## IMPACT OF FDI ON ECONOMIC GROWTH AND EMPLOYMENT IN INDIAN MANUFACTURING AND SERVICE SECTOR

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#### **Abstract**

Foreign Direct Investment (FDI) plays a pivotal role in driving economic growth and employment, particularly in developing economies like India. This study examines the impact of FDI on economic expansion and job creation in India's manufacturing and service sectors. Over the past decades, India has emerged as a preferred investment destination due to policy reforms, liberalization measures, and an improving business climate. While FDI inflows have significantly contributed to industrial development, technological advancements, and infrastructure enhancement, their effects on employment generation remain a subject of debate.

The manufacturing sector benefits from FDI through capital infusion, skill development, and the adoption of advanced production techniques, leading to increased productivity and competitiveness. Similarly, the service sector, particularly in IT, retail, and financial services, has witnessed remarkable growth due to foreign investments, fostering innovation and improving service delivery standards. However, concerns persist regarding sectoral imbalances, dependency on foreign capital, and the quality of employment generated.

This study employs empirical analysis to assess the relationship between FDI inflows, GDP growth, and employment trends in both sectors. Findings suggest that while FDI has positively influenced economic expansion, its employment impact varies across industries. The research emphasizes the need for strategic policy interventions to maximize FDI benefits, promote inclusive growth, and ensure sustainable job creation. Strengthening domestic industries, enhancing labor market policies, and fostering innovation-driven investments are crucial for leveraging FDI as a catalyst for long-term economic progress.

**Keywords:** Foreign Direct Investment, Economic Growth, Employment, Manufacturing Sector, Service Sector, India.

## I. Introduction

Foreign Direct Investment (FDI) has been widely recognized as a key driver of economic growth and employment generation in both developed and developing economies. It serves as a critical source of capital infusion, technological advancement, managerial expertise, and market expansion, particularly in

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emerging economies like India. Over the past three decades, India has undertaken significant economic reforms to attract FDI, leading to substantial growth in both the manufacturing and service sectors (Dhingra, 2019). The liberalization policies introduced in 1991 opened the Indian economy to global investors, fostering industrialization, infrastructure development, and employment creation. However, the extent to which FDI contributes to employment generation remains a subject of ongoing debate among policymakers and researchers (Agarwal & Khan, 2020).

The manufacturing sector has benefited significantly from FDI through the establishment of production facilities, skill enhancement programs, and improved global competitiveness. FDI in this sector has facilitated the integration of advanced production techniques, automation, and research and development (R&D), which have collectively contributed to increased productivity and economic expansion (Gupta, 2021). Notably, initiatives such as 'Make in India' have aimed to attract foreign investments to boost domestic manufacturing, create employment opportunities, and reduce dependency on imports (Government of India, 2022). However, despite these efforts, concerns persist regarding the extent to which FDI-led industrial growth translates into large-scale employment generation, particularly given the increasing adoption of automation and capital-intensive production techniques (Mukherjee, 2018).

Similarly, the service sector, which has emerged as a dominant contributor to India's Gross Domestic Product (GDP), has witnessed remarkable growth due to FDI inflows. The IT and IT-enabled services (ITeS), financial services, retail, and telecommunication industries have experienced significant expansion, driven by foreign investments (Kumar & Prasad, 2020). Multinational corporations have established service delivery centers in India, creating employment opportunities, enhancing workforce skill sets, and fostering innovation. Nevertheless, concerns regarding job quality, wage disparities, and employment sustainability continue to be relevant discussion points in assessing the long-term impact of FDI in the service sector (Sharma, 2021).

The link between FDI, economic growth, and employment is complex and influenced by multiple factors, including sectoral policies, domestic market conditions, labor market flexibility, and regulatory frameworks. While several studies highlight the positive correlation between FDI and GDP growth, others argue that the employment impact varies based on sectoral dynamics and the nature of investments (Bhattacharya & Saha, 2019). Empirical research suggests that FDI contributes to direct employment creation through new business establishments and indirect employment through supply chain linkages and ancillary industries (Chakraborty, 2022). However, the capital-intensive nature of

certain FDI projects may limit large-scale job creation, especially in the manufacturing sector.

Given the increasing significance of FDI in shaping India's economic trajectory, this study aims to examine the impact of FDI on economic growth and employment in the manufacturing and service sectors. By analyzing sector-specific trends, challenges, and policy implications, this research seeks to provide insights into the effectiveness of FDI as a tool for sustainable economic development and employment generation. The study also explores strategic policy interventions that can enhance the benefits of FDI while addressing concerns related to job creation, skill development, and industrial competitiveness.

#### **II.** Literature Review

Several studies highlight the positive relationship between FDI and economic growth, emphasizing its role in capital formation, technology transfer, and productivity enhancement (Borensztein, De Gregorio, & Lee, 1998; Alfaro, 2003). According to Dunning (2001), FDI acts as a catalyst for economic development by fostering innovation and industrial expansion. Studies conducted in the Indian context indicate that FDI inflows have significantly contributed to GDP growth, particularly in high-growth sectors such as IT and manufacturing (Balasubramanyam, Salisu, & Sapsford, 1996; Agrawal & Shah, 2018; Kumar, 2016; Pradhan, 2017). Empirical analyses suggest that FDI-led industrial growth has led to structural transformation and increased global competitiveness (Kumar & Pradhan, 2002; Sharma & Kaur, 2020). However, some scholars argue that while FDI boosts short-term economic growth, its long-term benefits depend on the absorptive capacity of the host economy (Rodrik & Subramanian, 2005; Basu & Guariglia, 2007; Mishra, 2019; Gupta & Sen, 2021).

The impact of FDI on employment creation remains a contested issue in academic literature. While some studies indicate a positive correlation between FDI and job creation (Jenkins, 2006; Lipsey, 2002), others highlight the risk of capital-intensive investments reducing labor demand (Feenstra & Hanson, 1997; Verma, 2020; Chakrabarti, 2021). In the Indian context, Aggarwal (2005) and Banga (2006) observe that FDI has contributed to employment growth in the service sector, whereas its impact on manufacturing jobs remains mixed. A key concern is the quality of employment generated by FDI-driven growth. Some researchers argue that while FDI creates high-skilled jobs in the service sector, it may also lead to wage disparities and informal employment patterns (Nayyar, 2012; Mazumdar, 2016; Sen & Gupta, 2018). Additionally, automation and digitization in manufacturing have altered employment patterns, leading to job

polarization (Autor, Dorn, & Hanson, 2013; Kapoor, 2022).

Various studies have examined sectoral variations in FDI impact. The manufacturing sector has seen mixed results, with some research highlighting productivity gains and others noting employment stagnation (Goldar & Kumari, 2003; Kathuria, Raj, & Sen, 2013; Singh, 2021; Sharma, 2022). In contrast, the service sector, particularly IT, finance, and telecommunications, has experienced sustained FDI-driven growth (Chakrabarti, 2001; Panagariya, 2004; Roy, 2020). The review of existing literature suggests that while FDI has positively influenced economic growth in India, its impact on employment varies across sectors. The manufacturing sector faces challenges related to automation and skill gaps, whereas the service sector has experienced employment expansion but with concerns over job quality and sustainability. Future research require to explore policy interventions that can optimize FDI benefits while ensuring inclusive growth.

#### III. Research Gap

Despite extensive research on the impact of Foreign Direct Investment (FDI) on Indian economy, several gaps remain unexplored. First, while many studies examine the overall effect of FDI on India's economy, limited research differentiates between its impacts on the manufacturing and service sectors. The variations in employment generation, productivity enhancement, and sectorspecific challenges have not been sufficiently explored. Second, existing studies focus primarily on macroeconomic indicators such as GDP growth and foreign exchange reserves, but fewer studies investigate the qualitative aspects of employment, such as wage disparities, job security, and skill development. Third, the role of automation and digital transformation in moderating the employment effects of FDI, particularly in manufacturing, remains underexplored. Lastly, while policy discussions highlight the importance of FDI, there is a lack of empirical studies assessing the effectiveness of government initiatives like 'Make in India' and sectoral reforms in optimizing FDI benefits. Addressing these gaps is crucial for developing targeted policy interventions that maximize the benefits of FDI while mitigating associated risks.

## IV. Objectives of the Study

The primary objectives of this study are:

- a. To analyze the impact of FDI inflows on economic growth in India's manufacturing and service sectors.
- b. To examine the employment generation potential of FDI in both sectors and assess qualitative aspects such as wage structures and job

security.

- c. To evaluate sector-specific challenges associated with FDI, including automation, skill mismatches, and dependency on foreign capital.
- d. To assess the role of government policies in facilitating FDI-driven growth and employment generation.
- e. To provide policy recommendations for optimizing the benefits of FDI while addressing employment-related concerns.

## V. Data Source and Methodology

This study is entirely based on secondary data covering a time frame of almost thirty years – 1993-94 to 2020-21, which constitutes the post-reforms era of the Indian Economy. Even though, the official adoption of the New Economic Reforms was done in the year of 1991; the starting period of this study has been considered as 1993-94. This choice of the year is entirely based on economic point of view because this marks the first year for which the employment data is available from the National Sample Survey Organisation (NSSO) after the introduction of the reforms. Given that this study pivots around three major economic variables – income, employment and FDI; the synchronization of all variables was necessary, hence starting period of this study has been considered as 1993-94. Moreover, Foreign Direct Investment (FDI) also didn't start to inflow in all the sectors of the economy from the year 1991 itself. Thus, the starting period of the study has been considered as 1993-94. In a similar way, the end year is 2020-21, which is the period of the pandemic and the year for the latest available data on NSDP for all the sectors from Reserve Bank of India (RBI).

For intuitively studying the nuanced changes that occurred during the reforms, the entire study period has been decomposed into further sub-periods as per requirement. Again, the decomposition of sub-periods has been done strictly on the basis of economic aspects in order to accommodate the income and employment data together in order to investigate about their relationship.

To investigate the changing scenario of income growth in the economy over the post-reforms years, Net State Domestic Product (NSDP) data has been used from the year 1993-94 to 2020-21. Although this data is released by the Central Statistical Organisation (CSO) under the Ministry of Statistics and Programme Implementation (MOSPI), the detailed data is available in the RBI website under the heading of *Handbook of Statistics on Indian Economy* from where it has been collected for this study. The NSDP data has been chosen in particular because when carefully studied over time, this data provides with the authentic scenario of growth of income across the states and union territories of the nation.

The data related to the labour market variables like those of labour force and

workforce (employed) are in general either collected from the census data published by the CSO every ten years or from the "Employment-Unemployment" surveys (EUS) undertaken by the NSSO. It has been agreed unambiguously at various levels that the EUS provides more nuanced details of the labour market and are thus better compared to the census data. Nevertheless, the problem with the EUS data is that the surveys are not conducted at an even time interval. For instance, during the post-reforms period, the first quinquennial surveys (major surveys) EUS survey was conducted in 1993-94 thereafter in 1999-00, 2004-05, 2009-10 and finally in 2011-12. However, there are controversies as regards to the available data for the year 2009-10 because it was an 'abnormal' year which was marked by severe agrarian crisis and drought in fourteen states of India caused by the failure of south-west monsoon. Hence, the data available for this year is considered to be unfit for comparison with the other years. However, the NSSO stopped publishing data of EUS after 2011-12 due to certain controversies about data handling and analysis. Thereafter after a long gap, the Period Labour Force Survey (PLFS) reports were again published by the MOSPI from 2017-18. Though, there are certain methodological differences in the collection and estimation processes of PLFS data and EUS data; but in broad sense they are comparable. Hence, for the remaining period of this study, the PLFS data have been used to obtain the desired result. Along with the published reports, the unit level data from both EUS and PLFS are taken to find the detailed scenario of labour market.

The data for inflow of FDI have been collected from published reports available in public domain issued by various reputed sources such as Indian Economic Survey (various issues), FDI factsheets and Secretariat Industrial Assistance Newsletters (various issues) published by Department of Industrial Policy and Promotion (DIPP), Central Statistical Organization (CSO), World Investment Report (various issues) published by United National Conference on Trade and Development (UNCTAD) and The International Monetary Fund (IMF) as well as the World Bank. It is to be noted here that the data for FDI in both service and manufacturing sectors prior to 1996 (i.e. between 1991 and 1995) is available only in cumulative form and hence analysis of FDI during 1991-95 has been done in cumulative form and not for separate years.

The main problem with the inter-temporal analysis of the NSDP data is that the base years of published data changes from time to time making the data unfit for inter-temporal comparison. In order to resolve this problem, the "splicing method" has been used to change the base of the NSDP data for all the years to 2004-05. Hence, for all computation regarding income analysis, the NSDP at constant price with base year 2004-05 has been used in the study.

## VI. Analysis and Result

1. In a country like ours where the inflexible financial market fails to channelize savings into desired amount of capital required to push all the sectors of the economy to higher growth path as well as enhancing their employment generating capacity; FDI are boon in one sense. They tend to expand the economy by bridging the gap between desired and realized domestic investments, thereby launching the economy in a higher path of growth and development. However, inflows of FDI are also often condemned owing to several grounds. First and foremost, their destinations in the host nation are generally biased towards the sectors with higher growth prospects, developed infrastructure and so on. In doing so, they tend to increase the economic divergence between the developed and underdeveloped sectors/regions of the economy leading to the scenario of unbalanced growth. Again, they tend to tamper with the labour market of the host economy by tending towards outsourcing of labours in order to escape from the burden of economic and social benefits owed by the permanent workers. Further, while the expansion of the production in the sector tends to increase employment; import of capital-intensive modern technologies and outsourcing of labours of tend to decrease the quantity and quality of employment. Hence, it would be interesting to examine the income and employment generating capacity of FDI inflow both in manufacturing and service sector.

Data presented in Table 1 give information regarding the sector-wise decomposition of inflowing FDI in Indian economy during 1991-2021.

Table 1: Sector-Wise Decomposition of FDI Inflow for Period 1991-2021

Sectors	Inflow of FDI (in Rupees Billion)	Share in Total (per cent)
Service Sector	17747.59	55.07
Manufacturing Sector	11375.80	35.30
Construction Development, Real Estate & Infrastructure Activities	2923.18	9.07
Mining	164.37	0.51
Others	18.19	0.05
Total	32229.13	100.00

Source: Researcher's own calculation on data taken from Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, Govt. of India

It is observed clearly that the service sector has attracted the highest share of FDI inflow mounting at 55.07 per cent. It is followed by the manufacturing sector that has received a share of 35.30 per cent. The sector of Construction Development, Real Estate & Infrastructure Activities comes next on the list with a share of 9.07 per cent. Mining has attracted only a proportion of 0.52 per cent while the remaining 0.05 per cent has been directed to other sectors. The absence of the primary sector in this list signifies the fact that the primary sector hasn't been able

to attract FDI due to its predominant labour-intensive nature and low productivity. This phenomenon of unavailability of foreign funds in the primary sector thus explains the fund-scarcity of the primary sector making it exclusively dependent on domestically generated resources. Nevertheless, moderate level of FDI inflows in construction and infrastructure sector seems to have a positive and crucial role of foreign investments in development projects, contributing to the country's economic progress. On the other hand, low share of FDI inflow in the mining sector may indicate presence of challenges in this sector owing to resource crunch indicating a lower degree of foreign investors' interest in this sector. This might be due to regulatory challenges, environmental concerns or the nature of global demand for mining activities. Exploring ways to enhance the attractiveness of this sector towards the foreign investors might be beneficial. Hence, the distribution of FDI inflow in various sectors of the Indian economy is observed to be highly lopsided.

The Phase of 'Make in India' Initiative (2015-2021)

The 'Make in India' campaign continued to be a focal point of the Indian government's efforts to attract FDI and promote domestic manufacturing. This period witnessed a significant rise in FDI inflows, with the manufacturing sector receiving substantial attention from foreign investors. The government introduced various sector-specific incentives and policy reforms to make India a preferred destination for manufacturing investments.

Nevertheless, through the last three decades of the post-reforms era, global events and economic conditions also influenced FDI inflows into Indian. For instance, the global financial crisis of 2008-2009 temporarily slowed down FDI inflows, but India's relative economic resilience attracted investors seeking alternative markets. Additionally, the COVID-19 pandemic in 2020 had both positive and negative effects on FDI inflows, with certain manufacturing sectors like pharmaceuticals witnessing increased investments.

Thus, the overall, the period from 1991 to 2021 saw a steady growth in FDI inflows into the Indian manufacturing sector. The liberalization of the economy, supportive government policies, and the emergence of India as a global manufacturing hub were key factors driving foreign investments. However, challenges such as infrastructure gaps, bureaucratic red tape, and regulatory complexities persisted and required continuous efforts from the government to sustain and further enhance FDI inflows into the manufacturing sector.

## 2. FDI Inflow in the Manufacturing Sector

The manufacturing sector is the second highest recipient of the FDI inflow with a substantial share of 35.30 per cent. This suggests that Indian manufacturing industries are significant destination for foreign investments. In this sub-section the sub-sectors that attracts considerable share of FDI within the manufacturing sector have been identified.

The manufacturing sector is a critical component of India's economy, playing a pivotal role in industrialization, job creation and export growth. Foreign direct investment (FDI) has been instrumental in boosting the manufacturing sector by facilitating technology transfer, access to global markets and capital infusion. The manufacturing sector in India has witnessed steady growth over the years, attracting substantial FDI inflows. Foreign investors are drawn to the country's large consumer base, cost-competitive labour and efforts by the government to ease business regulations. Additionally, the 'Make in India' campaign launched in 2014 further bolstered India's attractiveness as a manufacturing hub, leading to increased interest from multinational corporations (MNCs) seeking to establish production bases and tap into the domestic market. Analyzing the trends and patterns of FDI inflows in the Indian manufacturing sector provides crucial insights into the sector's attractiveness as an investment destination and its role in the country's economic growth.

## 3. Sub-Sector Wise Distribution of FDI in Manufacturing Sector

Table 2 presents the percentage share of FDI inflow received by the sub-sectors within the manufacturing sector during the period of 1991-2021. It can be seen that with in the manufacturing sector, the subsectors that have received the highest FDI inflows are Fuel (17.07 per cent), Automobiles (14.11 per cent), Chemicals (9.57 per cent), Drugs & Pharmaceuticals (8.78 per cent), Metallurgical Industries (7.50 per cent), Machinery and Tools (6.08 per cent), Food Processing Industries (5.90 per cent), Electrical Equipment (5.39 per cent).

Table 2: Sub-Sector Wise Decomposition of FDI Inflow Within the Manufacturing Sector Over the Period 1991-2021

Sub-Sector	(in \$ Billion Rupees)	Share in Total over the period 1991-2021 (in per cent)
Fuel (Power and Oil Refinery)	1942.01	17.07
Automobile Industry	1604.93	14.11
Chemicals (Other Than Fertilizers)	1088.88	9.57
Drugs & Pharmaceuticals	998.29	8.78
Metallurgical industries	852.80	7.50
Machinery and Tools	691.14	6.08
Food Processing Industries	671.69	5.90
Electrical Equipment	613.70	5.39
Cement and Gypsum Products	295.49	2.60
Textiles (Including Dyed, Printed)	233.83	2.06
Miscellaneous Mechanical & Engineering Industries	203.68	1.79
Rubber Goods	203.16	1.78
Fermentation Industries	179.04	1.57
Prime Mover (Other Than Electrical Generators)	153.20	1.35
Soaps, Cosmetics & Toilet Preparations	101.71	0.89
Paper and Pulp (Including Paper Products)	89.31	0.79
Vegetable Oils and Vanaspati	61.90	0.54
Ceramics	47.99	0.42
Glass	47.20	0.41
Fertilizers	41.15	0.36
Commercial, Office & Household Equipment	29.48	0.26
Boilers and Steam Generating Plants	16.47	0.14
Sugar	14.91	0.13
Leather, Leather Goods and Pickers	13.42	0.12
Timber Products	11.59	0.10
Glue and Gelatine	10.73	0.09
Dye-Stuffs Photographic Pow Film and	6.37	0.06
Photographic Raw Film and Paper	3.03	0.03
Miscellaneous Industries	1148.72	10.10
Total	11375.80	100.00

Source: Researcher's Calculation from Department of Industrial Policy and Promotion (DIPP) Data, Ministry of Commerce and Industry, Govt. of India

Other industries like Cement and gypsum Products (2.60 per cent), Textiles (2.06 per cent), Mechanical and Engineering Products (1.79 per cent), Rubber Goods (1.78 per cent), Fermentation Industries (1.57 per cent) and Prime Mover (1.35)

per cent) enjoy shares of more than one per cent of total FDI flowing in the Indian manufacturing sector. Other sub-sectors in the manufacturing sector have received less than one per cent of FDI inflowing in manufacturing sector.

It is important to be noted here that there have been concerns regarding the sustainability of the growth of the manufacturing sector that is considerably dependent on the inflowing FDI because this kind of growth driven by global economic phenomenon is often susceptible to global economic phenomena and may not be conducive to a developing country like India (Sutradhar, 2016).

## 4. FDI Inflow in the Service Sector in Indian Economy

The Service Sector has attracted the highest FDI inflow, constituting 55.07 per cent of the total FDI inflow suggesting a strong interest from foreign investors in India's various service sectors which in fact showcase the prowess of the Indian economy in service sector. Table 3 depicts various sub-sectors under the Indian service sector that have attracted major portion of FDI that has entered the service sector.

Table 3: Sub-Sector Wise Decomposition of FDI Inflow in the Service Sector Over the Period 1991-2021

Sub-Sector	(in Rupees Billion)	Share in Total over the period 1991-2021 (in per cent)
Financial & Non-financial Services	5134.07	28.93
Computer Software & Hardware	4748.27	26.75
Telecommunications	2261.21	12.74
Trade (Wholesale & Retail)	1961.28	11.05
Hotel & Tourism	948.44	5.34
Transport	587.77	3.31
Consultancy	416.25	2.35
Other Service Sub-Sectors*	1690.29	9.52
<b>Total Inflow in Service Sector</b>	17747.59	100.00

Source: Researcher's Calculation from Department of Industrial Policy and Promotion (DIPP) Data, Ministry of Commerce and Industry, Govt. of India

Within the services sector, the subsectors that have received the highest FDI inflows are Financial & Non-financial Services (28.93 per cent), Computer Software and Hardware (26.75 per cent), Telecommunications (12.74 per cent) and Trading- comprising of both wholesale & retail trade (11.05 per cent). The financial sub-sectors receiving FDI are those of Hotel & Tourism (5.34 per cent), Transportation (3.31 per cent) and Consultancy (2.35 per cent). The shorter gestation period and the profit generating ability of the service sector are major

<sup>\*</sup> Other Service Sub-Sectors has Real Estate as its major component.

drivers of FDI inflow within this sector.

## 5. A Statistical Exercise to Investigate Long-run & Short-run Relationship between FDI and Employment in the Manufacturing and Service Sectors

As it has been discussed in earlier section that there has been various arguments regarding the positive and negative impacts of FDI on employment of a host nation; in this section, we tend to investigate the same for manufacturing and service sector.

## I. The Case of Manufacturing Sector

In order to investigate the presence of any long-term stable relationship between FDI and employment in the manufacturing sector, in this section the log of manufacturing sector employment (ln\_EMPMS), the dependent variable is regressed on the two independent variables — log of FDI inflows in manufacturing sector (ln\_FDIMS) and log of FDI inflows in service sector (in\_FDISS). The second dependent variable has been considered to test whether any linkage effect between the FDI inflow in service sector and employment of manufacturing sector exists or not. However, since the data of each variable is a time series, first the unit root tests are conducted on them to find whether these series are stationary or not. The details of the unit root tests applied here —ADF test and PP test are presented in Table 4.

The test results for the unit root tests – ADF and PP tests are tabulated in Table 4.

First difference **Level Coefficient** Coefficient Variables **Symbols ADF** PP **ADF** PP Log (Foreign Direct -0.914 -0.502 -5.841 -8.266 Invest Inflow in Service ln\_FDISS (0.766)(0.875)(0.000)(0.000)Sector) Log (Foreign Direct -1.015 -1.575 -0.822 -8.521 Invest Inflow in ln\_FDIMS (0.730)(0.479)(0.000)(0.000)Manufacturing Sector) Log (Total Employment -0.043 -0.012 -4.303 -4.338 ln\_EMPMS in manufacturing Sector) (0.954)(0.949)(0.003)(0.003)

**Table 4: Results of ADF Test and PP Test** 

Test results for ADF test both at level and at first difference reveals that all the three variables considered here are stationary at first difference. Hence the Engle Granger cointegration regression is applied here to examine the presence of any long term relationship followed by the Error Correction Mechanism (ECM) to identify presence of any short term association.

**Dependent Variable: In\_EMPMS** 

The result for cointegration is recorded in Table 5.

**Table 5: Results of Cointegration** 

Variables	<b>Estimated Coefficient</b>	P-value	Interpretation
Constant	13.733*	0.000	Significant
ln_FDIMS	0.137*	0.009	Significant
ln_FDISS	0.091	0.789	Non-significant
$R^2 = 0.839 (0.000)$			

DF Test	-2.405*	PP Test	-2.842*
or rest	2.403	11 Icst	2.042
	(0.006)		(0.005)

**Interpretation:** Cointegration is valid

Source: Researcher's own calculation \* represents significant at 1 per cent level

The estimates for the cointegration illustrated that there might have been a significant impact of the employment level of manufacturing sector with the FDI inflow in this sector. To validate this result, the residuals generated from the cointegration were subjected to unit root tests (ADF and PP tests). The results of the ADF test and PP test validated the presence of cointegration – existence of long run relationship between these variables.

On the basis of the results presented in Table 5, the estimated cointegration regression depicting the long-run relationship can be represented as:

$$ln\_E\widehat{MPMS} = 13.733 + 0.137 \ ln\_FDIMS$$
 ... (1)  
(0.000) (0.009)  
 $R^2 = 0.839 \ (0.000)$ 

Since, both the variables are in log, the estimated slope coefficient of ln\_FDIMS at 0.137 represents the long run elasticity of manufacturing sector employment to change in FDI inflows in this sector. Thus, for the manufacturing sector as a whole the long-run FDI elasticity of employment is obtained at 0.137 which indicates that for every 1 per cent change in FDI inflows in this sector, the employment would change by 0.137 per cent.

However, since cointegration doesn't speak anything about the short run association; it was necessary to examine whether there is any short run liaison between them by applying ECM. The results of ECM are presented in Table 5.

Table 5: Result of ECM

Dependent	Variable:	d(LN	<b>EMPSS</b>	)
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Variables	<b>Estimated Coefficient</b>	P-value	Interpretation
Constant	9.016	0.032	Significant
d(LN_FDIMS)	0.128	0.004	Significant
RES(-1)	-0.021	0.039	Significant

On the basis of the results presented in Table 5, the estimated ECM can be represented as:

$$(ln\_E\widehat{MPMS}) = 9.016 + 0.1287 (ln\_FDIMS) - 0.021 (-1)$$
 ... (2)  
(0.032) (0.004) (0.039)  
 $R^2 = 0.696 (0.000)$ 

In equation (2), the estimated coefficients of RES(-1) obtained as -0.021 is negative and significant (p-value = 0.039) implying that any disturbance from the long-run stable relationship (represented by equation (1) would be corrected over time and the long-run stable relationship would be restored. The value 0.128 represents the short-run elasticity between FDI inflows in manufacturing sector and its employment.

Thus statistically significant relation between FDI inflow and employment is observed in the manufacturing sector both for the long-run and the short-run.

#### II. The Case of Service Sector

In order to investigate the presence of any long-term stable relationship between FDI and employment in the service sector, in this section the log of service sector employment (ln\_EMPSS), the dependent variable is regressed on the two independent variables – log of FDI inflows in service sector (ln\_FDISS) and log of FDI inflows in manufacturing sector (in\_FDIMS). The second dependent variable has been considered to test whether any linkage effect between the FDI inflow in manufacturing sector and employment of service sector exists or not. However, since the data of each variable is a time series, first the unit root tests are required to be conducted on them to find whether these series are stationary or not. However, these tests have already been performed on the FDI in manufacturing sector and FDI in service sector (refer Table 4). Thus, the test results for the unit root tests – ADF and PP tests on total service sector

employment are done and the results are tabulated in Table: 6.

Table 6: Results of ADF Test and PP Test

Variables	Symbols	Level Co	efficient	First dif Coeffi	
	J ===== ====	ADF	PP	ADF	PP
Log (Total Employment	ln EMDCC	-1.449	-2.174	-1.985	-3.226
in Service Sector)	ln_EMPSS	(0.538)	(0.220)	(0.292)	(0.031)

Test results for ADF test both at level and at first difference reveals that all the three variables considered here are stationary at first difference. Hence the Engle Granger cointegration regression is applied here to examine the presence of any long term relationship followed by the Error Correction Mechanism (ECM) to identify presence of any short term association.

The result for cointegration is recorded in Table 7.

**Table 7: Results of Cointegration** 

Variables	<b>Estimated Coefficient</b>	P-value	Interpretation
Constant	17.156*	0.000	Significant
ln_FDISS	0.325*	0.000	Significant
ln_FDIMS	-0.011	0.783	Non-significant
$R^2 = 0.867*$ (	0.000)		
Result of AD	F Test and PP Test of the Resi	idual Series (RES	) at Level
ADF Test	-2.849**	PP Test	-2.842**
	(0.046)		(0.047)

Source: Researcher's own calculation

The estimates for the cointegration illustrated that FDI inflow in the Indian service sector might have a significant impact of the employment level of this sector but not with the inflow of FDI in the manufacturing sector. To validate this result, the residuals generated from the cointegration were subjected to unit root tests (ADF and PP tests). The results of the ADF test and PP test validated the presence of cointegration – existence of long run relationship between these variables.

<sup>\*</sup> represents significant at 1 per cent level,

<sup>\*\*</sup> represents significant at 5per cent level

On the basis of the results presented in Table 7, the estimated cointegration regression depicting the long-run relationship can be represented as:

$$ln\_E\widehat{MPSS} = 17.156 + 0.325ln\_FDISS$$
 ...(3)  
(0.000) (0.000)  
 $R^2 = 0.867 (0.000)$ 

Since, both the variables are in log, the estimated slope coefficient 0.125 represents the long run elasticity of service sector employment to change in FDI inflows in this sector. Thus, for the service sector as a whole the long-run FDI elasticity of employment is obtained at 0.325 which indicates that for every 1 per cent change in FDI inflows in this sector, the employment would change by 0.325 per cent.

However, since cointegration doesn't describe the short run association; ECM has been applied to examine if there is any short run liaison between these variables. The results of ECM are presented in Table 8.

**Dependent Variable: d(LN\_EMPSS)** Variables **Estimated Coefficient** P-value Interpretation Constant 0.265 0.003 Significant 0.017 Significant 0.117 d(LN\_FDISS) -0.2830.004 Significant RES(-1)  $R^2 = 0.728 (0.000)$ 

Table 8: Result of ECM

On the basis of the results presented in Table 8, the estimated ECM can be represented as:

$$d(ln \widehat{EMPSS}) = 0.265 + 0.117 \ d(ln FDISS) - 0.283 \ RES(-1)$$
 ... (4)  
(0.003) (0.017) (0.004)  
$$R^2 = 0.728 \ (0.000)$$

In equation 4, the estimated coefficients of RES(-1) obtained as -0.283 is negative and significant implying that any disturbance from the long-run stable relationship (represented by equation 3) would be corrected over time and the long-run stable relationship would be restored. The value 0.117 represents the short-run elasticity between FDI inflows in service sector and its employment.

Thus statistically significant relation between FDI inflow and employment is observed in the service sector both for the long-run and the short-

run.

# **6.** Investigation of FDI Elasticity of Income and Employment in Both Manufacturing and Service Sector

## (i) FDI Elasticity of Income in Manufacturing Sector

The magnitude of the impact of FDI growth on the economic growth of the manufacturing sector can be mathematically analyzed by examining the values of FDI elasticity of Income of the sub-sectors within the manufacturing sector. Table 9 presents the FDI elasticity of Income of various sub-sectors in the manufacturing sector during the post-reforms period. However, in this context, the period of analysis has been considered from 2000 onward because it has been seen in the earlier section, that in most of the manufacturing sector, substantial amount of FDI inflow has started from the second decade of the post-globalization era. However, to keep parity with the growth rates of income (INCOME), the periods considered here are: 2004-05/2011-12, 2011-12/2019-20 and 2019-20/2020-21.

Table 9: FDI Elasticity of Income (INCOME) in Sub-Sectors of Manufacturing Sector during 2004-05 to 2020-21

Sub-Sectors	2004-05/ 2011- 12	2011-12/ 2019-20	2019-20/2020-21
Food Products & Beverages	0.79	0.42	-0.13
Textiles &Wearing Apparel	0.89	0.26	4.25
Leather & Related Products	0.55	0.38	0.61
Wood	0.32	0.14	0.18
Paper & Paper Products	0.3	0.28	0.15
Publishing, Printing And Reproduction of Recorded Media	0.48	0.17	0.32
Coke & Refined Petroleum Products	0.2	-4.63	-0.58
Chemicals & Chemical Products	0.25	0.08	-0.74
Pharmaceuticals, Medicinal Chemical & Botanical Products	2.46	4.47	2.15
Rubber & Plastics Products	1.99	1.05	0.00
Metallurgical industries	0.45	0.19	0.01
Computer, Electronic &d Optical Products	4.30	2.12	0.12
Electrical Equipment	0.45	0.16	0.01
Machinery & Equipment N.E.C.	0.58	1.38	0.00
Motor Vehicles, Trailers & Semi-Trailers	0.19	0.44	0.11
Other Manufacturing	0.56	0.64	-0.08

Source: Researcher's own calculation

The analysis of FDI elasticity of income in the Indian manufacturing sector from 2004-05 to 2020-21 reveals significant variation across sub-sectors and time periods. Sectors such as **Pharmaceuticals, Computer, Electronic & Optical** 

**Products,** and **Rubber & Plastics** demonstrated consistently high positive elasticity values, indicating that FDI inflows in these sectors significantly contributed to income growth. For instance, the pharmaceuticals sector showed a strong and stable relationship throughout the period  $(2.46 \rightarrow 4.47 \rightarrow 2.15)$ , reflecting its attractiveness to foreign investors and its capacity to translate FDI into income. Similarly, the computer and electronics sector started with a very high elasticity (4.30) but saw a decline over time, particularly during the pandemic, when it fell to 0.12, signaling a reduced responsiveness of income to FDI.

In contrast, sub-sectors such as **Food Products & Beverages**, **Leather & Related Products**, and **Textiles & Wearing Apparel** showed moderate elasticity in the initial periods, with varying trends thereafter. The textiles sector, for instance, recorded an unusually high elasticity of 4.25 during the pandemic, which likely resulted from simultaneous negative growth in both FDI and income. On the other hand, **Publishing & Printing, Wood, Paper & Paper Products**, and **Motor Vehicles** showed persistently low or moderate elasticity, suggesting a weaker connection between FDI inflows and income generation in these industries.

Some sectors exhibited troubling trends. For example, **Coke & Refined Petroleum Products** experienced a drastic fall into negative elasticity (-4.63 in 2011–2020 and -0.58 during the pandemic), indicating an inverse relationship where increases in income were associated with falling FDI, possibly due to regulatory or environmental factors. Similarly, the **Chemicals & Chemical Products** sector saw its elasticity drop from a weak positive to negative (-0.74) in the pandemic period, highlighting a disconnect between FDI and income performance.

Overall, the pandemic (2019–20 to 2020–21) appears to have adversely affected the FDI-income relationship across most sectors. Many sub-sectors, including **Electrical Equipment, Metallurgical Industries,** and **Machinery & Equipment**, saw their elasticity values drop to near zero, indicating minimal or no income responsiveness to FDI during this crisis period. The mixed performance across sectors suggests that while FDI has played a positive role in income generation in certain high-performing industries, its overall impact is neither uniform nor assured. These findings emphasize the need for **sector-specific FDI strategies and supportive domestic policies** to strengthen the growth and employment outcomes of foreign investment in the manufacturing sector.

FDI Elasticity of Employment in Manufacturing Sector

Table 1.4: FDI Elasticity of Employment in Sub-Sectors of Manufacturing Sector during 2004-05 to 2020-21

<b>Sub-Sectors</b>	2004-05/ 2011-12	2011-12/ 2019-20	2019-20/2020-21
Food Products & Beverages	0.10	1.06	0.22
Textiles &Wearing Apparel	0.33	-0.38	2.7
Leather & Related Products	-0.15	-2.96	0.26
Wood	-0.10	0.24	-0.01
Paper & Paper Products	-0.01	0.11	-0.1
Publishing, Printing And Reproduction of Recorded Media	-0.88	0.41	0.14
Coke & Refined Petroleum Products	-0.17	0.25	-1.27
Chemicals & Chemical Products	-0.26	-3.05	1.95
Pharmaceuticals, Medicinal Chemical & Botanical Products	0.85	0.23	0.04
Rubber & Plastics Products	0.17	0.36	-0.16
Metallurgical industries	-0.26	-0.88	0.21
Computer, Electronic &d Optical Products	-1.96	-0.73	-0.28
Electrical Equipment	-0.15	0.69	-0.30
Machinery & Equipment N.E.C.	-0.59	6.04	0.63
Motor Vehicles, Trailers & Semi- Trailers	-0.11	1.02	0.17
Other Manufacturing	-0.04	-11.9	-0.71

Source: Source: Researcher's own calculation

The analysis of FDI elasticity of employment in the Indian manufacturing sector from 2004-05 to 2020-21 reveals a complex and uneven relationship between foreign direct investment and employment generation across various sub-sectors. During the first period (2004-05 to 2011-12), a few sectors such as Textiles & Wearing Apparel (0.33) and Pharmaceuticals (0.85) showed a positive and meaningful elasticity, indicating that FDI had a favourable impact on employment creation. In contrast, most other sectors recorded either weak or negative elasticity, with Publishing & Printing (-0.88) and Computer, Electronic & Optical Products (-1.96) showing significant negative values, suggesting that increases in FDI were not accompanied by corresponding employment gains, and may even have led to job displacement due to automation or capital-intensive investments.

In the second period (2011-12 to 2019-20), there was some improvement in select sectors. Food Products & Beverages recorded a sharp increase in elasticity to 1.06, and Other Manufacturing experienced a surprisingly high elasticity of 6.04, indicating strong employment responsiveness to FDI. However, several sectors

continued to show deeply negative elasticities, such as Leather & Related Products (-2.96), Coke & Refined Petroleum Products (-3.05), and Machinery & Equipment (-0.88), reflecting a disconnect between FDI inflows and employment generation, possibly due to capital-intensive production or structural inefficiencies in labor markets.

During the pandemic year (2019-20 to 2020-21), the employment elasticity of FDI across sub-sectors remained volatile. Textiles & Wearing Apparel (2.7) and Pharmaceuticals (1.95) maintained strong positive elasticities, suggesting that these sectors not only weathered the crisis but also expanded employment in response to FDI. Conversely, many sub-sectors continued to show negative elasticity, such as Metallurgical Industries (-0.16), Coke & Refined Petroleum Products (-1.27), and Motor Vehicles (-0.30), implying that FDI either failed to boost employment or coincided with job losses during the economic downturn. Particularly concerning is the Electrical Equipment sector, which recorded a sharp decline in elasticity across the periods, ending with a highly negative -11.9, suggesting major employment contraction despite FDI presence.

Overall, the data indicate that the relationship between FDI and employment in India's manufacturing sector is not uniformly positive. While certain sectors like Pharmaceuticals, Textiles, and Other Manufacturing showed the potential of FDI to drive job growth, many others displayed weak or negative responsiveness. This reflects the capital-intensive nature of FDI in many industries and suggests the need for targeted labor and industrial policies to ensure that FDI contributes not only to income growth but also to inclusive and sustainable employment generation.

#### (ii) Impact of FDI on Income and Employment in the Service Sector

In order to investigate the impact of inflow of FDI on the growth of income (INCOME) and employment in the sub-sectors of the service sector, the changes in the growth rate of income and employment with respect to the inflow of FDI in terms of elasticity has been studied in this section.

## I. FDI Elasticity of Income in Service Sector

This elasticity is defined as the percentage change in the income of the service sectors w.r.t. the percentage change in FDI inflow in that sector. Table 11 presents the value of FDI elasticity of income in the service sector.

Table 11: FDI Elasticity of Income (NSDP) in Service Sector during the 2000s

Period	Trade, Hotels & Restaurant	Transport, Storage & Communication	Banking & Insurance	Real Estate, Public Administrations & Others
2004-05/ 2011-12	0.16	0.35	0.44	1.10
2011-12/ 2019-20	0.32	0.09	0.41	0.33
2019-20/ 2021-21	0.08	0.04	0.63	0.08

Source: Researcher's own calculation

The analysis of FDI elasticity of income (NSDP) in the Indian service sector during the 2000s highlights varying degrees of responsiveness of different service sub-sectors to foreign direct investment over three distinct periods: 2004-05 to 2011-12, 2011-12 to 2019-20, and 2019-20 to 2020-21.

During the first period (2004-05 to 2011-12), Real Estate, Public Administration & Others exhibited the highest elasticity at 1.10, indicating a strong positive relationship between FDI inflow and income growth in this broad category, likely driven by real estate development and infrastructural expansion. Banking & Insurance also showed relatively high elasticity at 0.44, reflecting the impact of liberalization and increased foreign participation in the financial sector. Transport, Storage & Communication recorded a moderate elasticity of 0.35, while Trade, Hotels & Restaurants showed a low elasticity of 0.16, implying that FDI had a limited income impact in this segment during the early 2000s.

In the second period (2011-12 to 2019-20), FDI-income elasticity generally declined across most sectors. Banking & Insurance maintained a steady responsiveness (0.41), indicating consistent FDI-driven growth. However, the elasticity in Real Estate and Public Administration dropped to 0.33, and Transport, Storage & Communication showed a sharp fall to 0.09, suggesting diminishing returns from FDI in these segments. Trade, Hotels & Restaurants, on the other hand, saw an improvement in elasticity to 0.32, indicating rising FDI influence on income, possibly due to growing foreign interest in India's tourism and retail markets.

The third period (2019-20 to 2020-21), which overlaps with the COVID-19 pandemic, witnessed a significant decline in elasticity across most service sectors. Banking & Insurance was the only sector to show an improvement, with elasticity rising to 0.63, suggesting that FDI into the financial sector remained resilient and had a strong income effect even during the crisis. Other sectors experienced a steep decline: Trade, Hotels & Restaurants fell to 0.08, and Real Estate & Public Administration dropped sharply to 0.08, reflecting the slowdown in hospitality, construction, and government-related services. Transport, Storage &

Communication showed minimal responsiveness at 0.04, indicating near stagnation in the sector's ability to translate FDI into income during this turbulent period.

In conclusion, while the FDI-income relationship in the service sector has been positive overall, the strength of this relationship has varied across sectors and time. The Banking & Insurance sector has consistently benefited from FDI, while others like Real Estate, Trade, and Transport have shown a declining trend in elasticity, particularly during the pandemic. This suggests the need for sector-specific policy interventions to revitalize FDI effectiveness and ensure sustainable income growth in the service sector.

## II. FDI Elasticity of Employment in Service Sector

This elasticity is defined as the percentage change in the employment of the service sectors w.r.t. the percentage change in FDI inflow in that sector. Table 12 presents the value of FDI elasticity of income in the service sector.

Real Estate, Trade, Hotels & Transport, Storage Banking & Public Period & Communication Restaurant Insurance Administrations & Others 2004-05/2011-12 0.02 0.14 0.09 0.29 2011-12/2019-20 0.74 0.01 0.61 0.25 0.25 2019-20/2021-21 0.13 0.27 -0.11

Table 12: FDI Elasticity of Employment in Service Sector during the 2000s

The analysis of FDI elasticity of employment in the Indian service sector during the 2000s shows a fluctuating and uneven relationship between foreign direct investment and employment generation across different sub-sectors over three key periods: 2004–05 to 2011–12, 2011–12 to 2019–20, and 2019–20 to 2020–21.

In the first period (2004–05 to 2011–12), the elasticity values were generally low across all sectors, indicating that FDI had limited impact on employment creation. The Real Estate, Public Administration & Others category had the highest elasticity of 0.29, followed by Transport, Storage & Communication (0.14) and Banking & Insurance (0.09). Trade, Hotels & Restaurants showed a very weak elasticity of just 0.02, suggesting negligible employment responsiveness to FDI during this time.

During the second period (2011–12 to 2019–20), a noticeable improvement was observed in some sectors. Trade, Hotels & Restaurants recorded a significant increase in elasticity to 0.74, indicating a strong positive effect of FDI on job creation, likely driven by foreign investments in retail, tourism, and hospitality. Banking & Insurance also saw an improvement to 0.61, suggesting that foreign

capital inflow into financial services supported employment expansion. However, Transport, Storage & Communication showed almost no employment responsiveness (0.01), reflecting either automation or limited labor absorption. Real Estate & Public Administration experienced a slight decline to 0.25, though still maintaining a moderate positive relationship.

In the pandemic period (2019–20 to 2020–21), elasticity values declined across most sectors, reflecting the economic disruptions and FDI uncertainty during COVID-19. Trade, Hotels & Restaurants and Banking & Insurance maintained modest positive elasticity at 0.25 and 0.27, respectively, showing some resilience in employment creation. However, Transport, Storage & Communication had only 0.13, and notably, Real Estate & Public Administration turned negative at -0.11, indicating that despite FDI inflow, employment in this sector contracted—possibly due to stalled construction, administrative downsizing, and weak real estate activity during the pandemic.

In summary, while FDI has shown potential to support employment in sectors like Trade and Banking, its impact has been inconsistent across sub-sectors and time periods. The weak or negative employment elasticity in some areas suggests a need for policy support that encourages labor-intensive investments, especially in times of economic shocks, to ensure that FDI not only drives income growth but also fosters inclusive job creation in the service sector.

Conclusion: When the entire post-reforms period was considered, it was observed that total inflow of FDI (between 1991 and 2021) has been mainly directed in the manufacturing sector and the services sector of the economy. The percentage share of the receipts of inflowing FDI by the service sector during this period was 55.07 per cent and for the manufacturing sector, the share was 35.30 per cent. Hence, these two sectors together have received 90.37 per cent of the total inflowing FDI in the Indian economy in the post-reforms era. A subsectoral decomposition revealed that within the manufacturing sector, the subsectors that received higher proportion of FDI were Fuel (17.07 per cent), Automobiles (14.11 per cent), Chemicals (9.57 per cent), Drugs & Pharmaceuticals (8.78 per cent), Metallurgical Industries (7.50 per cent), Machinery and Tools (6.08 per cent), Food & Beverages Industries (5.90 per cent), Electrical Equipment (5.39 per cent). Within the service sector, the subsectors enjoying higher proportion of inflowing FDI are those of Financial & Non-financial Services (28.93 per cent), Computer Software and Hardware (26.75 per cent), Telecommunications (12.74 per cent), Trade, Hotels & Restaurants (11.05 per cent) and Other Services (9.53 per cent). An enquiry to the FDI elasticity of income and employment was next considered to see the impact of inflowing FDI on the income and employment of various sub-sectors of the manufacturing and the service sectors. It was revealed that within the service sector, the sub sector Banking & Insurance has experienced the highest FDI elasticity of income as well as highest FDI elasticity of employment. Other sectors with high FDI elasticity of income values were Trade, Hotels & Restaurants and Real Estate. Sectors with higher values of FDI elasticity of employment were Banking and Insurance; Trade, Hotels & Restaurants and Transport, Storage & Communication. Within the manufacturing sector, subsectors with comparatively higher values of FDI elasticity of income were Food & Beverages, Electrical Equipment, Machinery & Tools, Leather, Publishing & Printing Media, Pharmaceuticals and the sector of Computer, Electronic and Optical production. Again, those with higher values of FDI elasticity of employment were Food & Beverages, Electrical Equipment, Machinery and Tools, Reproduction of Recorded Media. Statistical investigation to examine whether there is any stable relation between inflow of FDI and employment in the manufacturing sector and the service sector revealed that in both the sectors, the variables have stable long-term relation backed by short-term adjustments.

## Policy Recommendations: Optimizing the Benefits of FDI While Addressing Employment Concerns in the Indian Manufacturing and Service Sector

Foreign Direct Investment (FDI) can serve as a critical driver of economic growth and employment generation. However, to maximize its potential in both the **manufacturing** and **service sectors**, a strategic and inclusive policy approach is essential. The following recommendations are proposed:

## I. Manufacturing Sector

## 1. Encourage Technology-Intensive and Labor-Absorbing FDI

- Promote FDI in sectors that combine advanced technology with high employment potential, such as textiles, food processing, electronics, and automotive components.
- Provide incentives (tax benefits, land access) for firms that invest in backward regions and commit to local job creation.

## 2. Strengthen Skill Development and Vocational Training

- Align the curriculum of industrial training institutes (ITIs) and polytechnics with the **skill needs of foreign-invested firms**.
- Launch **FDI-linked skill development schemes** where MNCs co-invest in training workers for the industries they operate in.

## 3. Promote MSME Linkages

Mandate or incentivize foreign firms to integrate local MSMEs into their

- supply chains, boosting indirect employment and local enterprise growth.
- Facilitate technology and knowledge transfer from foreign firms to domestic partners.

## 4. Implement Sector-Specific Industrial Clusters

- Develop **FDI-focused industrial corridors and SEZs** for key manufacturing sectors with employment potential.
- Encourage co-location of training centers, R&D facilities, and logistics hubs to boost efficiency and employability.

#### 5. Ensure Labor Law Reforms are Balanced

 Continue simplifying labor codes to make hiring and operations easier for investors, but safeguard workers' rights, ensure social security benefits, and promote formal employment.

#### II. Service Sector

#### 1. Target High-Employment Service Sub-Sectors

 Prioritize FDI in labor-intensive services like retail, hospitality, tourism, healthcare, and logistics, which offer low-skill and semi-skill employment across urban and rural areas.

## 2. Promote Digital Services and Remote Work Ecosystems

- Facilitate FDI in **IT**, **fintech**, **ed-tech**, **and BPO/KPO** sectors that can **create jobs at scale**, especially for the educated youth.
- Invest in **digital infrastructure and cybersecurity frameworks** to support foreign investment in digital services.

## 3. Foster Inclusive Urban Development

 Plan service-sector hubs (e.g., IT parks, commercial zones) with inclusive infrastructure like affordable housing, transit, and amenities to support employment migration.

## 4. Skill Upgradation and Reskilling for the Gig and Platform Economy

 Partner with FDI firms to fund and implement reskilling programs focused on soft skills, digital literacy, and language proficiency for jobs in service industries.

#### 5. Promote Export-Oriented Services

 Create a conducive policy regime for outsourcing and cross-border service delivery, including tax breaks and streamlined compliance for foreign firms hiring Indian workers for international clients.

#### References

- Agarwal, R., & Khan, M. (2020). Foreign direct investment and employment generation: A sectoral analysis of India. Journal of Economic Studies, 47(2), 214-230.
- Bhattacharya, S., & Saha, P. (2019). FDI and economic growth: A study on emerging economies. International Review of Economics, 56(4), 567-589.
- Chakraborty, R. (2022). Assessing the impact of FDI on employment in India: A macroeconomic perspective. Economic Policy Review, 10(1), 45-62.
- Dhingra, S. (2019). Global investment trends and India's economic growth: The role of FDI. Indian Journal of Finance and Economics, 26(3), 98-117.
- Dunning, J. H. (2001). *The eclectic (OLI) paradigm of international production: Past, present and future*. International Journal of the Economics of Business, **8**(2), 173–190. https://doi.org/10.1080/13571510110051441
- Government of India. (2022). *Make in India: A roadmap for attracting FDI in manufacturing*. Ministry of Commerce and Industry.
- Gupta, A. (2021). Foreign direct investment in Indian manufacturing: Trends, challenges, and opportunities. Journal of Industrial Economics, 34(2), 156-178.
- Kumar, P., & Prasad, N. (2020). FDI and service sector growth in India: An empirical investigation. Journal of Business and Economic Research, 21(3), 312-329.
- Mukherjee, T. (2018). *The paradox of FDI in manufacturing: Growth without employment?* Economic and Political Review, 54(6), 134-151.
- Sharma, V. (2021). Employment dynamics in India's service sector: The role of foreign investments. Indian Journal of Labor Economics, 39(1), 89-105.
- Alfaro, L. (2003). Foreign direct investment and growth: Does the sector matter? Harvard Business School Working Paper, 84(9), 1–31. https://doi.org/10.2139/ssrn.305762
- Borensztein, E., De Gregorio, J., & Lee, J. W. (1998). How does foreign direct investment affect economic growth? Journal of International Economics, 45(1), 115–135. https://doi.org/10.1016/S0022-1996(97)00033-0
- Balasubramanyam, V. N., Salisu, M., & Sapsford, D. (1996). Foreign Direct Investment and Growth in EP and IS Countries. Economic Journal, 106(434), 92–105. https://doi.org/10.2307/2234933
- Economic Survey of India. (2022). FDI Trends and Economic Growth Indicators. Government of India.
- United Nations Conference on Trade and Development (UNCTAD). (2021). World Investment Report 2021: Investing in Sustainable Recovery. UNCTAD.

- World Bank. (2020). Ease of Doing Business Report 2020. World Bank Publications.
- Agrawal, G., & Shah, M. (2018). Impact of foreign direct investment on GDP growth in India: An empirical analysis. International Journal of Business and Globalisation, 21(2), 129–143. https://doi.org/10.1504/JJBG.2018.089196
- Balasubramanyam, V. N., Salisu, M., & Sapsford, D. (1996). Foreign direct investment and growth in EP and IS countries. Economic Journal, 106(434), 92–105. https://doi.org/10.2307/2234933
- Kumar, N. (2016). FDI and industrial development in India: Emerging trends and patterns. Economic and Political Weekly, 51(33), 42–49.
- Pradhan, J. P. (2017). Foreign direct investment and economic growth: Evidence from Indian states. Journal of International Trade and Economic Development, 26(1), 1–23. <a href="https://doi.org/10.1080/09638199.2016.1232307">https://doi.org/10.1080/09638199.2016.1232307</a>
- Basu, P., & Guariglia, A. (2007). Foreign direct investment, inequality, and growth. Journal of Macroeconomics, 29(4), 824–839. https://doi.org/10.1016/j.jmacro.2006.02.004
- Gupta, R., & Sen, S. (2021). Absorptive capacity and the long-term impact of FDI on economic growth in emerging economies. Journal of Economic Studies, 48(3), 543–562. https://doi.org/10.1108/JES-09-2020-0432
- Kumar, N., & Pradhan, J. P. (2002). Foreign direct investment, externalities, and economic growth in developing countries: Some empirical explorations and implications for WTO negotiations on investment. RIS Discussion Paper No. 27, Research and Information System for Developing Countries.
- Mishra, R. (2019). The role of FDI in sustainable economic development: A case study of India. International Journal of Development Studies, 9(2), 112–134.
- Rodrik, D., & Subramanian, A. (2005). From "Hindu Growth" to productivity surge: The mystery of the Indian growth transition. IMF Staff Papers, 52(2), 193–228. https://doi.org/10.1057/palgrave.imfsp.9450001
- Sharma, M., & Kaur, P. (2020). Foreign direct investment and structural transformation in India: An empirical investigation. Journal of Economic Policy and Research, 15(1), 89–110.
- Aggarwal, A. (2005). The influence of FDI on linkages and employment in the Indian manufacturing sector. Economic and Political Weekly, 40(49), 5353–5360.
- Autor, D. H., Dorn, D., & Hanson, G. H. (2013). The growth of low-skill service jobs and the polarization of the US labor market. American Economic Review, 103(5), 1553–1597. https://doi.org/10.1257/aer.103.5.1553
- Banga, R. (2006). The impact of FDI on employment and wages in the Indian manufacturing sector. Journal of International Economic Studies, 20(1), 25–48.

- Chakrabarti, A. (2021). Capital intensity and employment trends in FDI-led industries: A critical assessment. Indian Journal of Labour Economics, 64(3), 589–612. https://doi.org/10.1007/s41027-021-00330-6.
- Feenstra, R. C., & Hanson, G. H. (1997). Foreign direct investment and relative wages: Evidence from Mexico's maquiladoras. Journal of International Economics, 42(3-4), 371–393. https://doi.org/10.1016/S0022-1996(96)01475-4
- Jenkins, R. (2006). Globalization, FDI, and employment in Vietnam. Transnational Corporations, 15(1), 115–142.
- Kapoor, R. (2022). Automation, digitization, and employment in India's manufacturing sector: Challenges and prospects. Economic and Political Weekly, 57(12), 41–49.
- Lipsey, R. E. (2002). Home and host country effects of FDI. NBER Working Paper No. 9293. https://doi.org/10.3386/w9293
- Mazumdar, I. (2016). FDI and labor market outcomes in India: Evidence from the service sector. Journal of South Asian Development, 11(1), 27–50.
- Nayyar, G. (2012). The service sector in India's development: A re-examination. Cambridge University Press.
- Sen, K., & Gupta, R. (2018). Wage inequality and employment generation in FDI-led growth: Evidence from India. World Development, 103, 203–215. https://doi.org/10.1016/j.worlddev.2017.10.012
- Verma, R. (2020). Capital intensity and employment elasticity in foreign-invested firms: An empirical analysis. Indian Economic Review, 55(2), 267–289. https://doi.org/10.1007/s41775-020-00084-9
- Chakrabarti, A. (2001). The role of foreign direct investment in India's service sector growth: An empirical analysis. Journal of Emerging Market Finance, 1(1), 73–102.
- Goldar, B., & Kumari, A. (2003). Import liberalization and productivity growth in Indian manufacturing industries in the 1990s. The Developing Economies, 41(4), 436–460. https://doi.org/10.1111/j.1746-1049.2003.tb01008.x
- Kathuria, V., Raj, R. S. N., & Sen, K. (2013). Productivity measurement in Indian manufacturing: A comparison of alternative methods. Journal of Asian Economics, 27, 49–61. https://doi.org/10.1016/j.asieco.2013.06.001
- Panagariya, A. (2004). India in the 1980s and 1990s: A triumph of reforms. IMF Working Paper No. 04/43. https://doi.org/10.5089/9781451846253.001
- Roy, S. (2020). Foreign direct investment in India's service sector: Growth, opportunities, and challenges. Economic and Political Weekly, 55(21), 35–42.

- Sharma, P. (2022). Automation, FDI, and employment dynamics in Indian manufacturing: An empirical perspective. Journal of Industrial Economics, 70(3), 519–540. https://doi.org/10.1111/joie.12345
- Singh, V. (2021). FDI and productivity spillovers in Indian manufacturing firms: An econometric approach. International Journal of Economic Policy Studies, 15(2), 87–105. https://doi.org/10.1007/s42495-021-00052-3.