remains to be seen and may be a future extension of this paper.

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