AN ANALYSIS OF REGIONAL INEQUALITY OF FDI IN INDIA

A. Sabharwal
Department of Economics, Hindu Kanya College, Kapurthala, India
anu.meenu78@gmail.com

ABSTRACT

A significant determinant of economic growth is foreign direct investment. It is the acquisition of ownership by a foreign business entity. The movement of capital by FDI across national boundaries can also be related to it. It can be represented as an investor based in the home country, acquiring an asset to manage it in a host country. A large amount of capital is required to fund its various developmental needs, for a capital deficient country like India. To develop its infrastructure, expertise and technology base, FDI is inevitable. To promote economic growth, countries are trying to attract mobile capital, while FDIs could increase regional inequality, as several regions of a country typically do not receive FDI on an equal basis. A study of the geographic distribution of foreign investment shows a broad gap in the allocation of foreign capital between different regions. Although some regions attract heavy foreign capital flows, such as Mumbai, New Delhi, Chennai, and Gujarat, others are largely ignored by foreign investors.

Keywords: *Foreign Direct Investment, Regional Composition, Regional inequality, FDI Policies.*

Introduction

FDI inflows, however, are heterogeneously distributed across various regions of India. Regarding FDI inflows, various Indian states are performed dramatically differently. This skewed regional FDI inflow is also argued to be due in part to disparities in state government policy towards the FDI itself, and in part to the asymmetric degree of state growth due to the unequal distribution of natural resources, factors, social and historical factors. If that is the case, then if the current regional and inter-state imbalances are further concentrated by the inflow of FDI is a major concern. In other words, regional inflows and regional inequality of FDI are induced by each other.

Review of literature

Shujie Yao, et al. (2020) suggested that FDI should not be known to trigger regional inequality; regional growth disparities have been caused by the unequal distribution of FDI rather than FDI itself. The main policy issue is that to increase the geographical distribution of investments as a way to minimize regional inequalities, FDI should be directed towards inland areas with preferential policies enforced.

K. F, Kattookaran TP (2018) studied that FDI inflows to different states have tremendous variations. Although soaring FDI flows are received by some areas such as Delhi, Bombay, etc., regions such as Patna, Guwahati, etc. are very stumpy. The large disparity between different sectors in the allocation of foreign capital is revealed by an analysis of the sector-wise distribution of foreign investment. While some industries, such as services, manufacturing, etc., attract high flows of foreign capital, others are ignored by foreign investors.

Christian Lessmann(2013) studied higher mobility of persons in highly developed countries, as well as government policies to alleviate the negative redistribution effect of FDI on regional inequality. The cross-country evidence supports the Chinese case concerning the worsening effect that growth has had on the impact of FDI on regional inequality.

Azhar and Marimuthu (2012) examined that India was one of the developing countries and even during the recession-era, was able to show positive GDP growth. The overall growth rate of world GDP performed comparatively well then. India has all the variables that have favoured FDI, such as abundant labour supply, availability of natural resources, developing infrastructure, potential market size and elicit economic and trade policies. India is the world's second most favored FDI destination after China, but India is projected to outperform China in the future as it has a demographic dividend. Policies that can draw more foreign investment in the manufacturing industry rather than in the service sector should be formulated by the government.

Mukherjee, Atri. (2011) concluded that the scale of the market, the agglomeration effects and the size of the state-based output and service base have a substantial positive influence on inflows of FDI. Taxes and labour costs are negatively related to FDI. However, the influence of labour quality is not apparent; infrastructure has a significant positive impact on FDI flows. Due to the existence of a strong agglomeration effect and to make the backward states more attractive to FDI flows, it is need of the hour to have a cognizant and rigorous effort at the state and national government level. As in China the service, manufacturing and infrastructure sectors should be given importance in policy measures.

Objectives

1. To analyse region-wise trends of Foreign Direct Investment inflows in India.
2. To evaluate the reasons for inflow in major regions.

Research methodology

To find out the growth of the variable over the period, FDI regresses on time (trend term).

Model of basic linear regression as:-

$\text{Log (FDI)}_t = \alpha + \beta t + \mu,$

The trend word that is viewed as an explanatory variable is t' and log (FDI) is the logarithmic type of total US dollar FDI inflows, which is the variable explained.

Basic regression analysis is carried out and the model is calculated by the OLS method. If the absolute value of the approximate t-statistic turns out to be greater than 2, then we say that over the period, FDI has increased significantly. To determine the growth of FDI, the approximate slope coefficient of the trend term (t) is multiplied by 100.

Inflow of foreign direct investment in Mumbai region

In terms of land area, Maharashtra is one of the largest states in India accounting for 9% of India's land area and is also leading in terms of its contribution to the Indian economy. It is the richest state in the world with a gross domestic state product at constant prices, translating into 15 per cent of India's GDP. In recent years, New Delhi, Gujarat, Karnataka and Tamil Nadu have been providing Maharashtra with the increased competition with many companies that have been attracting industries with constructive policies in the form of fiscal incentives, infrastructure, operational ease and a better investment environment. The city of Mumbai is known as the financial capital of India while the emerging major centre of education in Pune. Furthermore, Mumbai has better infrastructure among all states. These factors contribute to attracting FDI into the state.

The Mumbai Regional Office of the RBI includes the states of Maharashtra, Daman & Diu and Dadra & Nagar Haveli. Table 1 displays the FDI inflow in the Mumbai area from January 2011 to December 2019. No doubt, the area of Mumbai accounted for maximum FDI inflow in India and ranked top place until 2019. During this time, there were large variations in FDI inflows in the region of Mumbai. In 2011, the FDI inflow in this area was US$ 9.05 billion. It has now climbed to USD 10.11 billion in 2019. In Mumbai, there were fluctuations in FDI flows. In spite of these movements, the gross FDI inflow during this time has seen a substantial rise. It has an annual exponential compound growth of 7.86 per cent during this period.

Table 1: Inflow of Foreign Direct Investment in Mumbai

Year	FDI in Mumbai	Total inflow of FDI	Percentage Growth as Per Preceding Year
2010-11	9.05	27.57	----
2011-12	7.98	22.79	-12
2012-13	4.61	22.04	-42
2013-14	5.09	28.78	10
2014-15	7.38	39.33	45
2015-16	21.83	46.40	196
2016-17	13.66	43.57	-37
2017-18	9.91	42.41	-27
2018-19	10.11	49.64	2
Total	89.62	322.54	
ECGR	7.86		

α	6052.142
Coefficient of determination	.205
β	0.079
F- value	1.807
Probability value	.220

Source: Newsletters of DIPP

Nevertheless, although its share of FDI inflow has fluctuated, the FDI inflow in the Mumbai region remains important. It remains one of India's biggest FDI destinations. The R square value shows a variance of 20.5 per cent with an F value of 1.807 during this time.

Inflow of foreign direct investment in New Delhi region

Delhi NCR, portions of Haryana and Uttar Pradesh are covered by the RBI's New Delhi Regional Office. The wise break-up of the cumulative FDI inflow in the area shows that the region of Delhi is second only to Mumbai. The inflow of FDI to New Delhi is given in Table 3. Its inflow has risen 10.2 per cent from 6.84 billion in 2011 to 11.48 billion in 2019 at an annual ECGR (exponential compound growth rate). With minor exceptions, the FDI flow in the Delhi region recorded enormous growth in subsequent years. During 2014 and 2015, the Delhi area took the top spot in terms of FDI flow by relegating Mumbai to second place during those two years. Its share of total FDI was ranged between 35.24 to12.08 percent.

Table 3: Inflow of Foreign Direct Investment in New Delhi

Year	Delhi region	Total FDI inflows	percentage Growth as Per Preceding Year
2010-11	6.84	27.57	----
2011-12	4.60	22.79	-33%
2012-13	2.82	22.04	-39%
2013-14	7.36	28.78	161%
2014-15	1.39	39.33	88%
2015-16	6.94	46.40	-50%
2016-17	7.15	43.57	3%
2017-18	9.82	42.41	37%
2018-19	11.48	49.64	17%
Total	70.87	322.54	
ECGR	**10.2**		
α		4298.41	
β		0.102	
F- value		3.68	
Probability value		.009	
Coefficient of determination		.344	

Source: Newsletters of DIPP

While its share of FDI inflows has been increased, the FDI inflow in the Delhi region remains substantial, remaining one of the second largest FDI destinations in India. At an annual growth rate of 10.2 per cent in this area, the FDI has been growing.

During this time, the R^2 value shows a 34 per cent variance in FDI inflow with F value 3.68 and significance at a 5 per cent level.

Inflow of foreign direct investment in Chennai region

The regional office of the RBI, Chennai, encompasses the Tamilnaidu and Pondicherry states. Table 5 displays the FDI in the Chennai area from 2011 to 2019. During the period from 2011 to 2019, there are significant variations in the inflow of Foreign Direct Investment in the area of Chennai. It grew during the time at an annual ECGR (exponential compound growth rate) of 4.28 per cent. The share of FDI in the Chennai region during this period varied from a minimum of 2.94 per cent in 2016 versus 13.46 per cent in 2015 at the most.

Table 5: Inflow of Foreign Direct Investment in Chennai

Year	Chennai	Total FDI	percentage growth Over Previous Year
2010-11	1.314	27.57	--
2011-12	2.071	22.79	58%
2012-13	2.650	22.04	28%
2013-14	3.332	28.78	26%
2014-15	5.292	39.33	59%
2015-16	1.365	46.40	-74%
2016-17	3.869	43.57	183%
2017-18	2.766	42.41	-29%
2018-19	2.082	49.64	-25%
Total	24.741	322.54	
ECGR	**4.28**		
α		2020.98	
β		0.043	
Coefficient of determination		0.065	
F- value		0.486	
Probability value		0.50	

Source: Newsletters DIPP

Inflow of FDI in Bangalore region

The region-wise FDI inflow study reveals that in India, Bangalore is in the fourth position. Table 7 displays the inflow of FDI in Bangalore from 2011 to 2019. With a 26.4 per cent ECGR (annual exponential growth rate), the inflow of FDI in the Bangalore area shows a fluctuating pattern, which is important at a 1 per cent significance level. In the Bangalore area, the inflow of FDI has increased from 1.423 billion in 2011 to 9.014 billion in 2019. The flow of FDI in this area has increased considerably during the study period. There was a sudden spurt in the flow of FDI from 2017 to 2019. The FDI share ranged from 4.62 per cent in 2012 to a maximum of 18.16 per cent in 2019.

Table 7: Inflow of Foreign Direct Investment in Bangalore

Year	Bangalore	Total FDI	percentage Increase Over Previous Year
2010-11	1.422	27.57	
2011-12	1.052	22.79	-26%
2012-13	1.640	22.04	56%
2013-14	2.524	28.78	54%
2014-15	4.855	39.33	92%
2015-16	2.422	46.40	-50%
2016-17	6.881	43.57	184%
2017-18	6.871	42.41	0%
2018-19	9.014	49.64	31%
Total	36.682	322.54	
ECGR	**26.4**		

α	842.8
β	0.264
Coefficient of determination	0.855
F- value	41.40
Probability value	.000

Source: Newsletters of DIPP

The R^2 value shows 85per cent variation in FDI flow in this region during this period which is significant at 5 per cent level of significance with F value being 41.40.

Inflow of foreign direct investment in Ahmadabad region

Ahmadabad, the regional office of the RBI, encompasses the entire state of Gujarat. Table 9 displays FDI inflows in the Ahmadabad area from January 2011 to December 2019. The inflow of FDI rose from 1.103 billion in 2011 to 4.313 billion in 2019 in the Ahmadabad area.

During this time, there were large variations in FDI inflows in the region of Ahmadabad. In the Ahmadabad area, there has been an upward movement in the FDI flow and sometimes downward movement in its flow. FDI has increased at an annual exponential growth of 21.3per cent with 5 per cent significance.

Table 9: Inflow of Foreign Direct Investment in Ahmadabad Region

Year	Ahmadabad	Total FDI	% Growth over Previous Year
2010-11	1.103	27.57	
2011-12	0.645	22.79	-42
2012-13	0.713	22.04	11
2013-14	0..900	28.78	26
2014-15	2.296	39.33	155
2015-16	3.485	46.40	52
2016-17	1.435	43.57	-59
2017-18	2.983	42.41	108
2018-19	4.313	49.64	45
Total	17.8	322.54	
ECGR	**21.3**		

α	549.71
β	0.213
Coefficient of determination	.819
F- value	14.302
Probability value	.007

Source: Newsletters from 2011 to December 2019

During this time in India, the share of FDI in the Ahmadabad area ranged from 2.8% to 8.7% of the total flow of FDI. However, during this time, its share of total FDI in India showed a fluctuating pattern. The R square value shows that during this time the FDI variance in the Ahmadabad area was 81.9 per cent, significant at 5per cent level of significance and F value is 14.03.

Conclusion

In the last decade, India's FDI has increased significantly. However, high regional concentration has followed the rise in FDI flows. Factors affecting FDI inflows in these regions are size and growth of the local market, the level of industrial activity, the growth of the services sector, the availability and quality of physical infrastructure, etc. The existence of a powerful agglomeration effect suggests that more of them appear to be received by states already rich in FDI flows, making it more difficult for other states to draw new investments. The direct way to accomplish this aim could be to develop the national FDI policy in such a way as to shift a large portion of FDI flows to India into the laggard states. The indirect approach is to provide a boost to the overall economy of the less developed countries, with a particular emphasis on the manufacturing, services and infrastructure sectors, to attract foreign investors themselves

References

1. Abbas, Q., Akbar, S., Shan, N., Ullah, A., Hafiz, A. & Muhammad, A. (2012).Impact of Foreign Direct Investment on Gross Domestic Product Global. Journal of Management and Business Research, 11(8).
2. Azhar, S. & Marimuthu, K.N (2012) An overview of Foreign Direct Investment in India. EXCEL International Journal of Multidisciplinary Management Studies, 2 (1).
3. Bindhia, K. F. & Kattookaran, T.P.(2018) Interstate distribution and sectoral composition of FDI Inflows in India. Foreign Trade Review, 53 (4).
4. Lessmann, C. (2013). Foreign direct investment and regional inequality: A panel data analysis. China Economic Review, 24:129-149.
5. Mukherjee, A. (2011). Regional Inequality in Foreign Direct Investment Flows to India: The Problem and the Prospects. Reserve Bank of India Occasional, Paper.32.
6. Nguyen, T. M, Nguyen, C. H & Huy, D. T. N (2020) Impacts of International Trade and FDI on the consumption of renewable energy: case in ASEAN countries, International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), 10(3).
7. Roy, S. & Mandal, K. (2012). Foreign Direct Investment and Economic Growth: An Analysis for Selected Asian countries. Journal of Business Studies Quarterly, 4(1).
8. Saha, R. & Bhowmick, S. (2020).Foreign Direct Investments in the Indian States: The SDG Cornerstones. The Book Thief/ New York: Knopf.
9. Yao S., Wei K., Liu A. (2010) Economic Growth, Foreign Investment and Regional Inequality in China. In: Greenaway D., Milner C., Yao S. (eds) China and the World Economy. Palgrave Macmillan, London. 194-225