

**Regional Determinants of FDI:
A Study of Indian States under Liberalization**

**Regional Determinants of FDI:
A Study of Indian States under Liberalization**


*Dissertation submitted in partial fulfillment of the requirements for the
degree of Master of Philosophy in Applied Economics of the
Jawaharlal Nehru University.*

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M.Phil Programme in Applied Economics
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**CENTRE FOR DEVELOPMENT STUDIES
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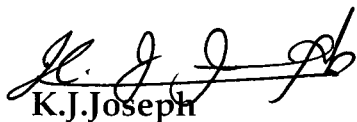
I hereby affirm that the work for the dissertation, 'Regional Determinants of FDI: A Study of Indian States under Liberalization', being submitted as part of the requirements of the M.Phil Programme in Applied Economics of the Jawaharlal Nehru University, was carried out entirely by myself. I also affirm that it was not a part of any other programme of study and has not been submitted to any other University for the award of any degree.



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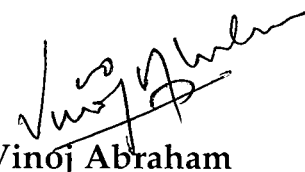
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*Dedicated to my mother
Shrimati Lakshmi Bai*

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ABSTRACT OF THE DISSERTATION

REGIONAL DETERMINANTS OF FDI: A STUDY OF INDIAN STATES UNDER LIBERALIZATION

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Foreign Direct Investment is now being considered to be an important source of foreign capital, technology, market access and managerial expertise to enable developing countries to survive in the current context of heightened international competition under globalization. Hence, developing countries are liberalizing their FDI policy regimes to create a more favorable environment to attract FDI. Apart from the policy liberalization, these countries are also providing different forms of incentives to attract FDI. Such incentive competition is intense not only between countries but also between different sub-regions within countries. Yet, there is significant inter-country and intra-country variation in the extent of success in attracting FDI. In this context, India has not been an exception. Against this background, the present study aimed at; a. to analyze the broad trend and patterns in FDI in-flows into India against the backdrop of policy reforms at the national and at the regional level and b. to explore the regional determinants of FDI inflows.

The study finds that, unprecedented increase in the inflow of FDI into the country under liberalisation and growing competition among the states to attract FDI notwithstanding, bulk of the FDI is concentrated in a select set of industrially developed regions. The states that are less developed, but having more liberal policies, are yet to figure into the location calculus of foreign investors. Thus, inter-state competition for FDI appears to be detrimental to their own interests. This trend, if allowed to continue, can lead to a situation where FDI becomes an instrument of aggravating rather than mitigating the disparities in regional development. With respect to the regional factors affecting FDI inflows the study finds that the size of region's market as approximated by Gross State Domestic product has positive and wages cost has a negative effect on FDI. Similar situation is found in terms of good infrastructure measured in terms of use of power consumption. In broader terms, the policy variables such as special economic zone and incentives are becoming one of the important instruments to attract the FDI at regional levels. However, study found that special economic zones have a positive effect in attracting the FDI, but the state incentive is not statistically significant. On the whole the study calls for more coordination among the states with respect their policies to attract investment.

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LIST OF ABBREVIATIONS

FDI	Foreign Direct Investment
LDCs	Less Developed Countries
MNEs	Multinational Enterprises
CAD	Current Account Deficit
DTTs	Double Taxation Treaties
BITs	Bilateral Investment Treaties
MIA	Multilateral Investment Agreements
CMIE	Center for Monitoring Indian Economy
SIA	Secretariat For Industrial Assistance
FERA	The Foreign Exchange Regulation Act
PMP	Phased manufacturing Programme
TNCs	Transitional Corporations
NRIs	Non-Resident India
OCBs.	Overseas Corporate Bodies
FIIIs	Foreign Institutional Investors
EPZ	Export Processing Zones
STP	State Technological Park
EOUs	Export Oriented Undertakings
WTO	World Trade Organization
TRIPs	Trade Related Intellectual Propert Rights
KSIMC	Karnataka Small Scale Industry Marketing Corporation
SIDCs	State Industrial Development Corporations
FIPB	Foreign Investment Promotion Board
FIIA	Foreign Investment Implementation Authority
DTA	Domestic Tariff Area

CHAPTER 1

INTRODUCTION

The Context

Foreign Direct Investment is defined as international investment made by a resident entity in one economy (direct investor) with the objective of establishing a lasting interest in an enterprise resident in an economy other than that of the investor (direct investment enterprise). "Lasting interest" implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the direct investor on the management of the direct investment enterprise. Direct investment involves both the initial transactions between the two entities and all subsequent capital transactions between them and among affiliated enterprises both incorporated and unincorporated (OECD Benchmark definition of FDI, 1996).

In the literature, we find a number of reasons why the Less Developed Countries (LDCs) try to attract Foreign Direct Investment (FDI) to their economies. To begin with, it provides non-debt creating financial resources for long-term investment; it may be argued that in an open economy with perfect capital mobility, growth may not be constrained by low rate of domestic savings because any shortage of domestic savings could be supplemented by foreign capital and thereby higher rates of investment and growth maintained. Secondly, the foreign firms, being part of the parent firm's global network, possess better brand image and have access to international market accompanied by greater technological and organizational capabilities, would tend to be more export intensive as compared to the domestic firms. Thirdly, FDI brings along with it complementary assets such as technology, management and organizational competence. Fourthly, FDI could be an instrument in facilitating international technology spillovers that are shown to be instrumental in facilitating the catching up by laggards. With the entry of foreign firms, the local firms are forced to improve their technology and product quality to sustain in the competitive world. FDI is also encouraged on the ground that they promote linkages (UNCTAD 2001) and contribute towards the much-needed foreign exchange to bridge the balance of payment deficit.

While the above arguments are analytically sound, empirical evidence, at best, has been mixed. While the growth augmenting argument based on the theoretical premises of Harrod-Domar growth model appears elegant, the real growth impulse that the FDI generates would depend, to a great extent, on the form and content of FDI. For example, if FDI is meant for taking over existing firms instead of creating new productive capacities (greenfield investments), its direct growth impulses could be minimal. In the Indian context, studies have shown that liberalization of policy framework since the early 1990s has induced the MNEs to increasingly use mergers and acquisition route to enter and strengthen their presence in the country (Beena, 1998 Basant, 2000 Kumar, 2000a)¹ This, however, has not been an isolated experience of India. According to UNCTAD (1999) mergers and acquisitions accounted for almost 50 per cent of FDI flows in 1996. Earlier empirical studies on the export performance of FDI (Jenkins, 1979, 1990 Kumar, 1994, Pant 1993, Subrahmanian and Joseph 1994, Subrahmanian et al 1996, Joseph, 2000 to list a few) as well as the more recent evidence (Aggarwal 2002) shows that MNEs are yet to become more export oriented than their local counterparts. True, after the introduction of reforms India has been able to bring down its Current Account Deficit (CAD) and increase its foreign exchange reserves substantially. But, studies (Joseph and Veeramani 2001 and Harilal 2005) have shown that, increase in the inflow of FDI notwithstanding, the contribution of FDI in the observed turnaround has been rather limited and the major role was played by invisibles, more specifically private transfers. Importance of international technology spillovers (Coe and Helpman 1995, Singh 2001, 2006) notwithstanding studies (Koko 1992, Kathuria 1999) have shown that the widening technology gap between the foreign firms and the local firms is a major factor, which prevents the local firms from exploiting the spillover efficiency gains. A more recent survey by Saggi (2002) concludes that the absorptive capacity of the host country is crucial for obtaining significant benefits from FDI. Without adequate human capital or investment in R&D, spillovers from FDI are infeasible.

¹ Kumar (2000a) finds that in the recent years two fifth of all FDI inflows took the form of M&A compared to virtually all of FDI inflows in the form of greenfield ventures during the pre 1990s.

Yet, we are living in a world wherein the developing countries are competing intensely among each other to attract more Foreign Direct Investment UNCTAD (1995), in contrast to the earlier disenchantment with FDI. Such a change among policy makers of developing countries, according to Dunning and Narula (2004) dates back to the early 1980s and can be ascribed to broad changes in the world economy which, has been generally described as globalization². The Fund-Bank induced stabilization and structural adjustment in many developing countries and the resultant shift in policy pendulum from import substitution to export orientation implied a greater role for FDI, than ever before, as a means of getting access to investible resources, advanced technology and other tangible and in tangible assets badly needed by the developing countries. More over, in a unipolar world of today wherein the commercial loans and foreign aid to developing countries has been declining, FDI can emerge as perhaps the most important source of investment funds (Subrahmanian et al 1996).

1.1 Winners and losers

The over all developmental outcomes of these initiatives, however, have not been uniform. While some countries like China, India and South East Asian countries have managed to improve their growth performance in Latin America and Sub-Saharan Africa has been less remarkable. Latin America's growth rate collapsed in the "lost decade" of the 1980s, and has remained anemic despite some recovery in the 1990s. Africa's economic decline, which began in the second half of the 1970s, continued throughout much of the 1990s and has been aggravated by the onset of HIV/AIDS and other public-health challenges (Rodrik 2004). Studies (eg Wade 2004) have also shown that the distribution of income among the world population has become more unequal over the past two decades along with increased economic integration between countries.

Given the important role that FDI inflows play in integrating the domestic market to International market through trade, transfer of knowledge, skills, technology and

² To them Economic globalization refers to the increasing cross-border interdependence and integration of production and markets for goods, services and capital.

technology spillovers, the developing countries across the continents, as part of on going globalization process, have liberalized their investment and trade regime. Given the link between trade liberalization and investment, an ever increasing number of countries are also involved in regional trade agreements with a view to enhance their attractiveness to foreign investors. This has led to the removal of tariffs on intra-bloc trade in goods, but many go beyond that to cover non-tariff barriers and to extend liberalization to trade and investment. At their deepest they have the objective of economic union, and they involve the construction of shared executive, judicial, and legislative institutions. Removal of trade barriers is like a market enlargement, as separate national markets move toward integration in a regional market. This allows firms to benefit from greater scale and attracts investment projects for which market size is important, including FDI. Removing barriers also force firms from different member countries into closer competition with each other, possibly inducing them to make efficiency improvements. Although these are major sources of benefit, the effects are not always achieved, and the effects depend on the design and implementation of the agreement.

To gain the benefit form the regional agreement the countries are creating a base for favorable environment for investment. In this regard to attract higher FDI and compete with developed countries, the developing countries are liberalizing their policy and making more favorable for FDI inflow³. Apart from the liberalizing policy the number of bilateral investment treaties (BITs) increased during the 1990s and, by end-2000, had reached total of 1,941. The single greatest number of the new treaties was between developing countries, 43 percent of the total. (WIR, 2000). During 2004, 73 new BITs were concluded, 10 of which replaced earlier BITs, bringing the total number to 2,392. However, there is a slowdown in the conclusion of BITs since 2001. At the international level, the number of bilateral investment treaties (BITs) and double taxation treaties (DTTs) reached 2,392 and 2,559 respectively in 2004, with developing countries concluding more such treaties with other developing countries. More international investment agreements were also concluded at the regional and global level, potentially contributing to greater

³ Between 1991-2000, a total of 1,185 regulatory changes were introduced in national FDI regimes, of which about 1,121 were in the direction of creating a more favorable environment for FDI.

openness towards FDI. Apart from BITs and DTTs, now the country and regions are entering into joint agreement, which are called International investment agreements (IIAs) and Multilateral investment agreements (MIA)⁴. The increase in BITs among developing countries, which accounted for 25%, while those between developing and transition economies (South-East Europe and CIS) rose to 10% of the total.(WIR, 2005).

Yet, there has been widening inter-regional and inter-country variation in attracting Foreign Direct Investment. From data it is clear that the major share of FDI inflow is concentrated in a few countries among the developed and developing countries. The countries, which are getting major share of inflow of FDI are also the major contributors of FDI outflow. While developed countries were the dominant sources of FDI inflows, last two decades witnessed the emergence of selected developing countries as major sources of FDI.

1.2 Winners in Developed countries and Developing countries

A few developed countries alone have a share of 50.15 per cent of the total global FDI inflow and rest of the inflow is shared by other developed, developing and transitional countries. Within the developed countries FDI is distributed unevenly and majority of the investment is concentrated in some countries like U.S.A and U.K. Table 1.1 indicates that the total share of six leading countries almost doubled during 1991-2004. More importantly, the share of two leading countries like U.S.A and U.K is as high as 27% in 2004.

We can find similar kind of pattern among developing countries also. Here too the FDI inflow is unevenly distributed among the countries. In 2004 the major FDI shareholders among the developing countries are china (9.35), Hong Kong (5.25), Brazil (2.80), Singapore (2.48) and Korea Republic (1.19) and they share 21.07 percent of inflow out of the total FDI inflow to developing countries (See Table 1.2).

⁴ Bilateral treaties for the promotion and protection of investment (or bilateral investment treaties), treaties for the avoidance of double taxation (or double taxation treaties), other bilateral and regional trade and investment agreements as well as various multilateral agreements that contain a commitment to liberalize, protect and/or promote investment.

Table 1.1 FDI Inflow into Select Developed countries: 1991 to 2004

<i>Year</i>	<i>UK</i>	<i>USA</i>	<i>Australia</i>	<i>Belgium</i>	<i>Italy</i>	<i>Luxembourg</i>	<i>Total Share</i>
1991	9.21	14.14	2.67	NA	1.54	NA	27.55
1992	9.14	11.36	3.38	NA	1.90	NA	25.78
1993	6.50	22.25	1.88	NA	1.65	NA	32.28
1994	3.57	17.38	1.94	NA	0.86	NA	23.75
1995	5.85	17.23	3.51	NA	1.41	NA	28.01
1996	6.22	21.49	1.55	NA	0.90	NA	30.17
1997	6.81	21.19	1.57	NA	1.02	NA	30.59
1998	10.60	24.88	0.86	NA	0.61	NA	36.95
1999	8.06	25.95	0.30	NA	0.63	NA	34.94
2000	8.50	22.48	1.00	NA	0.96	NA	32.95
2001	6.37	19.31	0.56	NA	1.80	NA	28.04
2002	3.36	9.96	2.18	2.18	2.03	16.37	36.08
2003	3.21	8.98	1.10	5.07	2.59	14.39	35.35
2004	12.10	14.79	6.57	5.30	2.59	8.79	50.15

Note: Has been selected (countries which are having share of more than 2 percent of world inflow)

Source: Estimation based on UNCTAD Data Base, 2005

Table 1.2: FDI Inflow in to Select Developing Countries: 1991 to 2004

<i>Year</i>	<i>Brazil</i>	<i>China</i>	<i>Hong Kong, China</i>	<i>Korea, Republic of</i>	<i>Singapore</i>	<i>Total share of FDI inflow</i>	<i>Total share of FDI Inflow to Developing Countries</i>
1991	0.68	2.71	0.63	0.7	3.03	7.75	14.53
1992	1.22	6.5	2.3	0.33	1.3	11.65	20.13
1993	0.57	12.08	3.04	0.24	2.06	17.99	24.63
1994	0.83	13.01	3.02	0.3	3.3	20.46	26.48
1995	1.29	11	1.82	0.37	3.4	17.88	24.1
1996	2.75	10.62	2.66	0.51	2.42	18.96	25.81
1997	3.89	9.28	2.33	0.54	2.78	18.82	24.5
1998	4.12	6.48	2.11	0.72	1.07	14.5	16.97
1999	2.62	3.69	2.25	0.87	1.52	10.95	14.09
2000	2.35	2.92	4.43	0.62	1.18	11.5	12.7
2001	2.72	5.68	2.88	0.45	1.71	13.44	14.87
2002	2.32	7.37	1.35	0.42	0.81	12.27	14.41
2003	1.6	8.46	2.15	0.6	1.47	14.28	17.21
2004	2.8	9.35	5.25	1.19	2.48	21.07	25.17

Note: Has been selected (countries which are having share of more than 2 percent of world inflow)

Source: Estimation based on UNCTAD Data Base, 2005

1.3 Winners in Global Level

In the global scenario, the major share of FDI inflow is concentrated on a few regions or a few countries. They are United Kingdom (12.10), United States⁵ (14.79), Australia (6.58), Belgium (5.3), Italy (2.59), Luxembourg (8.79), Brazil (2.8), China (9.35), Hong Kong and China (5.25), and Singapore (2.48) and France (3.75), who accounted for 74 per cent of World inflow of Foreign Direct Investment (See Table 1.3). This shows that FDI is still higher in the traditional FDI recipient countries like U.S.A and U.K. The countries like China, Belgium and Luxembourg are emerging as new destinations of foreign Investors.

Table 1.3: Major Destinies of FDI Inflow (Share of Major Countries) in the World

<i>Year</i>	<i>UK</i>	<i>USA</i>	<i>Australia</i>	<i>Belgium</i>	<i>Italy</i>	<i>Luxembourg</i>	<i>Brazil</i>	<i>China</i>	<i>Hong Kong, China</i>	<i>France</i>	<i>Singapore</i>	<i>Total</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>
1991	9.21	14.14	2.67	NA	1.54	NA	0.68	2.71	0.63	9.4	3.03	44
1992	9.14	11.36	3.38	NA	1.9	NA	1.22	6.5	2.3	10.55	1.3	47.7
1993	6.5	22.25	1.88	NA	1.65	NA	0.57	12.08	3.04	7.22	2.06	57.3
1994	3.57	17.38	1.94	NA	0.86	NA	0.83	13.01	3.02	6	3.3	49.9
1995	5.85	17.23	3.51	NA	1.41	NA	1.29	11	1.82	6.94	3.4	52.5
1996	6.22	21.49	1.55	NA	0.9	NA	2.75	10.62	2.66	5.59	2.42	54.2
1997	6.81	21.19	1.57	NA	1.02	NA	3.89	9.28	2.33	4.75	2.78	53.6
1998	10.6	24.88	0.86	NA	0.61	NA	4.12	6.48	2.11	4.42	1.07	55.2
1999	8.06	25.95	0.3	NA	0.63	NA	2.62	3.69	2.25	4.26	1.52	49.3
2000	8.5	22.48	1	NA	0.96	NA	2.35	2.92	4.43	3.1	1.18	46.9
2001	6.37	19.31	0.56	NA	1.8	NA	2.72	5.68	2.88	6.11	1.71	47.1
2002	3.36	9.96	2.18	2.18	2.03	16.37	2.32	7.37	1.35	6.85	0.81	54.8
2003	3.21	8.98	1.1	5.07	2.59	14.39	1.6	8.46	2.15	6.72	1.47	55.7
2004	12.1	14.79	6.57	5.3	2.59	8.79	2.8	9.35	5.25	3.75	2.48	73.8

Note: selecting on the bases of inflow more the 2 percentages in the world among developed and developing countries.

Source: Estimation based on UNCTAD Data Base, 2005

Thus the inflow of FDI is concentrated at a few location/region in the world. Such wide variation in the distribution pattern of FDI is not only at the international level

⁵ United States and United Kingdom, two of largest host countries, recovered from dip in 2003, partially because of increased M&A and improved inter-company loans.

but also at the intra-national level as well. Given that FDI inflow in India has increased substantially in the recent years, it would be worthwhile to look into the regional pattern of FDI inflow within the country⁶.

1.4 Indian Scene

In tune with the global pattern, in India also there is a significant variation in the inflow of FDI across different sub regions. To be more specific, while most of the states have very active policy for attracting investment, the extent of success is found to be varying.

Table 1.4: State-Wise FDI inflow during 1991-2002

<i>SL. No</i>	<i>States</i>	<i>Percentage Share 1991-2002</i>	<i>Rank</i>
1	Andhra Pradesh	4.64	6
2	Bihar	0.32	18
3	Gujarat	6.50	5
4	Haryana	1.27	8
5	Himachal Pradesh	0.41	16
6	Karnataka	8.31	3
7	Kerala	0.54	14
8	Madhya Pradesh	3.37	12
9	Maharashtra	17.42	1
10	Orissa	2.90	9
11	Punjab	0.69	13
12	Rajasthan	1.06	7
13	Tamil Nadu	7.81	4
14	Uttar Pradesh	1.72	10
15	West Bengal	3.15	11
16	Delhi	12.48	2
17	Goa	0.34	17
18	Pondicherry	0.44	15
19	State not indicated	26.60	

Source: Estimation based on SIA database

From Table 1.3 it is evident that during 1991-2002 five states accounted for 57.16 percent of FDI approval. Maharashtra (17.42), dominates in the total approval of FDI during 1991-2002, followed by Delhi (12.48), Karnataka (8.31), Gujarat (6.50) and Andhra Pradesh (4.64). These 5 states accounted for bulk of the FDI approval, 26 cent of FDI approval is not indicated to any states and rest 16 per cent is shared by

⁶ India is emerging as one of the second best destination for the investors (A.T. Kearney, 2006).

rest of the states. Thus from the above data one can come to the conclusion that FDI is unevenly distributed across the states.

1.5 Statement of the Problem

In tune with the policy changes in other developing countries, India also liberalized its policies governing the inflow of FDI into the country (for more details please see chapter2). These policy reforms seem to have had rich dividends in terms of increased inflows of FDI into the country. The Approach paper to the 11th plan noted that FDI increased from an average of \$3.7 billion in the 9th plan period to average of \$5.4 billion in the first four years of the 10th Plan (upto December 2005). This however is considered as below our potential. Along with national policy initiatives various state governments have also initiated policy reforms to attract more investments into the respective states. The outcomes of these initiatives, as noted earlier, have not been uniform. Here arises a number of issues of immense policy relevance. How has different states responded to liberalized policies at the national level? Has the policy reforms at the state level led to a situation of incentive competition and have they been able to benefit out of it? How to account the observed variation in the extent of success achieved by different states in attracting FDI?

To the extent that inter-regional variation is a major issue of concern to the policy makers and the FDI could play a significant role in leveling up the development outcomes, the broad objective of the study is to throw light into the factors responsible for the observed variation in the inflow of FDI into different states.

1.6 Specific Objectives

The specific objectives of the study may be stated as follows;

- To analyze the broad trends and patterns in FDI inflows into the country against the backdrop of policy reforms at the national and regional level, and
- To explore the regional determinants of FDI inflows

1.7 Data Sources and Methodology

This study is based mainly on secondary databases. The main source of data for FDI is Secretariat for Industrial Assistance (SIA), Ministry of Finance, Reserve Bank of India, and Center for Monitoring Indian Economy (CMIE). For State level NSDP the data source is EPW research foundation. Data on different factors that influence inflow of FDI at the state level has been obtained from the publications of different state governments. Data on FDI inflow into different countries has been obtained from the UNCTAD database.

1.8 Chapter Scheme

The remainder of the thesis is organized as follows. The second chapter presents detailed analysis of the various policy initiatives undertaken by different state governments against the backdrop of the policy reforms at the national level. Here the study also presents the broad trends and patterns in FDI inflows into different sectors and regions. The third chapter presents an analysis of the factors having bearing on the inflow of FDI into different using a panel data set and the last chapter sums up the study and presents the major conclusions.

CHAPTER 2

FOREIGN DIRECT INVESTMENT IN INDIA: POLICIES, TRENDS AND PATTERNS

Introduction

In the previous chapter we have noted the major shift in India's approach towards governing the economy. This shift essentially involved a reduction in the role of state and corresponding increase in that of the market. Yet, the state policies, even today, play an important role in almost all sectors of the Indian economy and here FDI a no exception. Therefore, any analysis on the performance of FDI remains incomplete without a discussion on the policy framework that governs it. In this chapter we shall undertake the task of highlighting the policies governing the inflow of FDI into the economy in an evolutionary perspective (section 2). Needless to say, given the issue at hand, the focus of discussion shall be on various policy initiatives undertaken by the regional (state) governments towards attracting FDI into different sectors of these sub national entities. This is followed by an analysis of the overall performance⁷ of FDI in terms of the observed trends and patterns in FDI into different sectors and also across different states (section 3). The discussion in this chapter highlights the inter-regional variation in the FDI inflows and also suggest, in tune with the findings of UNCTAD (1995), the prevalence of wasteful competition among different states with in the country to attract FDI which is ultimately detrimental to their own interest and calls for collective action among the states to avoid such wasteful competition and to replace it with collaborative actions.

2.1 Policy towards FDI: An Overview

It appears that explicit policy announcements aiming at attracting FDI into the country took place in the country only since the 1980s. This doesn't imply that the policy makers were not aware of the importance of FDI for the over all development

⁷ We use the term performance in a narrow sense. The performance could be analyzed, keeping the policy objective in mind, in various ways like their contribution to export, employment, technology generation and such other indicators. While a number of such studies undertaken in India have been cited in this study, for a recent study see Manikandan (2006).

of the country and industrial development in particular. Viewed in an evolutionary perspective, authors (eg. Subrahmanian et al 1996) have identified four different phases in the evolution of India's approach towards FDI. These phases in policy, in a sense, reflected the response of the government to external balance of the economy, though many other factors did influence the changes in the approach over the years.

The first phase, beginning with 1948 to mid 1960s was marked by 'Cautious welcome' as evident from the Industrial policy resolution of 1948. Such an approach was further reinforced in the Prime Minister's Statement of 1949 on foreign investment that acknowledged the importance of foreign capital as a source of industrial technology for the rapid industrialization of the country but called for carefully regulating the conditions under which they may participate in the national interest. As FDI was considered important, foreign investors were assured of a treatment on par with the local enterprises, provided for the repatriation of profits and compensation in the event of compulsory acquisition. But it was also laid down that as a rule, the controlling interest and ownership should be with the Indian hands.

The second phase, which was marked by a selective and regulatory approach, was set in by the mid 1960 and almost lasted till the late 1970s. The shift in policy stance needs to be viewed against that fact that by the mid 1960s as the external balance of the country became highly unfavorable and as FDI acted as a catalyst in the outflows from the economy *interalia* in the form of transfer payments. The Foreign Exchange Regulation Act (FERA) 1973 became the key to guiding and controlling FDI inflows. This period, thus witnessed the winding up of the operations of leading TNCs like IBM and Coco Cola in the country.

The various committees that were appointed in the seventies in context of industrial stagnation since the mid 1960s were unanimous about the view that the various

controls evolved over the years have been bridling the overall growth of the economy and called for liberalizing the policy regime in general and also the FDI. Hence by the late 1970s the country entered the third phase marked by partial liberalization. According to the Industrial policy 1977 foreign firms were allowed in financial and technological collaboration with Indian firms and fully owned foreign firms were permitted in highly exports oriented and sophisticated technology areas. Industrial policy 1980, among others, focused on the need for promoting competition in the domestic market, technological up gradation and modernization. The policy laid the foundation for an increasingly competitive export based investment and for encouraging foreign investment in high-technology areas. A number of policy and procedural changes were introduced in 1985 and 1986 under the leadership of Shri Rajiv Gandhi aimed at increasing productivity, reducing costs and improving quality. The emphasis was on opening up the domestic market to increased competition and prepare our industry to stand on its own to face international competition. With the New Industrial policy of July 1991 we have entered the current phase marked by globalization.

2.2 FDI Policies since 1991

The New Industrial Policy announced on July 24, 1991 marked a major transformation with respect to trade, industrial, and investment policies. The highlights of the policy included the de-reservation of public sector reserved areas, delicensing, abolition of Monopolies & Restrictive Trade Practice Act, 1969 (MRTPA), and removing the general ceiling of 40 percent foreign equity under Foreign Exchange Regulation Act (FERA). The policy also called for lifting the restriction on use of foreign brand names in the local market, withdrawal of the restriction on entry into low technology consumer goods; abandonment of the phased manufacturing programme (PMP), dilution of the dividend balancing

condition and export obligation; liberalisation of terms for import of technology and royalty payments'; permission to invest up to 24 per cent in small scale units. The ownership level were raised to 50 per cent, 51 per cent, 74 per cent and 100 per cent foreign equity⁸ and opening of new sectors such as mining, banking, insurance, telecommunication, electric generation, and special sectoral policy and sectoral equity cap for FDI and investment by Non-Resident Indians and Overseas Corporate Bodies (NRIs and OCBs).

The liberal policies envisaged by the New industrial policy of 1991 notwithstanding, the industry associations have been highlighting various hassles being faced by the industry from time to time⁹. These issues have been addressed by various press notes issued by the government from time to time (see table 2.1)

Thus today India has a FDI policy liberal than ever before and comparable to many other developing countries and even retail trade is being opened for FDI. The FDI policy as existing the country provides for "automatic" approval in many sectors, by which foreign investors only need to notify the Reserve Bank of India (RBI) of their investments, and need not obtain government licenses or approvals. The Foreign Investment Promotion Board clears the proposals that do not conform to the guidelines of automatic approvals. Government also encourages investment from NRIs including (OCBs– a company or other entity owned by NRIs directly or indirectly to the extent of at least 60 percent). NRIs and OCBs are allowed to invest in housing and real estate development sector. They are also allowed to hold up to 100 per cent equity in civil aviation companies in which otherwise foreign equity only up to 40 per cent is permitted.

⁸ Press note No 14 (1997 series) dated 13-06-98

⁹ See in this context among others the FDI survey by FICCI for different years.

Table 2.1: Important Press-Notes and Press Releases Relating to Foreign Investment since July 1991

<i>Press Note No. and Date</i>	<i>Subject</i>
No.10 (1991 series) dated 14.08.1991	Foreign Technology Agreement –Procedure and List of industries (Annex-III) for automatic approval of foreign technology agreements and for 51% foreign equity approvals
No.11 (1991 series) dated 20.08.1991	Foreign Direct Investment up to 51% foreign equity in high priority industries (Annex III). Import of components, raw material and intermediate goods, and payment of know-how fees and royalties will be governed by the general policy applicable to other domestic units
No.12 (1991 series) dated On 31.08.1991	Changes in procedure for technological agreement
No.17 (1991 series) dated 19.11.1991	Procedure for increase in foreign equity to 51% in existing companies
No.18 (1991 series) dated 25.11.1991	Clarification on 'Hotels' & 'Tourism related Industry' and criteria for automatic approval for foreign technology agreement and for 51 per cent foreign equity approvals in Hotel Industry.
No.23 (1991 series) dated 31.12.1991	Procedure of foreign investment up to 51% in trading companies primarily engaged in export activities
No 6 (1992 series) dated 14.05.1992	Ministry of Industry prohibited the use of foreign brand name/trade mark on goods for sale within the country. This condition was not applicable in the case of exports. Henceforth no so such condition will be imposed by the Ministry of Industry and RBI
No.9 (1992 Series) dated 10.06.1992	Facilitation Cell was set up to promote investment.
No.10 (1992 series) dated 24.06.1992	Revision of Annexure-III items for automatic approval of foreign technology agreement and for 51% foreign equity approvals.
No.12 (1992 series) dated 26.06.1992	Withdrawal of the condition regarding "Dividend Balancing" in all foreign investment approvals (except for industries in the consumer goods sector) and investments by approved international organizations like International Financial Corporation (IFC), DEG, Commonwealth Development Corporation (CDC) and Asian Development Bank(ADB)
No.13 (1992 series) dated 29.06.1992	Revised Procedures for raising of foreign equity up to 51% in existing companies
No 14 (1992 series) dated 28.07.1992	Deletion additional condition imposed in the industrial approval.
No.2 (1994 series) dated 03.06.1994	Approvals for raising foreign equity in existing companies- Revised guidelines for determining issue price of preferential shares

No.4 (1994 series) dated 25.10.1994	Modified Policy for grant of license and approval for foreign investment/foreign technology agreements for drugs and pharmaceuticals industry.
No.2 (1995 series) 10.04.1995	Approval for raising foreign equity in existing companies- Revised guidelines issued on 3 rd June, 1994 for determining issue price of preferential shares- Amendments to the guidelines
No.4 (1996 series) dated 05.11.1996	Further liberalization in parameters (foreign exchange requirements for import of Capital Goods and condition of plant & machinery) of automatic Approval in foreign equity and foreign technology collaborations.
No.2 (1997 series) dated 17.01.1997	Expansion of List of Industries for Automatic approval for foreign equity
No.3 (1997 series) dated 17.01.1997	Guidelines for consideration of Foreign Direct Investment (FDI) proposals by the Foreign Investment Promotion Board (FIPB)
No.4 (1997 series) dated 30.04.1997	Changes in guidelines prescribed for consideration of FDI proposals by FIPB in respect of Non-banking financial Services Sector
No.11 (1997 series) dated 17.07.1997	Deletion of certain industry from list of Industry under compulsory Licensing
No.13 (1997 series) dated 05.09.1997	Inclusion of "Forex Broking" in the permitted list of NBFC activities opened for FDI.
No.14 (1997 series) dated 08.10.1997	Revised consolidated list of industries/items for Automatic approval for foreign equity up to 50%/51%/74%. The description of the 35 industries has been re-cast on the basis of National Industries Classification (NIC), 1987
No.2 (1998 series) dated 13.06.1998	Revised guidelines for Automatic approval for 100% foreign equity in for electric generation, transmission and distribution in Power Sector (Hydro-electric and coal/lignite/oil/gas based Thermal Power Plants)
No.8 (1998 series) dated 05.08.1998	Inclusion of " Credit Card Business" and "Money Changing Business" in the permitted list of NBFC activities for FDI
No.11 (1998 series) dated 27.08.1998	Revision in guidelines for consideration of FDI proposals by FIPB for FDI up to 100% in Cigarette Industry
No.13 (1998 series) dated 01.09.1998	Permissible limit of FDI in Banking Sector-clarification reg.
No.15 (1998 series) dated 15.10.1998	Foreign Direct Investment in licensee companies operating Global Mobile Personal Communication by Satellite (GMPCS) services
No.16 (1998 series) dated 03.11.1998	Revision in guidelines for FDI proposals for purely financial consultancy services that are non-fund based – Minimum capitalization norms reg.
No.18 (1998 series) dated 14.12.1998	Guidelines pertaining to approval of foreign/technical collaboration under the automatic route with previous ventures/tie-ups in India

No.1 (1999 series) dated 04.01.1999	Revision of guidelines for automatic approval for foreign equity for construction and maintenance of rail beds, non-vehicular bridges, non-vehicular tunnels, ropeways and runways
No.5 (1999 series) dated 19.03.1997	Consideration of Foreign Direct Investment (FDI) proposal by the Foreign Investment promotion Board (FIPB), was reduced from six weeks to 30 days for FDI proposal for communication government decision
No.6 (1999 series) dated 01.04.1997	Applicability of condition of Dividend balancing – clarification reg.
No.7 (1999 series) dated 01.04.1997	Increase in the amount of foreign equity as a result of financial restructuring without any change in the percentage of foreign equity-simplified procedure reg.
No.9 (1999 series) dated 12.04.1999	Policy relating to the standard conditions applicable to foreign owned Indian holding companies requiring prior and specific approval of FIPB/Government for downstream investment in Annexure III activities, which qualify for Automatic Approval.
No.10 (1999 series) dated 12.04.1999	Guidelines pertaining to approval of foreign /technical collaborations under the automatic route with previous ventures / tie-ups in India-Clarification reg.
No.11 (1999 series) dated 01.17.1999	Activities being undertaken by 100% foreign owned NBFCs - Clarification reg.
No.12 (1999 series) dated 01.07.1999	Revision of norms for FDI in NBFCs which are purely financial consultancy services that are Non-fund based
Press Release dated 16.08.1999	Setting of Foreign Investment Implementation Authority (FIIA) for quick translation of FDI approvals and implementations
No.2 (2000 series) dated 11.02.2000	Expansion of list of industries/activities eligible for automatic route for FDI, NRIs and OCBs investment
No.6 (2000 series) dated 31.03.2000	FDI in the NBFCs acting as holding company – condition of disinvestment of equity in their 100% downstream subsidiaries – reg.
No.7 (2000 series) dated 14.07.2000	Review of existing sectoral policy and sectoral equity cap for FDI/NRIs/OCBs Investment.
No.8 (2000 series) dated 29.08.2000	Guidelines for simplifying the approval procedures under the automatic route for all FDI proposals relating to the IT sector
No.9 (2000 series) dated 08.09.2000	Review of existing sectoral policy and sectoral equity cap for FDI and investment by NRIs / OCBs
No.10 (2000 series) dated 19.10.2000	Review of existing sectoral policy and sectoral equity cap for FDI and investment by NRIs / OCBs.
No.1 (2001 series) dated 02.01.2001	Guidelines pertaining to approval of foreign/ technical collaborations under the automatic route with previous venture / tie-up in India in respect of FIIs such as ADB, IFC, CDC, DEG etc.,
No.4 (2001 series) dated 21.05.2001	Revision of existing sectoral guidelines and equity cap on FDI, including investment by NRIs and OCBs

No.3 (2002 series) dated 04.01.2002	Guidelines for FDI in development of integrated township including housing and building material
No.4 (2002 series) dated 27.03.2002	Revision of existing sectoral guidelines for FDI, including investment by NRIs and OCBs – Advertising and film sector reg.
No.5 (2002 series) dated 05.07.2002	Complete Prohibition on foreign investment and foreign technology collaboration in any form in lottery business, gambling and betting – clarification regarding
No.6 (2002 series) dated 05.07.2002	Revision of existing sectoral guidelines for FDI, including investment by NRIs and OCBs – Agriculture sector reg.
No.3 (2003 series) dated 29.07.2003	Capitalization of import payables (issue of shares against lumpsum fee, royalty and ECBs) – liberalization of policy
No.5 (2003 series) dated 28.11.2003	Issue of shares against External Commercial Borrowings – liberalization of.
No.1 (2004 series) dated 28.01.2004	Revision of existing sectoral guidelines and equity cap on Foreign Direct Investment (FDI), including investment by NRIs and OCBs
No.2 (2004 series) dated 05.03.2004	Revision of existing sectoral guidelines and equity cap on FDI, including investment by NRIs and OCBs/ FIIs in the Banking Sector

Source: Various Press Notes from SIA

Investments and returns are freely repatriable, except where the approval is subject to specific conditions such as lock-in-period on original investment, dividend cap, foreign exchange neutrality, etc. as per the notified sectoral policy. The condition of dividend balancing that was applicable to FDI in 22 specified consumer goods industries stands withdrawn for dividends declared after 14th July, 2000.

The GOI's privatization policy permits foreign investors to bid for the sale of the state-owned units. Foreign investors are given national treatment at the time of initial investment or after the investment are made. In sectors where licensing is required, procedures do not discriminate against foreign companies. However, in certain consumer goods industries export obligations and local content requirements are imposed on foreign investors.

The policy governing outward FDI has also been liberalized during the 1990s. The Guidelines for Indian Joint Ventures and Wholly Owned Subsidiaries Abroad as amended in October 1992, in May 1999 and July 2002 provide for the automatic

approval of outward FDI proposals upto a certain limit that has been expanded progressively from \$ 2 million in 1992 to \$ 100 million in July 2002.

2.2.1 Remittances of Dividend and Royalty

There are no restrictions on remittances for debt service or payments for imported inputs. Dividend remittances are permitted without approval from the Reserve Bank of India (RBI). There are no delays beyond 60 days on remittances for dividends, lease payments, etc. It only requires income tax clearance to ensure that taxes, if any, have been paid before the transaction is concluded. The RBI's approval is required to remit funds from asset liquidation. Foreign partners may sell their shares to resident Indian investors.

Foreign Institutional Investors (FIIs) may transfer funds from rupee to foreign currency accounts and vice versa at the market exchange rate. They may also repatriate capital, capital gains, dividends, interest income, and any compensation from the sale of rights offerings, net of all taxes without approval.

Indian companies having technology transfer agreements with foreign companies may remit royalties; but recurring royalty payments, such as patent licensing payments, are normally limited to eight percent of the selling price. Restrictions on payments (currently seven years) and the stipulation of minimum foreign equity holdings have been lifted. Royalties and lump sum payments are taxed at 20 to 30 percent. Payment of royalty up to two percent on exports and one percent on domestic sales is allowed under the automatic route on the use of trademarks and brand names of the foreign collaborator without technology transfer.

2.2.2 Performance requirements

Local sourcing is generally not required. In some consumer goods industries, the GOI requires the foreign party to ensure that the inflow of foreign exchange and foreign equity covers the foreign exchange requirement for imported goods. In

2002, the GOI removed measures previously requiring local content and foreign exchange balancing in automobile industry.

Plant location: industrial undertakings are free to select the location of a project; in case of cities with population of more than a million, the proposed location should be at least 25 kilometers away from the standard urban area limits of that city. Electronics, computer, and printing as well as other non-polluting industries are exempt from such location restrictions.

Employment: There is no requirement to employ Indian nationals. Restrictions on employing foreign technicians and managers have been eliminated, though companies complain that hiring and compensating expatriates is time-consuming and expensive. The RBI has raised the remittable per-diem rate from \$500 to \$1000, with an annual ceiling of \$200,000 for services provided by foreign workers payable to a foreign firm. Employment of foreigners in excess of 12 months requires approval from the Ministry of Home Affairs.

Taxes: The GOI provides a 10-year tax holiday for knowledge-based start-ups. Most state governments also offer fiscal concessions. All foreign firms are allowed to participate in government financed or subsidized research and development programs on a national treatment basis.

2.2.3 Capital markets and portfolio investment

FII's may invest in all securities traded on India's primary and secondary markets, in unlisted domestic debt securities, and in commercial paper issued by Indian companies. The ceiling of an investment by FII's is equal to the sector-specific FDI limits. Indian mutual funds may invest in rated securities in other countries. Disinvestments and repatriation of dividends are permitted after payment of capital gains taxes.

SEBI regulates all market intermediaries. The takeover regulations require disclosure on acquisition of shares exceeding five percent of total capitalization. In case of acquisition of over 10 percent, the buyer must make a public offer for a minimum of 20 percent from the remaining shareholders at a fixed price. Companies may buy back their shares in the market to make inter-corporate investments. RBI and FIPB clearances are required to acquire a controlling stake in Indian companies.

2.2.4 Foreign trade zones/free ports

EPZ/STP units may import intermediate goods duty-free. The minimum net foreign exchange earning as a percentage of exports by EPZ/STP units is required to be at least 3 percent. EPZ/STP units may sell up to 50 percent of their level of exports on the domestic market after payment of taxes. Export Oriented Undertakings (EOUs) are industrial companies established anywhere in India that export their entire production. There are about 2,300 fully operational EOUs in India. They are allowed to import intermediate goods duty-free; have a ten-year corporate income tax holiday; are exempt from excise tax on capital goods, components and raw materials; and are exempt from sales taxes. EOUs may sell up to five percent of "seconds" on the domestic market after paying appropriate taxes. The government recently extended Special Additional Duties (SAD) exemption to EOUs.

Special Economic Zones (SEZs) are designated duty-free enclaves with developed industrial infrastructure. These zones are regarded as foreign territory for the purpose of duties and taxes, and are excluded from the domain of the custom authorities to enjoy full freedom for the in and outflow of goods. SEZ units enjoy a tax exemption for seven years: 100 percent exemption in first 5 years, and 50 percent in the remaining 2 years. They have the facility to retain 100 percent foreign exchange earnings in Export Earners Foreign Currency Exchange accounts. All SEZ units are free to sell goods in the domestic tariff area (DTA) on payment of applicable duties.

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2.3 Policies at the State Level

While the FDI policy at the national level governs the inflow of FDI into the country, the decision of the TNCs with respect to the location of their investment is guided to a great extent by the policies and practices adopted by the state governments. Thus, while the regional governments do not have an FDI policy of their own, they do have various policies with respect to industry, labor, power and other related issues that in turn have a crucial bearing on the location decision of TNCs. This is because, India has a federal system of government with clear demarcation of powers. The states deal with subjects of law & order, agriculture, sales tax, minor minerals, electricity, health, education, irrigation, water supply, minor ports, roads, etc. From time to time the states are liberalising their policy to attract investment in both private and public sector. Since many of these areas act as determinants of location of FDI, states do compete among themselves to attract FDI using these policy instruments. Some states provide special packages to foreign investors and representatives of some states visit investors' country to give information regarding the state policy preference to foreign investors. With liberalization and decentralization of Indian economy, both domestic and foreign investors now mainly require to interact with state governments and local bodies for seeking various regulatory approvals and for getting land and necessary infrastructure.

Table 2.2 clearly depicts policies of different states, such as the policy relating to Information Technology (IT). Most of the states have such policies needs to been seen in terms of the immense scope for employment generation through IT. Through this policy, all the states propose to generate large-scale employment and attract increased flow of FDI. The states like Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra and Delhi are known as IT hubs as these states have given high priority towards the IT. Apart from IT policies these states have Biotechnology policies (exception is Delhi), which is considered as next revolution in Knowledge based industries. One interesting observation from Table 2.2 is that the states formulate their policies according their assets/resources and traditional industries. The states like Chattisgarh, Orissa, which are rich in minerals, have separate policy on Minerals. Gujarat, which is considered as a highly industrialized state and with

the longest coastline, has to explore the oil resources and therefore they are concentrating on Interim Policy for Gas.

Table 2.2: Different State policies and Special policies

<i>States</i>	<i>Polices</i>	<i>Special policy</i>
Andhra Pradesh	Information Technology Policy Infrastructure Policy Port Policy Roads Policy Policy for Small Scale Enterprises Tourism Policy	Biotechnology Policy
Arunachal Pradesh	Agricultural policy	
Assam	Information Technology Policy	
Bihar	No	No
Delhi	Transport policy Information Technology policy	Transport policy
Gujarat	Port Policy Information Technology policy Roads Policy Policy on Special Economic Zone Interim Policy for Gas Distribution Tourism Policy Agro policies	Interim Policy for Gas Distribution
Haryana	Information Technology policy Export policy Food processing policy Education policy	Education policy, Food processing policy, Web policy, ROW policy,
Himchal pradesh	Information Technology policy Tourism policy Township policy	
Karnataka	Policy on Special Economic Zone Export Promotion policy Information Technology policy	Biotechnology Policy Millennium BPO policy
Kerala	Energy Policy Information Technology policy Tourism policy	Urban Policy Draft Fisheries Policy Labor policy
Madhya Pradesh	Information Technology policy Eco & Adventure Tourism Policy Tourism Policy Labour Policy	Women Policy Environment policy Trade Policy Captive Power policy
Maharashtra	Information Technology policy IT and ITES Policy Policy Regarding Setting up of SEZ	Grapes Processing Industry Policy Biotechnology Policy

Orissa	Agricultural policy Tourism Policy Information Technology policy	
Rajasthan	Information Technology policy Tourism Policy Agro-Processing Policy New Road Policy,	Land allotment policy Mineral policy Granite policy Captive Power Plant Policy
Tamil Nadu	Biotechnology Policy Captive Power Generation Policy Environment Policy Information Technology Policy Textile Policy	Floriculture Policy Housing Policy
Uttar Pradesh	Agriculture Policy Export Policy Information Technology Policy Mineral Policy Road Development Policy Tourism Policy	Film Policy
West Bengal	Information Technology Policy	Siting Policy For Industries

Source: Various State Government website

Distribution and Port Policy. Haryana gives special preference to Web Policy¹⁰ and Education Policy. The state like Kerala has special policy on Fisheries, Tourism, Labour and others. Madhya Pradesh have special policy with regard to Captive Power Policy, Environment Policy, Tourism Policy, Eco & Adventure Tourism Policy, Women Policy. Rajasthan, which is considered to be the biggest exporter of Granite have their own Policy with regard to granite. Thus policies are framed with the motive of attracting the investors, but apart from polices the states are also providing different forms incentives, which we shall discuss in the next section.

Whether the small-scale industry will survive in the era of globalization is a big question? Before liberalization small-scale units were protected through measures such as reservation of certain products for exclusive production in the small-scale sector, reservation of some of the products produced in the sector for purchase preference by government agencies, supply of scarce materials, input price

¹⁰ The IT Policy 2000 of the State emphasizes the use of Web Technology to disseminate the information across the world and to enhance the citizen-IT interface. Also, the Policy recognizes the need of using Web Potential in bridging the gap between the Government and the Citizen.

concessions like lower interest rates and numerous fiscal measures such as excise duty exemptions and other tax concessions (Bhavani, 2000). Due to economic reforms of the 1990s the protection given to this sector is slowly relaxed. According to the World Trade Organization (WTO) regulations member countries have to remove import quotas and other import restrictions, and reduce import tariffs. In addition, countries, especially developing countries, are asked to stop subsidies to exports as well as to domestic goods. Equally important are the non-trade issues of WTO such as Trade Related Investment Measures (TRIMs), Trade Related Intellectual Property Rights (TRIPs), and the stringent sanitary, environment and labor standards. In view of the serious sickness faced by the Small Scale Industries Sector as a whole and the problems getting much more serious with full implementation of the provisions of various agreements signed with the WTO, it is necessary that Small Scale Industries is protected for some more time. In this background, to make small-scale industries Karnataka has set up Karnataka Small Scale Industry Marketing Corporation (KSIMC) is oriented to help improve the quality products, improve the production and provide purchase and price preference to the Small Scale Industries Sector. After removal of protection and opening up of market has adversely affected the exports of manufacturing sector in India including the SSIs (Balasubramanya, 2002). Thus policies are framed with the motive of attracting the investors, but apart from policies the states are also providing different forms of incentives, which we will discuss in the next section.

To attract the investors, including FDI, the states are providing various forms of incentives such as investment subsidy, capital subsidy, power subsidy, exemption from sales tax and sales incentives. Apart from that, special incentives for small-scale industries and special packages for Mega project are also initiated. All these incentives are not provided by all the states, some states

are providing investment subsidy and some others power subsidy and sales tax exemption. Infrastructure facility in a special economic zone is a common policy initiative by almost all the states. Moreover the rate of subsidy given to investors differs across region and sectors. Subsidies are provided according to different zones within the states, starts from highly developed zone to highly backward zone.

In general, investors in developed zones with the states receive less incentives as compared to those in the less developed regions. The motive behind this demarcation is to develop the underdeveloped region and bring about regional balances within the states.

In the present scenario most of the states are setting up facilitator such as industrial area, industrial park, special economic zones, growth centres or export processing zones with necessary infrastructure for power, water, roads, etc. Investors could take land on lease or purchase from the state level corporations for setting up their units. These industrial parks have been developed either by State Industrial Development Corporations (SIDCs), State Infrastructure Development Corporations (SIDCs) or by private sector or in joint sector. Many states have started to provide single window clearance for many regulatory approvals and for getting infrastructure for units being setup in these industrial parks. Some of these parks are also for specific sector such as Information Technology, biotechnology, food processing, garments, etc. The overall changes in the policy seem to have led to competition among states to attract the investors. To highlight the extent of competition among states we shall discuss at some length various policy instruments employed by the states to attract investment¹¹.

2.4 Incentive Competition among States?

To make their state an attractive destination for both domestic and Foreign Investors, the states are providing one or the other forms of incentives to the investors. The fiscal incentives are common among all the developing countries and economies in transition, most probably because developing countries lack the

¹¹ Apart from state incentives the center is also sponsoring some special scheme for North-Eastern state mainly the Transport subsidy scheme for a period of another 7 years i.e. up to 31st March, 2007. Industries located in the growth centres would also be given capital investment subsidy at the rate of 15% of their investment in plant and machinery, subject to a maximum ceiling of Rs. 30 lakhs. An interest subsidy of 3% on the working capital loans would be provided for a period of ten years after the commencement of production.

budgetary resources to provide financial incentive (WIR, 1995). Increase in the number of incentive package has been designed to induce investor to profile their investment project so as to contribute to the state goal in terms of export promoting, employment creation and worker training, domestic value added technology transfer and innovation.

The state governments in India are providing different forms of incentives. But all these incentives are not provided by any single state. In the case of incentives, the states that are rich can provide investment subsidy, 100 per cent power subsidy and so on whereas it may not possible for the poor states. In the present section we are discussing different incentives provided by different states.

2.4.1 Investment subsidy

Investment subsidies are provided on capital investment on land, building, plant and machinery. Investment subsidy is provided under different classifications and under different rates. Backward regions are provided with higher rate of subsidy and developed regions are provided lower rate of investment subsidy. Investment subsidies are also differing according to sectors, sector like IT and Small Scale Industries are provided more investment subsidy. Tables 2.3 and 2.4 presents the investment subsidies across different sectors and general picture with respect to investment subsidies across different states.

Table 2.3 Different Types of Investment Subsidies offered by the States

<i>State</i>	<i>Backward Region</i>	<i>Developing region</i>	<i>Medium/large scale</i>	<i>Tiny/Small scale</i>
Andhra Pradesh	Nil	Nil	Nil	10% to a Rs.10 lakhs will be given to SC/ST entrepreneurs
Arunachal Pradesh	Nil	Nil	75% or Rs.12 Lac	Capital Investment Subsidy @ 15%
Gujarat	Nil	Nil	25% subsidy limited to Rs. 100 lakhs	10% to Rs. 10 lakhs
Himachal Pradesh	CIS@ 10% ceiling of Rs.2.5 lacs	Nil	Nil	Nil
Karnataka	20% max. of Rs.10 lakhs	10% value of max. of Rs.5 lakhs	25% max. of Rs. 12.5 lakhs	Nil
Mizoram	Nil	Nil	Nil	10% subject to a maximum of Rs. 5.00 lakhs and for medium 5% on total capital investment in plant & machinery subject to a maximum of Rs 10.00 lakhs
Maharashtra	30 to 40 % max value of 25 to 40 lakh	@20% max value of 10 lakn	Nil	5% of the subsidy admissible as above for expansion, diversification or modernization involving additional investment to the extent of 25% or more for SSI/Tinny
Tamil Nadu	20% or to a Rs.20.00 lakhs	5% to a ceiling of Rs.15.00 lakhs	10% of fixed assets subject to a ceiling of Rs. 15.00 lakhs	Nil
West Bengal	@25% of the subject to a limit of Rs.250.00 lakhs.	@15% of subject to a limit of Rs.150.00 lakhs	@15 % of subject to a ceiling of 150 lakhs	25% of subject to a limit of Rs.150.00 lakhs

Source: Various State Government website

Table 2.4: Investment subsidies across States: An overview

<i>State</i>	<i>Special Policy on Investment Subsidy</i>
Andhra Pradesh	1) 20% Investment Subsidy, 50% up to a maximum of Rs.10 lakhs will be given as cash subsidy.
Assam	@30% to a ceiling of Rs. 20.0 lakhs
Gujarat	*ARDP & RS, assistance will be provided rate of 50% limited to Rs. 5 lakhs for patent/ IPR
Karnataka	5% to a ceiling of Rs.1.00 lakh for SC/ST entrepreneur and women entrepreneur SSI/tiny sector
Kerala	Priority sector, State Investment Subsidy of 15% FCI, subject to a maximum of Rs.15 lakhs, whereas non-priority sectors will be eligible for 10%.
Madhya Pradesh	Industrial units in the cooperative sector with a minimum investment of Rs. one crore in plant and machinery and a membership of a minimum of one hundred persons, will also be eligible.
Manipur	State Capital Investment subsidy is given @ 15% on the fixed capital investment on plant & machineries, subject to a maximum of Rs. 15 lakhs to units set up in Manipur.
Meghlay	20% of the capital cost of investment on land, building, plant and machinery subject to a ceiling of Rs. 25.00 lakhs shall be provided for all tourism related activities including drawl of Water Supply. 2) Additional subsidy like Publicity Subsidy, Maintenance And Up Keep Subsidy at 20 % of 5.00 lakh and 10 % of 2.00 lakh
Mizoram	15% of total capital investment in plant and machinery for all Investments
Nagland	15% Capital Investment Subsidy on Plant & Machinery subject to a maximum of Rs. 30.00 lakh and 90% Transportation Subsidy
Orrisa	Venture capital for technical entrepreneurs (belonging to Electronics and Computer disciplines) up to 50% of the equity requirements, subject to a limit of Rs. 25 lakhs (either singly or jointly) and equity participation for other categories of entrepreneurs up to 25%, subject to a limit of Rs. 25 lakhs will be provided and travel assistance to technical entrepreneur
Punjab	Investment Incentive @ 20% of Fixed Capital Investment to the Small, Medium and Large scale Information Technology units, subject to maximum of Rs 30 lacs, in 'B' Category Investment Incentive (Capital subsidy) @ 30% of the Fixed Capital Investment (FCI) to the SSI, Large & Medium units subject to maximum of Rs 50,000 lacs shall be available to the Information Technology in developed region
Tamil Nadu	To attract mega projects into the State, attractive capital subsidies have been introduced as hereunder to industries set up in the State (Subject to specified locational restrictions). <ul style="list-style-type: none"> • For project with an investment of Rs.50.00 crores Rs.25.00 lakhs crores and above but below Rs.100.00 crores • For projects with an investment of Rs.100.00 crores Rs.50.00 lakhs crores and above but below Rs.200.00 crores • For projects with an investment of Rs.200.00 Rs.100.00 lakhs crores and above
West Bengal	Capital Subsidy of 15% or Rs. 1.5 million whichever is less in Group-B, 20% or Rs. 2 million whichever is less in Group-C and 30% or Rs. 3 million whichever is less in Group-D

Source: Various State Government website

From the tables 2.3 and 2.4 we clearly depict that, states like Himachal Pradesh, Karnataka, Tamil Nadu, West Bengal, Maharashtra and Kerala are providing capital investment subsidy to backward regions, but the rate of capital investment subsidy is differing. While other states like Rajasthan, Uttar Pradesh, Haryana are not providing capital Investment subsidy to the investors, some other states like Karnataka and Gujarat are concerned about the development of backward community entrepreneurs (SC and ST) and are providing additional capital investment subsidy for backward community development. These two states are providing investment subsidy for women entrepreneurs also. To attract investment in SSI/Tiny sector, especially to backward areas, the state is providing special incentives as well. Gujarat, one of the highly industrialized states in the country, are providing special capital subsidy for research units. Assistance for Research and Development and Patent Registration are provided at the rate of 50 percent limited to Rs. 5 lakhs. In general it may be noted that special incentives for backward regions is widely prevalent. Also the states that are well developed are providing special incentives for investors to invest in backward region and thereby enhance the backward region and bring intra-regional balance.

2.4.2 Interest rate Subsidies:

States are providing interest rate subsidy on loan taken from the financial institutions to modernize their activities by small-scale industries, sectors like services, medium & large industries, and industrial units established in the backward region. Interest rate subsidy policy is followed in some states like Arunchal Pradesh, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan and West Bengal. The interest rate at 5 per cent level is for a period of 5 year but the ceiling level changes across sectors. The states like Arunchal Pradesh is keeping interest subsidy at 4 per cent level for a period of 5 years.

Table 2.5 gives clear idea about the states' initiative in providing the interest subsidy. The states are providing interest subsidy for modernization of industrial unit, development of small-scale industrial units. These incentives are provided to a selected sector, where the state finds that investment is needed for the development of that sector.

Table 2.5: Interest Subsidy Across different States

Arunchal Pradesh	<ul style="list-style-type: none"> • 4% subsidy on interest charged by Financial Institutions on term loans for a period of 5 years from the date of commissioning of their industrial unit
Gujarat	<ul style="list-style-type: none"> • Any small scale unit set up with the loans from financial institution or any existing small scale unit going for modernization program can avail of 5% subsidy on the applicable interest over the loan period, limited to Rs. 5 lakhs per annum totaling to Rs. 25 lakhs. In the case of backward region the interest subsidy is increased to 25% • Service industries shall be given interest subsidy at a rate of 5 % up to a maximum of Rs. 5 lakhs on applicable rate of interest of term loan taken by the service industry. E.g. if bank charges 12 % interest on finance, the amount thereof at the rate of 5 % up to a maximum of Rs. 5 lakhs shall be considered eligible for incentives under the scheme
Madhya Pradesh	<p>Interest subsidy up to a maximum of 5.5% of interest rate, on capitalised basis corresponding to moratorium period including 1.0% for speedy approval/sanction and release of first installment of loan within the stipulated period of 90 days from submission of TEFR/DPR shall be applicable for payment to/through the major/leading financial institutions/intermediary.</p>
Maharashtra	<p>New textile, hosiery and knitwear small-scale industries set up in different parts of the State will also be eligible for Interest Subsidy on the interest actually paid to the financial institution/bank on the term loan for creating fixed capital assets, equal to the interest payable at 5% per annum</p>
Rajasthan	<ul style="list-style-type: none"> • Interest subsidy of 5 per cent will be given on loans sanctioned by RIICO/RFC to approved Heritage Hotel Projects at all places in Rajasthan. • An interest subsidy of 5 per cent will be given on loans sanctioned by RIICO/RFC to approved 1-, 2- and 3-star hotel projects in special areas (e.g., Jaisalmer, Jodhpur, Biknaer, Barmer). • In other areas/ places, the interest subsidy of 3 per cent will be given. 100-per cent exemption from entertainment tax for amusement parks, water parks, etc. for five years.
West Bengal	<p>Industrial unit for its approved project will be entitled to Interest Subsidy to the extent of 50% of the annual interest liability on the loan borrowed from a Commercial Bank / Financial Institution / NBFC approved by Reserve Bank of India, for implementation of the approved project, subject to a limit of Rs.100.00 lakhs per year depending on the location of the unit as follows:</p>

Source: Various State Government website

2.4.3 Energy subsidies:

Inability to provide uninterrupted power is major hurdle for many states. Hence many states provide power subsidy, which is one of the important incentives given by the states to investors. In this category two kinds of states can be seen; one provides subsidy at the slab rate, and others provide 100 % power tariff exemption. This exemption is also applicable to the industrial area and special economic zones.

Table 2.6: Energy subsidy and power subsidy across different States

<i>States</i>	<i>Power Generating subsidy and Power Subsidy/</i>
Arunchal Pradesh	<ul style="list-style-type: none"> • Drawl of power lines from the main line to the factory site will be subsidised to the extent of 50% of the cost incurred by the entrepreneur or Rs.50,000.00 • Subsidy on power supply will be provided to all the industrial units excepting (a) medium and large scale units and (b) the Plywood/veneer and saw mills irrespective of their size. for a period of three years
Harayana	Exemption of payment of electricity duty for 5 year period
Himachal Pradesh	New industrial unit(s) in priority sector shall be exempted from payment of electricity duty for a period of 8 years in the industrially backward areas and for 5 years in industrially developing areas
Kerala	Exemptions from Electricity Duty for five years to new industrial units from the date of commencement of their commercial production
Madhya Pradesh	Electricity duty exemption for five years. Plant and machinery installed for generation of power shall be exempted form State sales tax. Demand cut up to 30 per cent of the installed capacity of non-conventional energy unit if the generation party is a consumer of MPEB and establishes the unit for its own use.
Orissa	Payment of electricity duty for a period of 5 years from the date of power supply. For new industrial units located in Zone- B and C, this exemption shall be respectively 35 per cent and 25 per cent for 5 years.
Punjab	<ul style="list-style-type: none"> • The New Agro-based units set up in the State shall be exempted from the payment of Electricity Duty, for a period of 5 years. Selective 11 Agro based Industries shall, however, be exempted from the payment of Electricity Duty for 7 years. • Generator set subsidy @ 30% of the cost of Captive Generator set, subject to maximum of Rs. 10.00 lacs, shall be allowed. • Generator set subsidy @ 50% of the cost of Captive generator set subject to maximum of Rs. 15.00 lacs,
Tamil Nadu	<ul style="list-style-type: none"> • Subsidy for installation of new generators for captive use to the extent of 15% of cost up to a ceiling of Rs. 5.00 lakhs is also extended. • Full exception from electricity consumption tax will be given for 3 years for all the new units
West Bengal	<ul style="list-style-type: none"> • Subsidy of 25%, up to Rs. 1.25 million, on purchase and installation of generating sets • Electricity consumed for its production / operation activity for a period of 5 years from the date of commercial production / operation

Source: Various State Government website

The states are concentrated in two major mechanisms to attract the investors; by providing subsidy to captive power generation and by exempting from electricity duty. However the period of exemption differ from 3 years in the case of Tamil Nadu to 8 years in Himachal Pradesh. The second way is to attract investors in power generation and the state provides subsidy on the investment.

2.4.4 Other Incentives:

Another common measure to attract investment adopted by the states is to either exempt from or offers reduced sales tax rates (see table 2.7). In addition, there are other incentives like provision of land either as free of cost or facilitating land acquisition at market price or at lower rates.

Table 2.7: Sales Tax exemption, Entry Tax emption and Sales Tax incentives

<i>State</i>	<i>Sales Tax Exemption</i>	<i>Entry Tax exemption</i>	<i>Sales tax incentives</i>
Bihar	<p>Sales Tax Exemption" on purchase of raw materials within the State. The period of exemption for new units will be limited to 10 years for category 'A' and 8 years for Category 'B' Districts</p> <p>Sale tax exemption on finished goods for a period of 10 years for category 'A' and 8 years for category 'B' Districts from the date of production of the unit with a ceiling of 100% of the fixed investment made by the unit. The ceiling for deferment linked to the fixed investment in regard to Telecommunication, Computers, Software/Hardware & electronics Industries would be 300% of the fixed investment made by the unit</p>		

Karnataka		On commencement of commercial production [during the operational phase], on raw materials, components, semi-finished goods, sub-assemblies, consumables [excluding petroleum products like petrol, diesel, furnace oil, naphtha and LSHS used as consumables or for captive power generation units]. Entry Tax exemption will be available as indicted below: Developing area 3 years, Backward area 5 years and highly Backward area 8 years.	
Madhya Pradesh	Exemption form payment of sales tax and commercial tax for different region with in the states. For developed the benefit is 125% for 3 years and for the Backward region benefit varies from 150%, 200 %, 250% eligibility period form 5 years to 7 years		
Maharashtra	Sales tax incentives are providing on the basis of pioneer unit, Non-pioneer unit and SSI unit. Percentage of Fixed Capital Investment ranges from 20 to 45 % in Non-pioneering industries, in pioneering industry 80 for developed to 130 backward and for SSI 100 to 130		

Source: Various State Government website

On the whole different states are providing incentives according to their requirement or objective. First the states are formulating policies according to their comparative advantages. Second, the incentives are differing among the states and within the state. The main motive behind the different rate of subsidy among the states and within the state is to attract the investors to selected regions/sectors and to bring regional equality. Third, all the major states are not providing any sort of incentives to developed region, but they are providing special packages such as investment subsidy, exemption from power cut, exemption from payment of entry tax and sales tax on purchase of raw material to 100% Export Oriented Units, special

economic zones and Growth centers/Industrial area. Thus the states are competing according to their comparative advantages and providing incentives according to their economic strength.

2.5. Trends and Patterns of FDI Inflow

In the earlier section we have explored the policy changes with regard to FDI and different policy initiatives taken by the different states to attract investors. As we mentioned earlier no states have FDI policy as such. But they have different policies and incentives, which are being used as instruments to attract the all sorts of investment¹². In the present section we shall undertake an exploration of the bearing of policies on the magnitude of FDI inflow over a period of time.

To begin with, we shall undertake an examination of the trends in foreign collaboration approvals in the country using the data obtained from Department of Scientific and industrial Research. An analysis of the average number of foreign collaborations in the first policy phase was found to be 180 where as the number increased to 256 during the second period. This provides an empirical verification of our argument that we have developed in the previous section. From table 2.8 it is further evident that the total number of foreign collaborations increased substantially to reach a level of 738 in the early phase of liberalization (1980-90) and their number more than doubled (1928) as we move towards the last phase. More importantly, the number of cases involving foreign equity accounted for only about 12 per cent of the total number of foreign collaborations in 1980 but increased substantially to reach a level of over 86 per cent in 2001 (see table 2.8).

¹² Pubic investment and Private Investment

Table 2.8: Trend in Foreign collaboration Approvals

	<i>Total Number of Collaboration approvals</i>	<i>Cases involving Foreign Investment</i>
1980	526	65
1981	389	56
1982	588	113
1983	673	129
1984	740	148
1985	1041	256
1986	960	256
1987	903	259
1988	957	289
1989	639	212
1990	703	201
1991	976	298
1992	1520	736
1993	1476	762
1994	1854	1054
1995	2337	1355
1996	2303	1555
1997	2325	1690
1998	1786	1186
1999	2224	1708
2000	2144	1716
2001	2270	1971

Source: Department of Scientific and Industrial Research, 2001

Not only that the share of the number of cases involving foreign equity increased, but also the share of cases involving higher equity participation also increased. From table 2.9 it is evident that the number of cases involving more than 75 per cent equity participation accounted for only a little more than 3 per cent in 1990. But as we move towards 2001 their share increased to more than 58 per cent.

Table 2.9: Number of Approvals at different Foreign Equity Ranges

	<i>Up to 50 %</i>	<i>50-74%</i>	<i>Above 75 %</i>	<i>Total</i>
1990	174	10	6	190
1991	248	32	10	290
1992	492	177	51	720
1993	467	175	99	741
1995	842	249	260	1351
1996	781	350	419	1550
1997	635	421	609	1665
1998	304	190	627	1121
1999	423	249	680	1352
2000	464	188	601	1253
2001	471	160	891	1522

Source: Department of Scientific and Industrial Research, 2001

So far our discussion has been on the number of approvals of foreign collaborations and those cases involving foreign equity (FDI). Though the number of collaborations provide a broad indications of the trends, what really matters is not the number but actual inflow of FDI. Hence let us now proceed to examine the actual inflow of FDI into the country. Table 2.10 provides data on the actual FDI inflow in pre and post liberalization period. (here the pre liberalization period refers to 1980-90 and post liberalization period refers post 1991 period). Table reveals that during the pre-liberalization period also India attracted FDI but the magnitude of FDI was less. But after the 1991 there has been a significant increase. The average annual inflow of FDI increased from 116.73 \$ US million in the 1980s to 458.3 \$ US million during 1990s. Thus with the adoption of liberalized policies there has been a marked inflow of FDI into the country.

Table 2.10 : FDI inflow in pre-liberalisation and post liberalization (Million of Dollar)

<i>Pre-liberalization</i>		<i>Post- Liberalization</i>	
1980	79	1991	75
1981	92	1992	252
1982	72	1993	532
1983	6	1994	974
1984	19	1995	2 151
1985	106	1996	2 525
1986	118	1997	3 619
1987	212	1998	2 633
1988	91	1999	2 168
1989	252	2000	2 319
1990	237	2001	3 403

Source; UNCTAD data base, 2005

However, researchers (Kumar 1998) have found that only a part of the increase in FDI inflows could be attributed to the liberalization and a rise in inflow can be explained in terms of a sharp expansion in the global scale of FDI outflow during the 1990s.

2.5.1 Liberalization and Sectoral Composition

The sectoral composition of FDI in India has undergone significant change in the 1990s because of change in equity cap in different sectors and also due to 100 per cent automatic approval in sectors like telecommunication, electric generation, transmission and distribution in Power Sector (Hydro-electric and coal/lignite/oil/gas based Thermal Power Plants), Cigarette Industry and banking sector. Now these sectors are opened for private participation as well for the foreign investors. As a result of these the FDI inflows are flowing to these sectors.

Table 2.11: Sector Wise share of FDI Inflow From 1991-1999 to 2000- 2005

<i>SL. No</i>	<i>Sector</i>	<i>1991-1999</i>	<i>Rank</i>	<i>2000-2005</i>	<i>Rank</i>	<i>1991-2005</i>	<i>Rank</i>
1	Miscellaneous Industries	9.54	1	12.62	2	11.46	2
2	Transportation Industry	8.93	2	8.39	5	8.59	3
3	Electricals Equipment (Incl S/W & Elec)	8.05	3	17.13	1	13.71	1
4	Service Sector	7.01	4	5.16	6	6.99	6
5	Telecommunications	7	5	10.83	3	8.01	4
6	Chemicals (Other Than Fertilizers)	6.91	6	3.63	7	4.87	7
7	Fuels (Power & Oil Refinery)	6.32	7	8.57	4	7.96	5
8	Food Processing Industries	4.1	8	2.42	10	3.05	8
9	Paper And Pulp Including Paper Product	1.5	9	0.97	14	1.10	14
10	Miscellaneous Mechanical & Engineering	1.48	10	2.23	12	1.33	12
11	Textiles (Includ Dyed, Printed)	1.44	11	0.55	21	0.96	15
12	Drugs And Pharmaceuticals	1.43	12	3.38	8	2.64	9
13	Trading	1.16	13	0.95	15	1.26	13
14	Metallurgical Industries	1.1	14	2.66	9	2.11	10
15	Glass	0.98	15	0.9	16	0.86	16
16	Consultancy Services	0.04	36	2.25	11	1.76	11

Source: secretariat for Industrial Assistance (SIA)

During 1991 to 1999 electrical equipment sector received inflow of 9.54 per cent to total FDI inflow to the sector, which ranks top position in attracting the FDI inflow and followed by the other sector like transportation industries attract (8.93),

telecommunications received inflow of (7), Fuels (Power & Oil Refinery) received inflow of (6.32) and service sector is received inflow (7.01). During 2000-05 some of sectors ranks declined for the sectors like Miscellaneous Industries, Transport industry and service sectors. Where as in the total period these sectors ranks in the top. One of the important changes in ranking is consultancy sector, which was ranked at 36 positions in the total ranking and now its ranking 11 position. Studies have noted that during the pre-liberalization period the bulk of FDI was directed to manufacturing sector but in the post liberalization period FDI inflows have been received by services and infrastructure sectors (Kumar ,2005).

2.5.2 FDI and the Economy

The common perception among the developing countries with regard to FDI is that it enhances economic development of host region with generation of output, employment, technological capability and export-expansion, among other parameters.

Figure 2.1: FDI inflows and their share in gross fixed capital formation in India: 1970-2004

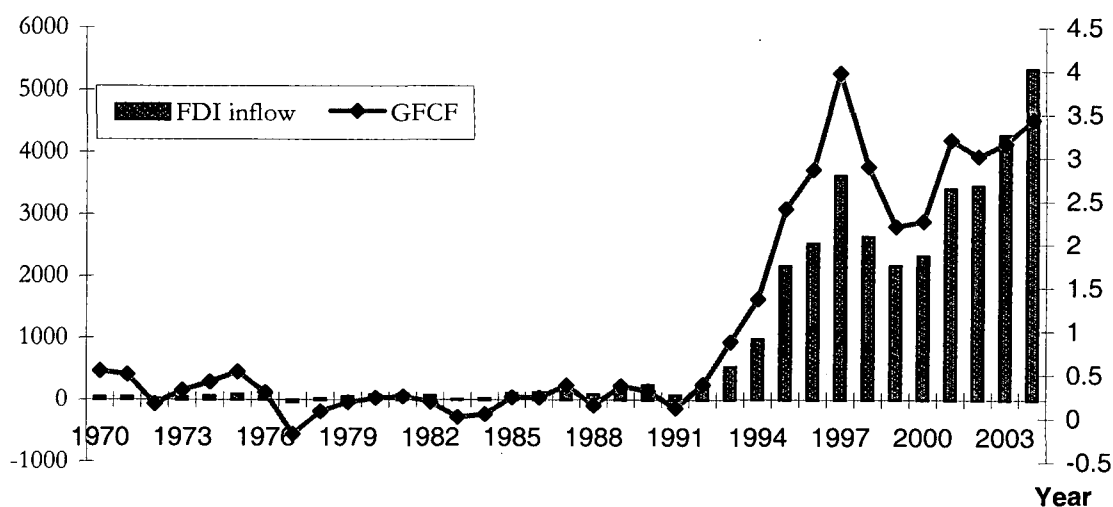


Table 2.12: FDI inflow as a percentage of GFCF and GDP

<i>Indicator</i>	<i>1991</i>	<i>1995</i>	<i>2000</i>	<i>2004</i>
Inward inflow as percentage of Gross Fixed Capital Formation	0.1	2.4	2.3	3.4
Inward FDI stock as a percentage of GDP	0.6	1.5	3.7	5.9

Source: UNCTAD

Figure 2.2: Inward FDI stock as a percentage of GDP

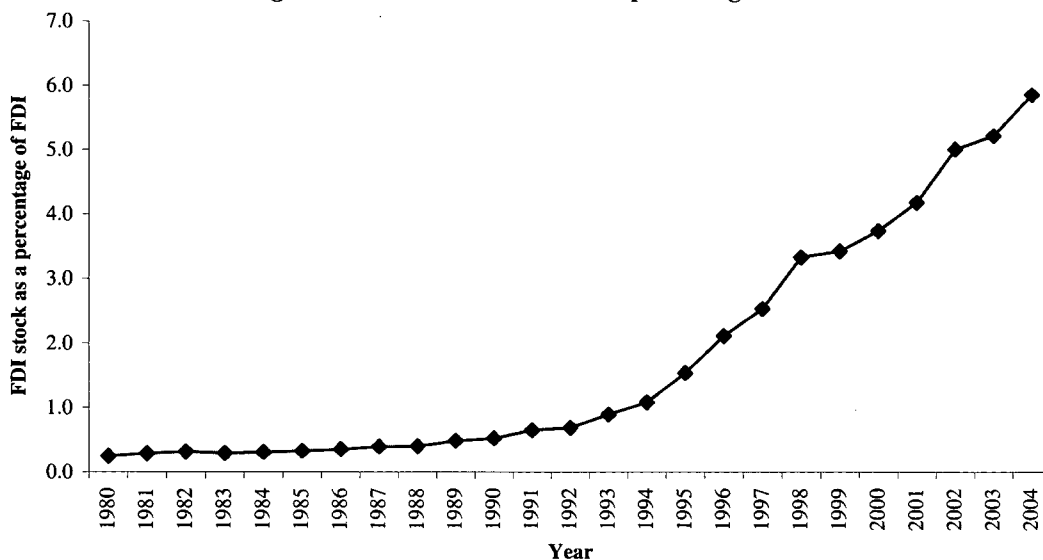


Figure 2.1 and 2.2 depicts contribution of FDI to Gross Fixed Capital Formation and its share in FDI. The Share of FDI in GFCF remained negligible through 1970s but steadily increased in 1990s and by 2004 it increased to 3.4 per cent. The figure 2.1 thus clearly indicates the significant increase in the share of FDI in GFCF in the country especially after 1990s indicating a positive outcome of the liberalized policies. Yet a definite conclusion on the impact of FDI on the economy is not warranted as it called for much more detailed analysis.

2.5.3 Realization of FDI

Investment approvals show a promising picture in the post liberalisation era compared to pre liberalisation. The change in approval over a period of time and percentage of realisation gives a pictures on how the policy regulation and procedure has evolved over time with intention of attracting higher FDI inflow. But

after FDI approval is given it takes time to fructify ¹³. But to overcome the procedural hurdles the Government of India has been changing its policy form time to time like.

- Setting up Foreign Investment Promotion Board (FIPB) Guidelines for consideration of Foreign Direct Investment (FDI)
- Consideration of Foreign Direct Investment (FDI) proposal by the Foreign Investment promotion Board (FIPB) was reduced from six weeks to 30 days for FDI proposal for communication of government decision¹⁴.
- Setting of Foreign Investment Implementation Authority (FIIA) for quick translation of FDI approvals into implementations¹⁵

Table 2.13: Foreign Direct Investment Approvals and Actual Inflows in India

<i>Year</i>	<i>FDI Approvals</i>	<i>FDI Inflows</i>	<i>% Realization</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1991-92	527.2	129.4	24.54
1992-93	2296.5	392.5	17.09
1993-94	3265.8	654	20.03
1994-95	3178	1374.1	43.24
1995-96	11439.5	2140.5	18.71
1996-97	11484.3	2769.5	24.1
1997-98	10984.2	3682.1	33.52
1998-99	7532	3082.9	40.93
1999-00	4266.4	2438.8	57.16
2000-01	5754.5	2907.6	50.53
2001-02	3159.7	4221.9	133.62
2002-03	1653.9	3133.9	189.49
2003-04	1352.9	2776.1	205
Total	66894.9	29703.3	44.40

Source: SIA Newsletter, 2005

¹³ On an average it takes 11 procedures and 89 days to start a business in India; 9 procedures and 46 days to start a business in South Asia. In china, the global centre of foreign investment, it takes 12 procedures, but only 41 days to start a business and to enforce contract in India, it takes 40 procedure and 425 days , in comparison with 25 procedures and 241 days in china(Indian Economic Review, 2005)

¹⁴Press Note No.5 (1999 series) dated 19.03.1997

¹⁵ Press Release dated 16.08.1999

The number of approvals against which inflows have recorded would give a better indication of the extent of likely implementation of approval of foreign project. From 1991-92 to 2003-04 in total FDI approval, the realisation of inflow is only 44 per cent. But the percentage of realisation of FDI inflow has undergone major changes. In 1991 the percentage of FDI was 24 per cent and in 1994-95 it increased 43.24 but after 1999 it further increased and during 2001-02, 2002-03, 2003-04 its actual were more the approval. Thus it shows that the transformation in the policy procedure is influencing the actual FDI inflows.

2.5.4 Region wise FDI approval

Once the investment is approved, the investors select the state/location for setting up their industrial unit. The next stage will be taking all clearance from state regulatory authority for setting up unit, which often turns out to be a difficult task for the investors. As we have already seen, to overcome the regulatory problems the states have been formulating a transparent policy towards the investors and providing different forms of incentives. Hence it may be appropriate at this juncture to have a close look at the effect of these policy initiatives at the state level.

Table 2.14: State-Wise FDI approval - During 1991-97 and 1998-2002 and 1991-2002

SL. No	States	Percentage Share 1991-2002	Rank	Percentage share 1991-1997	Rank	Percentage share 1998-2002	Rank
1	Andhra Pradesh	4.64	6	3.71	9	5.67	6
2	Bihar	0.32	18	0.08	18	0.60	14
3	Gujarat	6.50	5	4.42	7	8.80	4
4	Haryana	1.27	11	1.32	12	1.22	10
5	Himachal Pradesh	0.41	16	0.23	16	0.57	16
6	Karnataka	8.31	3	5.53	4	11.52	2
7	Kerala	0.54	14	0.36	14	0.72	11
8	Madhya Pradesh	3.37	7	4.44	6	2.26	7
9	Maharashtra	17.42	1	12.78	2	22.21	1
10	Orissa	2.90	9	4.96	5	0.61	13
11	Punjab	0.69	13	1.20	13	0.13	18
12	Rajasthan	1.06	12	1.46	11	0.60	15
13	Tamil Nadu	7.81	4	7.02	3	8.68	5
14	Uttar Pradesh	1.72	10	1.84	10	1.58	9
15	West Bengal	3.15	8	4.12	8	2.10	8
16	Delhi	12.48	2	14.25	1	10.54	3
17	Goa	0.34	17	0.24	15	0.45	17
18	Pondicherry	0.44	15	0.21	17	0.67	12
19	State not indicated	26.60		31.84		21.01	

Source: Estimation based SIA Data base

In the case of states, we find a different pattern compared to the national level. The states have their own procedures and policies to attract investment. States that are able to cope up with the procedural delay and regulatory reforms are able to transform the approval into the actual. Some states are doing well in converting approval into actual but this is not the case with all the states. The states like Delhi and Maharashtra are able to attract more approvals. Where as other states like Gujarat, Andhra Pradesh, Karnataka, Tamil Nadu approvals are high but they are not able turn them to actual. This might be because of gestation period, which takes time to convert the approval into actual inflows. Other reason might be because of locational competition, the states that are able to get approval in the earlier stage but when it reaches of implementation stage, they may change their location. Table 2.14 gives the actual FDI inflow in the states here also Delhi stands first in these three period followed by Maharashtra, Karnataka, Gujarat, Tamil Nadu and Andhra

Pradesh. On the whole it appears that while most of the states have adopted highly proactive policies towards FDI, these policy reforms seems to have had only very limited impact in terms of attracting FDI.

2.6 Conclusion

The policies governing FDI inflows into the country today is liberal than ever before. The states are also competing among each other through various policy instruments at their disposal to attract FDI. We have seen that, at the national level, there has been an unprecedented increase in the inflow of FDI and bulk of it is today directed towards priority sectors like infrastructure. Also it has been noted that thanks to the various initiatives, the ratio of actual FDI inflow to the approved FDI has been increasing over the years. But an examination of the regional patterns of FDI has shown that bulk of the FDI is concentrated in a select set of industrially developed regions. The states that are less developed, but having more liberal policies, are yet to figure into the location calculus of foreign investors. This trend, if allowed to continue, can lead to a situation where FDI becomes an instrument of aggravating rather than mitigating the disparities in regional development. Needless to say, this is an issue of immense policy relevance in the years to come. Hence in the forthcoming chapter we shall explore the factors that determine the regional distribution of FDI in India.

CHAPTER 3

ON REGIONAL DETERMINANTS OF FOREIGN DIRECT INVESTMENT

Introduction

Against the background of the findings in the earlier chapter, this chapter seeks to understand the regional factors that determine the location of FDI. To be more specific, the issue addressed in this chapter is, having decided to invest in the Indian economy what regional factors attract the investor to choose a particular location within the economy. Further, an analysis is done to see if the choice of location of the investors had changed over the years or do they continue in a cumulative manner causing widening regional disparities. The chapter is divided into three broad sections. Section I reviews the broad literature on motives of foreign investment. Section II analyses the regional determinants of FDI flow, and finally section III studies the trends in convergence of FDI flow across regions. Lastly, the conclusions are drawn.

3.1. FDI and its Location: A review

Three sets of literature are renowned for their work on the location of FDI. Location theorists predict that locational determinates play an important role in locating a plant (Weber, 1929 and Losch, 1954). Second set of literature highlights on how market imperfection plays important role in investors taking advantage of the host country (Stephen Hymer, 1960), third set of literature point how the specialized advantage helps in exploiting the host country market (Dunning, 1979). These theories give a picture about locational importance, market condition and advantage over the domestic firm to exploit the host country market.

According to location theorists the amount of capital invested is apparently determined by the price of the various elements of production; such as, the cost of grounds, the cost of building machines and other fixed capital cost, the cost of

securing materials, power and fuel, the cost of labour, cost of transportation, interest rates and the rate of depreciation of fixed capital (Weber, 1929). These elements vary according to location of production and thus represent general regional factors of location.

Hymer (1960) argued that one of the basic reason for outdoor investment is profit maximization, market expansion, access to auxiliary units and finally to bring down the cost of production. These outdoor investments will differ according to market condition. Stephen Hymer (1960), in the seminal doctoral thesis attempts to refine and formalize this effect into a separate theory of foreign direct investment. It was essentially that the firms that undertake Foreign Direct Investment operates in an *imperfect market environment*, where it is necessary to acquire and sustain certain net advantages. These advantages (including brand name, patents, superior technology, organizational know-how and managerial skills) helps all such firms to obtain rents in foreign markets that more than compensate for the inevitable initial disadvantages (inferior market knowledge) to be experienced when competing with local firms within the alien environment. Hymer (1970) argued that this conduct by firms, which often results in 'swallowing up' competition, affects market structure and allows MNEs to exploit monopoly and oligopoly powers. To swallow up the external market the firm should possess certain net advantage in their product line and investment in R& D to standardize their product. Once standardized, the product become a developing country's exports and to sustain their market share firms need to innovate the new product (Vernon, 1966). The product cycle theory (Vernon, 1966) treated trade and investment as part of the same process of exploiting foreign markets. The model of the product cycles was primarily intended to explain the expansion of US MNEs in Europe after the Second World War and, at the time of its inception, could account for high concentration of innovations in, and technological superiority of, the USA. This model, however, is now regarded as outdated (Vernon, 1979). He himself recognized that the technological gap between the USA and other region of the world (notably Europe and Japan) has been eroded. And the product life extension which characterized the maturity phases is difficult

to reconcile with MNEs' tendency to produce the new product where factor costs are at their lowest from the start, and opt for a simultaneous introduction phase of the product world wide.

None of the above approaches such as imperfect market and product cycle hypothesis was able to explain where ownership advantages were exploited and how foreign owned firms could out-compete domestic firms. Dunning (1979) integrates three strands of economic theories viz. *industrial organization approach* (Hymer, 1960), *imperfection of financial market* and *theory of firms*, to explain the ability and willingness of firms to serve markets and the reason why they chose to exploit this advantage through foreign production rather than by domestic production. It is explained with eclectic approach that made a promising start towards the development of a general theory of FDI. The hypothesis is that FDI is a function of *ownership, internalisation and locational advantages (OLI)*.

1. The firm possesses net ownership advantages vis-à-vis firms of other nationalities in serving particular markets. These ownership advantages largely take the form of the possession of intangible assets, which are, at least for a period of time, exclusive or specific to the firm possessing them.
2. Assuming Condition 1 is satisfied, it must be more beneficial to the firm possessing these advantages to use them itself rather than to sell or lease them to foreign firms, that is, the firm prefers to internalize its advantages through an extension of its own activities rather than externalize its advantages through licensing and similar contracts with independent firms.
3. Assuming Conditions 1 and 2 are satisfied, it must be profitable for the firm to utilize these advantages in conjunction with at least some factor inputs from outside its home country, otherwise foreign markets would be served entirely by exports.

Till 1970s, the Dunning framework was worked out in investment decision. But after 1970, the study by Aliber (1970) postulated the impact of exchange rate on investment decision. He suggested that weak-currency countries are likely to attract FDI due to the higher purchasing power and more efficient hedging capacity of investors operating from strong-currency countries. Despite Aliber (1970) early work, it was not until the late 1980's and early 1990's that serious consideration started to be given to the exchange rate as potential FDI determinant. This new research momentum was promoted by Caves (1989). He examined the inward investment flows into the USA from over a dozen different countries, and found the strength of a country's currency relative to the US dollar was an important explanatory variable for that country's direct investment in the USA. Calderon (1985) too incorporated the effect of foreign exchange rates and production costs in choosing between domestic and foreign production costs in investment theory. He found that change in the foreign exchanges rate and, or risk, however would have no effect on FDI or exports in sectors where the production cost foreign exchange rate is and remains identical to the overall exchange rate. Thus the volume of FDI and export would be determined solely by the size of the market.

Study by Stevens (1974) has examined different studies related to survey, cross country analysis and interview. He concluded that some explain profit maximization as the primary motive¹⁶, some advocate growth and profit maximisation¹⁷ and some others support the behavioral aspects¹⁸. After considering the evidence for and against the profit maximisation theories, conclusion was that there was not sufficient evidence to discard profit maximisation theory.

Apart from above condition the motive of investors also plays an important role in determining the investment. The motives were classified as Resource seeking, Market seeking, Asset seeking, and Efficiency seeking (Dunning, 1992).

¹⁶ Balassa(1966), Bendera @ White (1968), Aliber (1970), Behrman (1962), Berlin (1971), Billsborrow (1968), Brash (1966), carlson (1969), caves (1971), Horst (1972), Hymer (1960) Johns (1967), Kindelberger (1969), Kopits (1972), Kwack (1971), Severn (1972), Stevens (1972), Stobough(1970) Vernon (1971), Wolf(1971) Coughlin et al (1991) Cheng & Kwan(2005)

¹⁷ Behrman (1962). Behrman (1969), Hymer & Rowthorn (1970)

¹⁸ Aharoni(1966),Barlow & Wender(1955), miller & weigel (1971) (foot note 1,2,3 quoted from Stevens 1974).

The *resources seeking investment* is undertaken abroad to acquire particular and specific resources at lower real cost than could be obtained in their home country. There are three main types of resource seekers.

- First, there are those seeking *physical resources* of one kind or another. They include primary producers and manufacturing enterprises driven to engage in FDI by the motives of cost minimization and security of supply sources
- The second group of resources seeking MNE's (Multinational Enterprises) comprises those *seeking plentiful supplies of cheap and well-motivated unskilled or semi-skilled labour*. This kind of FDI is usually undertaken by manufacturing and service MNE's from countries with high real labour costs, which set up or subsidiaries in countries with lower real labour cost, to supply labour intensive intermediate or final products for export.
- The third type of resources seeking FDI is prompted by the need of *firms to acquire technological capability, management or marketing expertise and organizational skills*.

The *Market seeking investment* is undertaken to sustain or protect existing market or to exploit or promote new market. Apart from market size and prospects for market growth, there are four main reasons, which might promote firms to engage in either sort's of market-seeking investment.

1. Their main suppliers are customers having setup foreign producing facilities and that to retain their business they need to follow them overseas
2. Frequently producers need to be adapted to local taste or needs and to indigenous resources and capabilities.
3. Bring down the production and transaction costs of so doing are less than supplying it for distance.
4. MNE may consider it necessary, as part of its global production and marketing strategy, to have a physical presence in the leading market served by its competitors

The third motive *efficiency seeking FDI*, is to rationalize the structure of established resources based on market seeking investment in such a way that the investing company can gain from the governance of geographically dispersed activities. Thus the intention of efficiency seeking MNE/investors is to take advantage of different factor endowments, culture, institutional arrangement, economic system and policy, and market structure by concentrating production in a limited number of locations to supply multiple markets.

The fourth motive *Assets seeking investment*, is acquiring the assets of foreign corporations, to promote their long-term strategic objectives, especially that of sustaining or advancing their international competitiveness. This investment is less to exploit specific cost or marketing advantages over their competitors than to add the acquiring firm's existing portfolio of assets, other, which they perceive, will either sustain or strengthen their own overall competitive position or weaken that of their competitors.

The review of various theoretical arguments on location of FDI can be summarized as follows. One, FDI flow into a region is affected by the host country conditions, as argued by the location theorists. Two, the foreign investors are seeking to take advantage of the existing market imperfections to maximize their profits and; Three, apart from short term profit maximization, motives of investment depends on market size, sustenance of competitiveness of firms, search for resources and increase in efficiency. These factors of location of FDI inflow, while largely has been stated in the context of international FDI inflow they could be the frame of analysis for understanding the regional location of FDI within an economy. In other words, the decision to invest in a country would indirectly point towards the decision to locate the investment within the region as well. However, one needs to add the caveat that there could be the interplay of these factors when coming to the location decision of FDI within the economy. For example, a market seeking FDI investment may also like to take advantage of the low transportation costs within the economy and hence choose to invest in a low cost region within a economy but seek the market of other regions within the economy. Moreover, the decision maker

may choose to invest in a region, which provides more incentives and subsidies than other regions within the economy. Therefore, the choice of regional location of FDI within the economy may be the outcome of the interplay of number of factors that include the investors motives, the institutional arrangements within the region, the market size, the investor friendliness of the region, the infrastructure facilities of the region etc. It would be worthwhile to analyze these factors in understanding the regional patterns of FDI flow in the Indian economy. Before a formal analysis is attempted, I give the trends and patterns in FDI flow along with some of the covariates identified in the literature.

3.2. The regional Factors

Regional factors play an important role in attracting the Foreign Direct Investment. The firm will undertake business in foreign market if it possessed an ownership advantage over the local competitors. The firms need different factor combination to but all these factor combination might not available at same location. Different locations are endowed with different factors for which firms will be attracted to that location. In the following section the trends and patterns of FDI approval is analyzed according to various regional characteristics that influence the flow of FDI. In the Table below (Table 3.1) FDI share of states are divided into three classes, namely, states that received less than 10 percent of the FDI approvals, states that received 10 to 20 percent of the approval and states that received more than 20 percent of the approval. The average figures of each characteristic are marked for three periods, 1991-94, 1995-98 and 1999-2002.

Table 3.1 Trends and Patterns of FDI approval based on various state characteristics

	Variables	FDI Share	Years			All Years	no. of observations
			Period I 1991-1994	Period 2 1995-1998	Period 3 1999-02		
Market Size	GSDP (in Rs. Crore)	Less than 10	39067.3	44399.6	54325.9	45951.3	151
		10-'20	23656.5	83580.8	73751.8	65179.1	26
		Above 20	76973.1	42365.0	121111.1	92956.5	15
	Per capita Income (In Rupees)	Less than 10	7706.6	9180.2	10357.6	9080.2	151
		10-'20	13409.1	12006.4	14518.8	12963.8	26
		Above 20	8853.3	14855.5	15499.9	12755.3	15
Education and Human Capital	Primary Enrolment (numbers in '000s)	Less than 10	5635.2	5439.2	5660.3	5558.6	113
		10-'20	1883.5	7980.5	5838.1	6599.4	21
		Above 20	10717.0	3673.0	8534.6	8217.0	10
	Secondary Enrolment (numbers in '000s)	Less than 10	902.3	919.3	1195.9	1008.4	113
		10-'20	431.5	1434.6	1133.3	1219.6	21
		Above 20	1759.3	642.0	2297.3	1804.9	10
	Tertiary Enrolment (numbers in '000s')	Less than 10	219.8	265.2	359.4	286.4	113
		10-'20	119.5	431.2	508.9	405.1	21
		above 20	522.5	246.0	619.0	515.5	10
Infrastructure	Road Density (in Km per 1000 sq.km)	Less than 10	969.2	1777.1	1747.6	1494.3	151
		10-'20	9340.6	2321.9	3606.2	4507.9	26
		above 20	700.5	9379.3	3193.6	3021.1	15
	Route Density (in Km per 1000 sq.km)	Less than 10	24.2	29.5	30.2	27.9	151
		10-'20	76.2	30.0	40.7	44.9	26
		above 20	29.8	80.1	35.5	39.2	15
	Power consumption Per capita (KWH)	Less than 10	339.9	391.9	408.4	379.9	151
		10-'20	458.3	500.9	553.8	501.7	26
		above 20	332.8	547.5	584.3	478.8	15
Labour Characteristics	No of Trade Union intensity	Less than 10	1.15	0.72	136.56	46.75	146
		10-'20	0.75	0.40	0.42	0.50	25
		above 20	1.42	0.48	0.41	0.82	15
	Man days lost per worker	Less than 10	68.8	6.2	8.5	28.4	146
		10-'20	0.7	98.8	33.3	59.5	25
		above 20	871.7	3.0	0.7	349.4	15
Wage rate (wage per worker)	Less than 10	0.250	0.394	0.483	0.376	151	

		10-'20	0.257	0.448	0.404	0.386	26
		above 20	0.254	0.383	0.606	0.436	15
Manufacturing base	Manufacturing Density (factories per sq.Km)	Less than 10	0.046	0.147	0.140	0.110	151
		10-'20	1.469	0.254	0.442	0.625	26
		above 20	0.056	1.244	0.396	0.373	15
Governance	Crime Rate (numbers in '000s)	Less than 10	100884.3	93638.3	98014.5	97563.7	151
		10-'20	47876.6	142297.8	108396.7	109053.4	26
		above 20	140160.5	79109.5	137798.0	130917.9	15
	Capital Expenditure Per head (Rs.Crore)	Less than 10	0.000027	0.000044	0.000068	0.000046	151
		10-'20	0.000079	0.000048	0.000086	0.000063	23
		above 20	0.000025	0.000061	0.000080	0.000056	15
State Incentives to FDI	State incentive index	Less than 10	0.102	0.238	0.353	0.231	151
		10-'20	0.111	0.205	0.259	0.192	26
		above 20	0.074	0.167	0.254	0.170	15

Source: Estimated based on SIA data base

3.2.1 Market Size

Inflow of Foreign Direct Investment is influenced by many factors and motives of investors. One of the major variable/component, which emerges from the literature, is market size¹⁹. To measure the market size the literature has used proxy variables such as GSDP, PCNSDP and GSDP growth (Cheng and Kwan, (2000), Fung et. al., (2002), Gao, (2002), Shamsuddin (1994). Table 3.1 gives an idea about FDI share with related to GSDP. The GSDP in states that had less than 10 percent share of FDI was Rs. 45951 crore, while for the next class 10-20 it was Rs. 65179 crore, and for the next class, above 20, it was Rs. 92956 crore. Thus the table shows a positive relationship between the FDI and GSDP. The lower the average GSDP lower the FDI inflow over a period of time. The FDI inflow is concentrated to the state where the average GSDP of states is higher. In the case of Per capita Income, the first period, 1991 to 1994 the highest percapita income is marked in the middle class of 10-20 FDI share,

¹⁹ We are aware of the limits to this factor, when analyzing FDI across regions within a country. Yet, there is some merit in incorporating this factor in the regional context as well because, despite liberalization, restrictions on inter-regional mobility of goods do exist even today.

but for the other two periods, the linear trend is visible. Over all, the linearity of the trend is lost due to the influence of the first period.

3.2.2 Education level

The education level is one of the important variables to measure the quality of human capital of host country. Mainly the recent boom of FDI in developing countries is largely due to a stronger engagement of multinational enterprises (MNEs) in the services sectors (Nunnenkamp, 2002), especially growth of knowledge-based industries. For knowledge-based industries they need skilled labors. Porter (1988) points that multinational firms give more value to the existence of labor with good knowledge level.

In all the three aspects of education and human capital, namely the number of enrolments in primary education, in secondary education and tertiary education, a linear trend is visible. As the FDI share in states increase from less than 10 to the next class, the number of enrolments in primary increased from 5558 to 6599, for secondary it increased from 1008 to 1219 and for tertiary education it increased from 286 to 405. This rise continues in the highest FDI group to 8217, 1805, 515 respectively for primary, secondary and tertiary education. However, such a linear trend is not entirely justified when we look at the figures at four yearly averages. In fact, the four yearly averages shows that in each period there is considerable variations in the enrolments in all the three stages of education, probably indicating that there has been substantial changes in the structure of education enrolment over the years.

3.2.3 Infrastructure

Quality of Infrastructure plays an important role in attracting the Foreign Direct Investment. Here, to measure quality of infrastructure we have taken the variables such as Road density per 1000 square kilometer, Railway route density per 1000 square kilometer, and per capita consumption of electricity per head in Kilowatt-

hours. It is interesting to note that in all the variables pertaining to infrastructure there are mixed trends. In all the three variables, namely, road density, route density and per capita power consumption, the highest figures are noticed in the case of states that had a share of more than 10 percent FDI share but less than less than 20 percent share. In case of all the three variables the figures for states with higher than 20 percent FDI share had slightly less than that of their immediate lower class, though higher than the lowest class, i.e., less than 10 percent share states. However, this trend is not uniform across the four-year averages. In fact, except for the first period, in all the other periods the linear positive trend is visible in both road density and power consumption.

3.2.4 Labour Characteristics

Labour characteristics affect the flow of FDI in two primary ways. One is related to the cost of labour and the other is related to the flexibility of labour market. The cost of labour is captured through the average wage rate per worker and the extent of labour market flexibility/rigidity is captured through two variables, man days lost per workers and the average number of trade unions in a firm. The manday lost due to industrial disputes like strikes and lockout can bring down the confidence of the investors while the presence of trade unions would make the industrial relations rigid.

The foreign direct investment is showing a negative relationship between the average union intensity and FDI share. Table 1 clearly depict the union intensity across the different category of FDI share and shows that higher the union intensity lower is the Foreign Direct Investment. The overwhelming number of trade unions in lowest class of FDI share, at 47 is due to the presence of multiple trade unions in this group in the period, 1999-2002.

There is a clear positive relation between the man-days lost due to strikes and lockouts and FDI share in the total figures. The man days lost per worker increased from 28 to 59 to 349 in a year, as the class of FDI share increased from less than 10, to

10 to 20 and then to greater than 20' FDI share. This is intriguing, since the relation is theoretically expected to be negative. However, part of the problem is resolved when we look at the four-year averages. The period after 1994, the average man-days lost in regions with larger FDI share was considerably lower to the lower class, 10 to 20. It was only in the first period, that we saw an outlying presence of man days lost within the largest FDI share group.

The cost factor plays important role in attracting FDI inflow. Especially, MNCs prefer the locations where the cost of production is least. Labour cost is one of the important components of cost of production. Higher wages may discourage the FDI inflow to the region. However, the present data shows that wage rates and FDI shares are positively related. The trend shows that as the FDI share increases the wage rate also increase. Moreover, this trend seems to persist across time periods as well. This is in quite contrast with the literature, the literature identifies higher wages discourage the FDI inflow.

3.2.5 Manufacturing density

Manufacturing Density is calculated by number of factories/ total geographical area. Manufacturing density plays a bandwagon effect or it attracts further investors to location. The reason might be because of the linkages and network between the supplier of ancillary goods and firms. This will help in reducing the cost of transport and also it can access to the host country market and it can also use host country plant as export base. On the other hand if the firms are in the same product line and located near to each other then there is chance of spillover effects.

However, from the table there is no clear trend on the link between manufacturing density and FDI share. On the average manufacturing density seems to be highest among the states that have medium level of FDI share, i.e., 10-20 percent share. During the period 1995-1998, there is a clear positive trend in the relationship, but this is lost in the subsequent period.

3.2.6 Quality of governance

The attitude and quality of governance matters a lot in attracting the investment. Here, to measure the quality of governance we have taken Cognizable Crimes per '000 Population and per capita capital expenditure by the state. The first variable would give a picture of the state of law and order in the region while the second variable would give us an understanding of the state's effort to strengthen its physical assets such as building of a new hospital, the purchase of new computer equipment or networks, building new roads and so on.

Interestingly, there seems to be a positive link between crime rate and FDI share. This may be due to the fact that the rate of crime increases in large urban areas, which are also related to the FDI flow. In the case of capital expenditure per head there is no particular linear relation visible. The largest expenditure per head is found to be in the class of 10-20 FDI share.

3.2.7 Incentives

Incentives have become one of the important instruments to attract the Foreign Direct investment in the present era. The developed countries are mainly known to provide financial incentive and developing countries are known to provide Fiscal incentive (WIR, 1996). Much of literature points out that incentives as such is not an important instrument to attract the FDI. There are other factors also plays an important role in attracting the investment. The States are vying with each other for greater share of FDI and for this they are providing many incentives and subsidies to attract FDI. The most important of such incentives are investment subsidies, sales tax exemption and concessions, power subsidies and exemptions, entry tax exemptions, interest subsidies, tax holidays and stamp duty exemptions. All of these together form 9 different forms of incentives. To arrive at a single indicator of incentives a value of one was assigned to a state for a year if a particular incentive was provided, otherwise it was given the value of zero. All the incentive values were summed together to get the total of all incentives in a year for a state. This was

further divided by the maximum achievable value for a particular year by a particular state, i.e. 9. Such an index clearly shows that those states that attract the most FDI are the states that provide the least incentives. In other words, FDI share of a state is not determined by the incentives and subsidies provided by the state. For eg. The states, which are having share below the 10 per cent, are providing more incentives and in opposite the state, which are having the share above 10 per cent are not providing lesser incentives.

But all these above characteristics are measured individually and provide only approximations of the actual. Many of these variables are inter related, and their effects may be quite different when their covariates are added to the analysis. So to further refine the analysis and identify the determinants of FDI share to states a regression exercise is called for.

3.3 Hypotheses, Data Sources and the Model

3.3.1 Size of the Market

Large market size helps to reap the advantage of scale economy and expand their market for their product. Majority of studies (Table 3.1) found that Market size is significant and has positive effect on attracting Foreign Direct investment. A study by Fung et.al (2002) on determinants of Hong Kong and U.S direct investment in China separate out investment from Hong Kong and from the United states to compare and contrast determinants of these two very important source of foreign direct investment during 1990-99. The finding of this paper was that GDP has a significant impact on inflows of direct investment from both U.S.A and Hong Kong investment. U.S investments are more sensitive to local market demand than Hong Kong investment. This may be explained by the fact that U.S firms sell more to the domestic Chinese market, while the Hong Kong firms tend to use China as a low-cost hub to manufacture goods and export to countries outside China. Shamsuddin (1994) try to examine what are the economic determinants of private foreign direct investment. For this he used single equation model for 36 LDCs for the year 1983. The most important factor in attracting FDI is the per capita GDP in the host

country; followed by, wage cost, per capita debt, per capita inflow of public aid, and volatility of prices. In this study it is hypothesized that market size, measured, as Gross State Domestic Product would have a positive impact on FDI share.

3.3.2 Characteristics of Labour

(a) Extent of Unionization

The good relationship between the entrepreneur and labour is an important factor for the development of industries in the states. The states should take care of labour demand time to time and create favorable environment to investors from all sorts of labour disputes. States with higher unionization will deter the inflow of FDI investment. Bartik (1985 and 1989) and Coughlin et.all (1991) has generated empirical evidence for its negative impact on the inflow of Foreign Direct Investment. Woodward (1992) analysed Japanese-affiliated manufacturing investments in the United states or site selection of Japanese-owned factories, based on micro data representing individual location choice for 1980-89. Outcome of the paper was Japanese investors prefer states with strong markets and low unionisation rates and manufacturing plants are more likely to select countries characterised by manufacturing agglomeration, low unemployment and poverty rates and concentrations of educated, productive workers. Study by Aggarwal (2005) on the sensitivity of Foreign Direct Investment on labour market condition suggests that rigid labour markets discourage FDI. The effect of labour market rigidities and labour cost however is more pronounced for the export oriented FDI as compared with the domestic market seeking FDI. It is therefore evident that aside from promoting the other factors, India will have to attempt to exploit its comparative advantages in the labour intensive sector before they get eroded. Therefore, based on the above literature it is hypothesized that the intensity of unionization would have a negative impact on attracting FDI in the state. Unionization intensity in a state has been measured as follows:

$$\text{Unionization intensity}_{it} = \text{No of Unions}_{it} / \text{No of factories}_{it}$$

(b) Labour cost

From the literature we can identify that higher wage deter Foreign Direct Investment. Bartick (1985) found that higher wage rate had a negative relationship with new plant location in a state. Lugar and Shetty (1985), Coughlin et.all (1991), Woodward (1992), Cheng and Kwan (2000) and Fung et all.(2002) found evidence that foreign plant starts up in three industries were related positively to agglomeration economy. Hence it is hypothesized that wage rate, or wage per worker has a negative impact on attracting FDI to the state. Wage per worker is measured as follows:

$$\text{Wages per worker}_{it} = \text{wages of workers}_{it} / \text{No of workers}_{it}$$

3.3.3 Infrastructure

One of the perception among investors is that infrastructure in developing countries are at very low levels. In a liberalized world the developing countries are taking more initiative to develop their infrastructure and attract higher Foreign Direct Investment. Cheng and Kwan (2000) examined the determinants of foreign direct investment in 29 Chinese regions from 1985 to 1995, they found that large regional market, good infrastructure, and preferential policy has positive effect. It is our hypothesis that the level of infrastructure facilities would have a positive effect on attracting FDI in the state. In the present model Level of infrastructure has been incorporated using two variables, namely, Road Density and per capita consumption of electricity (kwh).

3.3.4 Agglomeration Effect

Basically there are two major types of agglomeration economies (Hoover, 1936). First, location economies, or externalities derived from industry-specific location, obtained when firms in the same industry share a pool of skilled labor and specialized input suppliers, so there are external economies to the firm but internal to the industry. Second, urbanization economies, there are external to the industry,

but internal to the territory, and benefit to all the firms located in the area, generally related to the concentration of services in urban areas. Urban areas provide professional services, banking services, communication services, and scientific and technological assets. Sebastian Morris (2004) used Stephen Hymer's understanding of the parallels and relationship between the international organization of a global firm and the locational choices for the same with the spatial aspects of location of economic activities in general. He applied the same to the situation in Indian FDI flows since reforms to explain the regional patterns of FDI. He argued that for all investments it is the regions with metropolitan cities that have the advantage in attracting the bulk of FDI. Gujarat has been particularly handicapped in not having a large and metropolitan city unlike the southern states, which have Bangalore, and Hyderabad besides the older metropolis of Chennai. Adjusting for these factors the FDI into Gujarat was large enough over the period when the state had grown rapidly in the first six years following the reform of 1991-92. Since then the slow down of the growth has been a retardant to FDI since the kind of FDI that Gujarat can hope for are largely industrially oriented.

The presence of existing manufacturing activity in the region, with a large cluster of consumers and suppliers, has often been considered a positively related factor of attraction to firms that have a less demand for specialized labor and other inputs, but seek to locate in areas with a heritage of industrial activity (Bartik, 1985; ; Coughlin et al., 1991; Woodward, 1992; Guimaraes et al., 2000;). Jaumite, (2004) and cheng and Kwan(2000) has used lagged value of the stock of FDI as a possible measure of the incentives for clustering. Another way of measuring agglomeration is through quality of infrastructure (Wheeler and Mody,1992). Pelegrin (2004) introduce manufacturing density into the agglomeration variable and he has used this variable as another proxy variable for market demand. To measure the urbanization Guimaraes et al. (2000) used Service agglomeration, calculated as the share of total employment in tertiary sectors, and obtained a positive and significant relation with foreign location. Another variable used to proxy urbanization economies is population density. Luger & Shetty (1985), Woodward (1992) and He (2002) consider that a high population density act as a centripetal force on

agglomeration, with a positive significant effect on foreign investment. Thus in the present model manufacturing density and urbanization is hypothesized to play an important role in attracting the FDI. So in our model we are using the Manufacturing Density and urbanization to measure the agglomeration effect on the FDI. The variables are constructed as follows

$$\text{MD}_{it} = \text{No of Factories}_{it} / \text{Geographical area per sq (000) Km}_{it}$$
$$\text{Population Density}_{it} = \text{Total Population}_{it} / \text{Total geographical area}_{it}$$

3.3.5 Quality of Governance

The general state of cordial law and order in a region, and greater amount of physical stock available as public good would bring in greater possibilities of more efficient functioning of the market, which in turn would attract greater levels of FDI.

(a) Cognizable Crimes per '000 Population (-)

This variable explains how well the states are providing security to its citizens and reflect quality of protection. Our hypothesis states that if higher the crimes rate in the state lesser the FDI inflow. Crime rate is measured as number of cognizable crimes committed per 1000 population.

(b) Capital expenditure per head

Capital expenditure used by the states to acquire or upgrade the physical assets such as building of a new hospital, the purchase of new computer equipment or networks, building new roads and so on. Capital expenditure per head is measured as the total state budgeted capital expenditure per head for a particular year.

3.3.6 Policy Variables

(a) State incentives

The general perception among the state is that incentives play an important role in attracting the Foreign Direct Investment. There are many forms of incentives such as investment subsidy, power subsidy, interest subsidy, exemption from the sales tax and tax holiday. All these incentives are meant to attract the investors to states. Some states can use these incentives in a strategic manner to attract the investors to backward region by which in the long run backward region can develop. However, David Wheeler and Ashoka Mody (1992) focused on manufacturing investment by U.S multinationals in the 1980's and stated that paradoxically, short-run incentives have limited apparent impact on location choice. Regional tax differentials have no impact on FDI inflows either in the long run or short run, Instead, FDI inflows are affected by regional-specific attributes measured by provincial income (Chi Chur Chao et. al, 2005). In the present model it is hypothesized that such incentives by the state help in attracting FDI to the state. In other words, there is a positive relationship between incentives and state's share of FDI.

Among the various types of incentives, 9 different forms were identified. To arrive at a single indicator of incentives a value of one was assigned to a state for a year if a particular incentive was provided; otherwise it was given the value of zero. All the incentive values were summed together to get the total of all incentives in a year for a state. This was further divided by the maximum achievable value for a particular year by a particular state, i.e. 9.

(b) Special Economic Zones

Special Economic Zones is becoming one of the important ways of attracting the investment to the country. Units may be set up in SEZ for manufacture of goods and rendering of service. Investors are also interested to locate their firms in these Zones because of availability of better infrastructure and special incentives. Study by Cheng and Kwan (2000) found a positive role in attracting the Foreign Direct Investment to a Special Economic Zone. The Government of India introduced an SEZ scheme in 2000 to provide an internationally competitive and conducive

environment for export production Thus, the Government has converted export processing zones located at Kandla and Surat (Gujarat), Cochin (Kerala), Santa Cruz (Mumbai-Maharashtra), Falta (West Bengal), Madras (Tamil Nadu), Visakhapatnam (Andhra Pradesh), and Noida (Uttar Pradesh) into SEZs In addition, the Government has approved the setting up of 21 SEZs in various parts of the country. Thus to empirically examine the special economic zones on FDI approval we are incorporating the special economic zone into our model. We are using the dummy of special economic zone in our model assigning value of 1 to states, which have special economic zone, and 0 to states, which don't have special economic zone. Table 3.2 presents details on the variable construction and the sources of data used in the analysis.

Table 3.2 Data Source

<i>Variables</i>	<i>Publication</i>	<i>Source</i>
FDI State level approval data	Secretariat of Industrial Assistance, Annual publication, various issues	Department of Industrial policy and promotion
Markets Size <ul style="list-style-type: none"> Gross State Domestic product 	Government of Indian, Annual survey of Industry, Central Statistical Organization Database.	Economic and Political Weekly CD ROM, Ministry of Statistical and progress implementation Government of India.
Agglomeration <ul style="list-style-type: none"> Manufacturing Density Population Density 	Census, CSO	ASI and Cenusu "C" series
Factor Affecting Cost <ul style="list-style-type: none"> Wage Rate 	Annual survey of Industry	Economic and Political Weekly CD ROM
Characteristics of labour Market <ul style="list-style-type: none"> Extent of Unionized labour 		Statistical pocket book, Statistical Abstract, Manpower Profile India year book 2001 and Indian labour statistics.
Infrastructure <ul style="list-style-type: none"> Road Density 	Economic Intelligence service: Infrastructure	Centre For Monitoring Indian Economy
Quality of Governance <ul style="list-style-type: none"> Cognizable Crimes per '000 Capital Expenditure 	Crimes in India, Reserve Bank of India	
Policy variable <ul style="list-style-type: none"> Special Economic zone State Total incentives to investors 	Various State Government Industrial policy	Ministry of commerce and Industry

3.4 The Model

In our model we are incorporating nine variables that corresponds to five sets of determinants of FDI flow in a state, namely, Market size, Infrastructure, Labour Characteristics, Cost factors and Policy variables.

$$\ln fdi_{it} = \beta_1 + \beta_2 \ln gsdp_{it} + \beta_3 \ln popdensity_{it} + \beta_4 \ln roaddensity_{it} + \beta_5 \ln nppc_{it} + \beta_6 \ln unionit_{it} + \beta_7 \ln wpw_{it} + \beta_8 \ln crimerate_{it} + \beta_9 \ln speczone_{it} + \beta_{10} \ln incent_{it} + w_{it}$$

where

$$\ln fdi_{it} = \log \text{ of } fdi_{it} / \Sigma fdi * 100$$

Log GSDP = Gross State Domestic Product in i state t time period

Independent variables are

Log GSDP = Gross State Domestic Product in i_{th} state t time period

Pop density = population density in i_{th} state t time period

Lnroaddenssity= Road density of state wise in i_{th} state t time period

lnppc_{it} = log power percapita consumption in i_{th} state t time period

unionit_{it}= unionintensity in i_{th} state t time period

lnwpw_{it}= log wages per worker in i_{th} state t time period

ln crimerate_{it}= logcrime rate in i_{th} state t time period

speczone_{it}= special economic zone i_{th} state t time period

incent_{it}=incentives in i_{th} state for t time period

w_{it} = error term

The period of analysis covers from 1991 to 2002. This covers the entire period of liberalized regime of FDI flow into the country. The data set covers all the sixteen large states in the country. Thus the data is essentially a balanced panel data having 192 observations in total. The structure of the dataset allows us to follow panel data estimation techniques. The reason to select the panel data for analysis is they provide more information, more variability, less co linearity, more degrees of freedom, estimates more efficient, allow to study individual dynamic, information on the time –ordering of events, control for individual unobserved heterogeneity. In the panel data model we have two sets of model namely Fixed effect model and Random Effect Model.

The Random Effect Model and Fixed Effect Model are different in the following ways:

$$Y_{it} = \beta_1 + \beta_2 X_{it} + u_{it}$$

Where

U_{it} can be decomposed as

$$U_{it} = V_i + e_{it},$$

Where

V_i is random,

e_{it} is individual effect

Random effect model assume E_i is not correlated with X_{it} , FE assumes E_i and X_{it} are related

- T (Number of times series date) is large and N (Number of cross section units) is small, there is likely to be little difference in the values of the parameters estimated by FEM and REM
- N is large and T is small, the estimates obtained by the two method can differs significantly

To select the best model for analysis we have used Hausman specification test, which help us in selecting the fixed or random effect model. The Hausman test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results.

Table 3.3: Hausman Test

<i>logfdishare</i>	<i>Fixed Effects</i>	<i>Random Effects</i>	<i>Difference</i>
Loggsdp	1.185445	1.043119	0.142326
logroadensity	-1.086099	-0.891958	-0.194141
popdensity	0.0002269	0.00052	-0.000293
logmanfdenit	0.9082928	0.306696	0.6015968
unionit	-0.0547267	-0.009877	-0.04485
logwageperworker	-1.604438	-1.117479	-0.48696
logpwrpercapita	1.255613	0.923255	0.3323583
logcapitalexpperhead	-0.355	-0.458991	0.1039912
logcrimerate	-2.248514	-0.080706	-2.167808
incentiveindicat	0.9873031	-0.589645	1.576948
speeconzone	1.054285	1.000739	0.0535465
chi2(11) =16.59			
Prob>chi2 = 0.1205			

According to Hausman test condition if P-value is insignificant, Prob>chi2 larger than .05 then it is safe to use random effects. If you get a significant P-value, however, you should use fixed effects. Thus when we run the Hausman test the result is showing insignificant, Prob>chi2 larger than .05. So we are selecting the Random effect model for our estimation.

3.5 Estimation results

Table 3.4 reports the Random effects model and a pooled OLS estimation with robust standard errors is also reported in the table below. The over all significance of both the models is vindicated by the highly significant F-values and Wald Chisquared values for OLS and random effects model respectively. The explanatory power of both the models are quite high at nearly 45 percent (R squared) considering the panel structure of the data. The number of observations has been reduced from 192 to 189 owing to missing observations in some variables.

Table 3.4: Estimation of Determinants of Foreign Direct Investment different method.

<i>Variables</i>	<i>Pooled OLS with robust estimation</i>	<i>Random Effect Model</i>
Logfdishare	Coef.	Coef.
Loggsdp	1.23 (3.63)*	1.27 (3.25)*
Logroadensity	-0.77 (-2.53)***	-0.77 (-2.13)**
logpwrperc~a	1.08 (3.19)*	1.06 (3.17)*
Popdensity	0.00 (3.97)*	0.00 (3.43)*
unionit	0 (-0.14)	-0.02 (-0.26)
logwageper~r	-1.1 (-3.16)*	-1.19 (-3.11)*
logcapital~d	-0.44 (-1.19)	-0.48 (-1.67)***
logcrimerate	-0.14 (-0.53)	-0.2 (-0.60)
speeconzone	1.08 (3.03)*	1.1 (2.41)**
incentivei~t	-1.25 (-1.72)***	-0.79 (-1.02)
_cons	-18.43 (-2.77)***	-18.68 (-3.63)***
Number of Observations	189	189
Number of Groups		16
Wald chi2(9)		58.04
Prob > chi2		0.00001
F value (9, 179)	15.31	
Prob > F	0.0000	
Rsquared	0.4548	0.4487

Note: *significance at 1 %, **significance at 5 %, ***significance at 10 % (t test for OLS and for Random effect model Z result in the parentheses)

As hypothesized market size, measured as log of GSDP turns out to be highly significant in explaining the changes in the log of FDI share in the state. A unit change in loggsdp would have an effective change of 1.27 unit change in

logfdishare. Since the figures are in log form in both the sides the coefficient measures essentially is an elasticity measure. It measures the rate of change of FDI share to the rate of change in GSDP.

Among the variables for infrastructure, road density comes out with a negative and significant sign (at 5% level) while power consumption power capita is positive and highly significant at 1 percent level. Thus availability of power is a crucial variable in explaining the share of FDI in a state. Road density has turned to be negative probably because it includes both pucca and kutchra roads. The inclusion of kutchra roads may not be a determining factor for explaining FDI shares.

To look into the agglomeration effects two variables were initially tested. One, the density of manufacturing and the other being population density. Since there was a fair degree of multicollinearity between the two variables manufacturing density was dropped as it had lesser significance level. Population density turns out to be significant at one per cent level. As mentioned the externalities of urbanization are benefiting all the firms located in the area, generally related to the concentration of services in urban areas.

The number of labour and trade unions in a state dose not seem to have any significant effect on the share of FDI flow into a state as the coefficient turns out to be statistically not different from zero. In the case of random effects model, the expected negative sign is obtained though the coefficient continues to be not significant.

One variable that has a definite negative impact on the share of FDI flow is the wage rates in a state. The variable turns out to be negative and highly significant as hypothesized. Thus FDI flow in India is indeed one wherein cheaper cost of production is an important determinant. Interestingly capital expenditure per head turns out to be negative and significant in both models. This is contrary to the general understanding of theories, where public expenditure is supposed to crowd in private investment. It rather suggests that public expenditure in capital is

crowding out private investment, especially foreign investment in the regions. Crime rate again turns out with the expected negative sign though not statistically significant.

The presence of special economic zones certainly has a positive and significant effect on the share of FDI in a state as the coefficient turns out to be significant at one percent level in the OLS model and at 5 percent level in the random effects model. However, special incentives given by the states have a negative effect on the share of FDI flow into the state. This can be explained by the fact that it is perhaps those states that attract the least FDI that provide the largest incentives in order to compete with the states that having better FDI shares. But the analysis shows that such competition among the states is wasteful and does not lead to any incremental change in the FDI shares.

The above analysis on determinants of FDI into a state provides a static picture on what determines the flow of FDI into a region. Now it would be interesting to see whether there has been any regional convergence or divergence of FDI flow into the states over the same period as mentioned in the above analysis. For the purpose an analysis of convergence / divergence is taken up in the following section.

3.6 Convergence in Foreign Direct Investment Inflow

In this section we empirically verify the convergence and divergence hypothesis propounded in the literature with respect to Foreign Direct Investment (FDI). The analytical framework for measuring convergence as well as divergence among the states, in terms of Net State Domestic Product (NSDP) and Per Capita Net State Domestic Product (PCNSDP) was developed by Barro and Sala-I-Martin (1990). In brief the purpose of present section is to give clearly the trends of FDI over the period 1991-2003 and finally an attempt is made to verify convergence and divergence hypothesis of FDI based on the neo classical framework developed by

Barro and Sala-I-Martin (1990). The Indian government has liberalized its policy with regard to trade and investment and special preferences are given to foreign investors. Apart from the central government the states have been providing special incentives and also some state's representative have directly visited home countries of foreign investors to give detailed information about the state's special provision for the foreign investors. (Chalpathi Rao and Murthy, 2005). In the process of competition India has gained the credit of being one of the hot spots for the foreign investors and rated as the second best destiny after China (Kearney, 2005). Given this background, in a competitive regime whether the FDI is equally distributed among Indian states or concentrated in a few regions is an issue that needs to be explored. To accomplish the objective of this section, we have followed a methodology adopted by the Dasgupta et al. (2000) where they examine the convergence and divergence hypotheses with respect to PCNSDP. We are following same methodology to verify the convergence and divergence hypothesis with respect to FDI. We found the FDI is converging among 12 major states.

3.6.1 Inter-State Growth Rate of FDI:

We adopted semi-log functional form ($\ln Y_t = \alpha + \beta_t + u_t$) to estimate growth rates of FDI approval during 1991-2002. The estimated result shows that the (Table 3.5) slope coefficient are positive and significant at 5 per cent level. This means that for all the states FDI approval shows an increasing trend, though the R^2 differ across states. The states like Karnataka, Andhra Pradesh, Maharashtra, Tamil Nadu and Kerala have been able to achieve in terms of FDI approval in the top 5 positions. The backward states like Bihar, Madhya Pradesh, Orissa are lagging behind with respect to FDI approval.

Table 3.6 depicts the estimated growth rate of FDI approval across the states during the 1991-02. This table shows how FDI approvals have grown over a period of time across the states. In case of FDI approval Karnataka ranks on the top followed by Andhra Pradesh, Maharashtra, Tamil Nadu and Kerala. In the backward state like

Orissa, it is showing a negative growth compared with other underdeveloped states like Uttar Pradesh, Madhya Pradesh and Rajasthan. The result presents a picture that the states that are growing well in terms of NSDP and PCNSDP are also growing well in terms of FDI approval.

Table 3.5: Estimated Growth rate of State-Wise Approval for 1991-2002

<i>States</i>	<i>Intercept</i>	<i>Slope</i>	<i>R²</i>
Andhra Pradesh	5.83 (2.84)*	0.38 (2.84)*	0.4468
Bihar	-	-	-
Gujarat	7.25 (7.04)*	0.23 (1.67)	0.2171
Haryana	5.54 (5.86)*	0.27 (2.12)***	0.3094
Himachal Pradesh	-	-	-
Karnataka	5.28 (5.51)*	0.53 (4.09)*	0.6262
Kerala	4.34 (5.66)*	0.28 (2.74)**	0.429
Madhya Pradesh	6.70 (5.53)*	0.14 (0.86)	0.0694
Maharashtra	7.36 (7.69)*	0.38 (2.93)*	0.4615
Orissa	7.68 (3.37)*	-0.21 (-0.69)	0.0449
Punjab	-	-	-
Rajasthan	5.62 (7.27)*	0.20 (1.93)***	0.2711
Tamil Nadu	6.73 (6.62)	0.35 (2.55)**	0.3948
Uttar Pradesh	6.58 (10.58)	0.18 (2.19)**	0.3237
West Bengal	7.06 (7.88)	0.17 (1.41)	0.1659
Delhi	7.75 (8.31)	0.26 (2.07)***	0.2992

Note: Figures in parentheses are t-ratios of the estimates.

Significance at 1 % level, ** significance at 5 % level**, *** significance at 10 % level

Table 3.6: Estimated Annual Percentage Growth rate of FDI of Each states from 1991-02

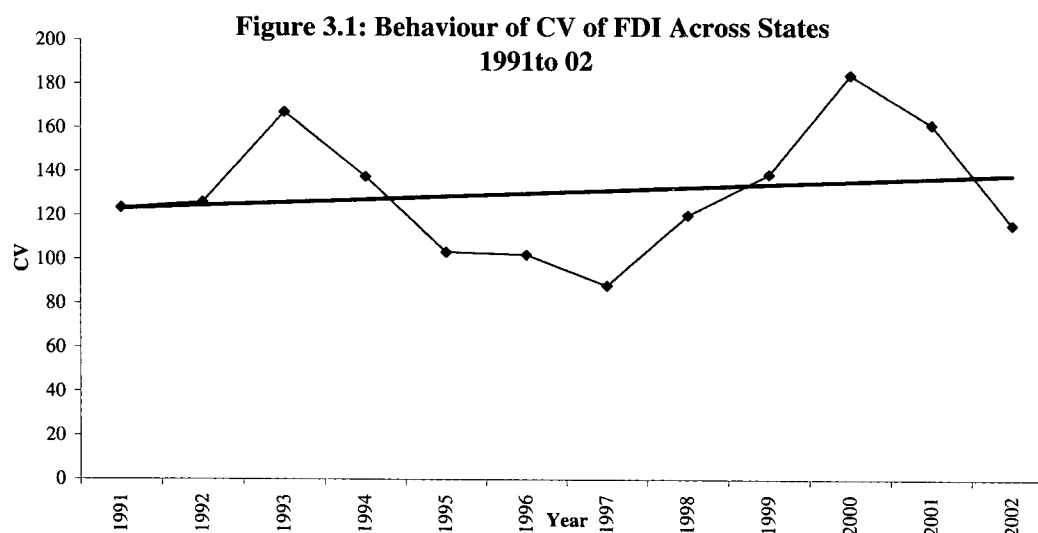
<i>States</i>	<i>AGR</i>	<i>Rank</i>
Andhra Pradesh	38.62	2
Gujarat	23.29	8
Haryana	27.17	6
Karnataka	53.33	1
Kerala	28.58	5
Madhya Pradesh	14.21	12
Maharashtra	38.06	3
Orissa	-21.21	13
Rajasthan	20.27	9
Tamil Nadu	35.31	4
Uttar Pradesh	18.48	10
West Bengal	17.17	11
Delhi	26.17	7

Note: Average Growth Rate(AGR)

Source: Estimated by Researcher using the SIA Data Base

3.6.2 σ -convergence

The concept of σ -convergence of FDI is applied to know the extent of dispersion of FDI Indian states over a period of time. The condition of sigma-convergence is satisfied if the dispersion across the states decreases over a period of time. To test the σ -convergence we put forward the hypothesis such as 'if the dispersion is decreasing over a period of time across the states then we can infer that regional disparities is declining'. On the other hand 'if the dispersion is increasing over a period of time across the states then we can conclude that there is widening inter-regional disparities in FDI approval.



We begin our analysis by calculating the Coefficient of Variation (CV) of FDI across states for each year. Then we fit a linear time trend over the series so generated. For the period 1991-02, the data for state of Bihar, Himachal Pradesh, Punjab, Andaman and Nicobar Island, Arunachal Pradesh, Meghalaya, Nagaland and Sikkim have not been taken into analysis mainly because of missing observation.

The CV reveals a cyclical trend when we impose a linear curve on C.V more or less trend line remained same over a period of time.

Table 3.7: Estimated Linear Trend equation for different series of CVs of FDI of states - 1991-2002.

Row no	Dependent variable	Estimated value		
		Intercept	Coefficient of time	R ²
1	CV of states "FDI" major state	1.38* (5.98)	0.00 (0.07)	0.0053
2	CV of states FDI in 'technical inflow'	0.83 (7.98)*	-0.003 (-0.28)	0.0052
3	CV of states FDI in 'Financial inflow'	62.56 (2.66)*	0.63 (0.26)	0.0047

Note: Figure in parentheses are t-ratio of the estimates

* significance at 1 % level

In our first step we regressed CV on time across the states over a period of time. For this analysis we took all the major states and we found that the slope coefficient is negative and R² is very low (Table 3.7). In order to have deeper look into the nature of divergence, the same Coefficient of Variation-trend analysis was carried out for broader components of FDI i.e. technical and financial inflow. It was found that the CV for technical flow is negative and for financial flow showed a positive result and the R² value is very low for both the component.

Table 3.8: Estimated Linear Trend equation for different series of CVs of FDI of states after removing the outlier states, 1991-2002.

Row no	Dependent variable	Estimated value		
		Intercept	Coefficient of time	R ²
1	CV of states "FDI" 18 states	1.34 (7.29)*	0.01062 (0.43)	0.0002
2	CV of states "FDI" 16 states	1.38 (5.98)*	0.00 (0.07)	0.0005
3	CV of states "FDI" 12 major state	1.26 (5.72)*	-0.008 (-0.26)	0.0053

Note: Figure in parentheses are t-ratio of the estimates

* significance at 1 % level

The estimation was further carried out by removing the states that have no initial values like Punjab, Bihar and Himachal Pradesh and also those states are showing high fluctuation in FDI (Table 3.8). Even after removing this outlier the result were not significant at 5 percent level and R^2 remains the low for these states also. Thus it is difficult to draw a conclusion whether it is diverging or converging across the states over a period of time.

3.6.3 β -convergence

As neoclassical theory suggests that at low levels of percapita output, an economy grows at a high rate and vice-versa. If two economies, similar in terms of parametric specifications, differ only with respect to their per capita output levels at some initial point of time, then at any subsequent point of time, the economy that started of with a higher per capita output should grow at a slower rate. This leads to the hypothesis of absolute or β -convergence, which predict a negative relationship between the rates of growth enjoyed by a cross-section of economies and the levels of their per capita outputs at a given initial point of time. The coefficient with negative sign and statistically significant predicts the negative relationship between the rates of growth enjoyed by a cross section of regions and the levels of their FDI at a given initial point of time (i.e 1991). In other words, the negative coefficient gives the evidence of beta-convergence and reduced inequalities across the regions.

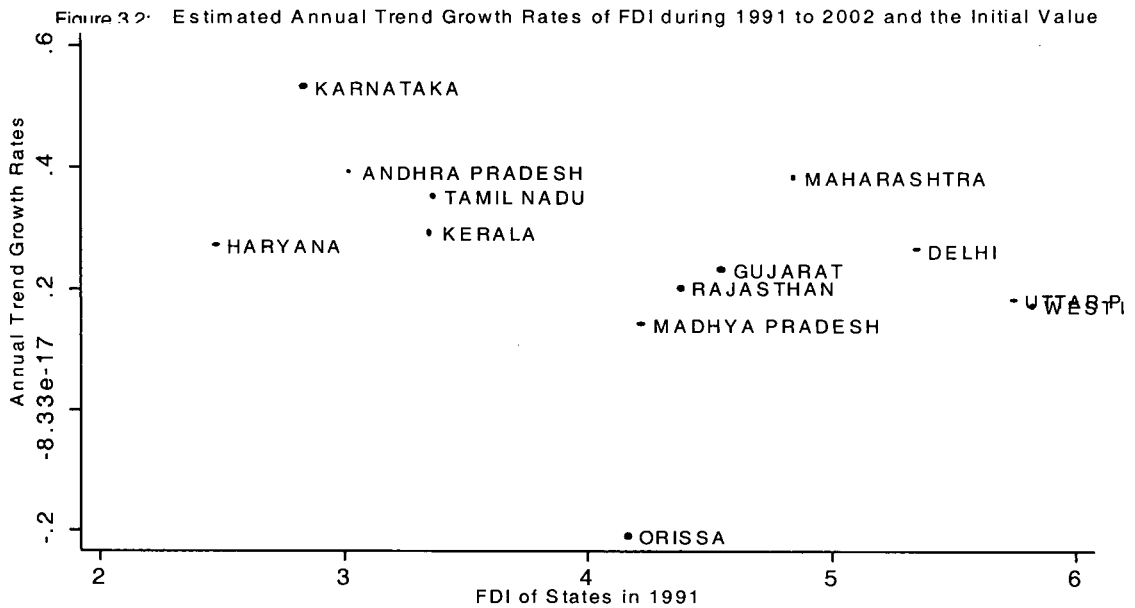
To test the β -convergence amongst Indian states we first looked at the line of best fit through a scatter of estimated compound growth rates for the different states and their initial FDI, we take 1991 as the initial year (Y_{91}). We estimated $\ln Y_t = a + b_t + u_t$ for each region and then regressing the given estimated value of b on Y_{91} .

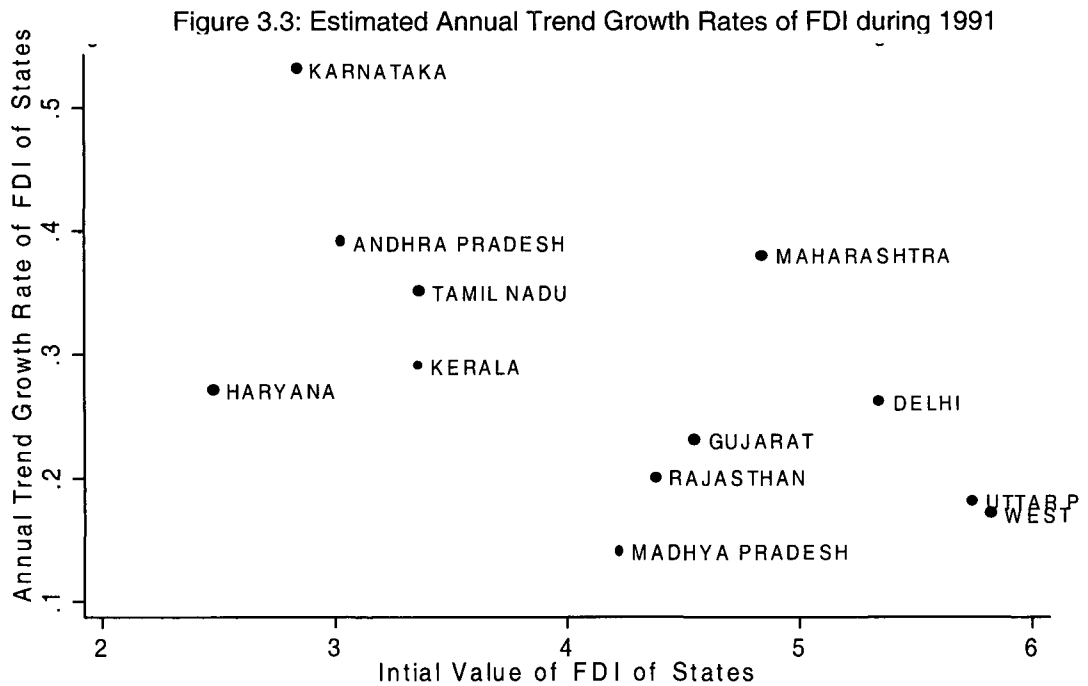
Table 3.9: Estimated Linear Regression of Growth Rates of FDI,

Row no	Dependent variable	Estimated value		
		Intercept	Initial Value (Y_{91})	R^2
1	Estimated Trend Growth Rate	0.49 (2.55)**	-0.06 (-1.31)	0.1354
2	Estimated trend growth rate after removing outlier (Orissa)	0.53 (4.86)*	-0.06 (-2.33)**	0.3509
3	$\ln (Y_T/Y_0)/T$	0.74 (6.56)*	-0.09 (-3.56)*	0.5584

Note: Figure in parentheses are t-ratio of the estimates
* significance at 1 % level, **significance at 5 % level,

Table 3.9 presents the estimates of linear regression of growth rates of Foreign Direct Investment (FDI) during 1991 to 2002 in the major states. It can be observed from the table that after running regression, the coefficient on Initial value was found to be negative, but not statistically significant at 5 per cent level of confidence. After removing the outlier i.e. Orissa as depicted in Figure 3.2, the coefficient was again found to be negative but statistically significant at 5 per cent level. This implies a convergence among the major states. However in Y_{91} the initial year the states which don't perform well were performing well in proceeding year. Hence, an alternative indicator was tried i.e. average growth rate per annum may be taken to be $1/T \{ \text{Ln} (Y_T/Y_0) \}$, where T refers to the length of the period and Y_0 and Y_T to the initial and final FDI inflow. The growth rates calculated may then be regressed on estimated compound growth rate. The results improved over the earlier results 't value also showed an improvement and R^2 value also increased supporting the β -convergence hypothesis among these states.





The relationship between FDI and its initial value of major states over period of time is depicted the Figure 3.2 and Figure 3.3. An outlier can be seen in the figure 3.2, i.e. Orissa, which makes our estimates non-significant. After removing outlier, the Figure 3.3 revealed that the higher FDI attraction in the states is associated with significant low growth rates of FDI or convergence in Madhya Pradesh, West Bengal, Rajasthan, UP, Gujarat and Delhi. The results were not as per expectation in Karnataka, Andhra Pradesh and Tamil Nadu. These states have grown at higher rate in initial stage of FDI inflow and remains to be among the growing states in the later stage also which is against the β -convergence assumption

3.7 Conclusion

This chapter looked into the motives of regional location of foreign direct investment in India. The chapter first resorted to analysis of the determinants of share of FDI flow at the regional level, followed by an analysis of convergence of FDI inflow across regions in the country. Based on the regional characteristics of 16 major states in India a panel data estimation was done to analyze the determinants

of share of FDI approvals in the states. From the analysis it can be concluded that the search for location of FDI in the country is based on both market seeking principle and efficiency seeking principle as propounded by Dunning. FDI share seems to be higher in case of regions with larger domestic market while FDI seems to flowing to those regions, which has lesser cost of production, in terms of labour cost. The impact of short-term incentives doled out by the regional governments for FDI flow is doubtful. The competition among states by providing incentives and subsidies seem to be wasteful. Rather, positive signals from the state government efforts should be in the direction of long-term building of capabilities of the region such as better infrastructure and hassle free production environment such as the SEZs and efficient law and order conditions wherein institutions of free market could bloom. At the same time the expenditure pattern of the state government should not be such that it crowds out private investment.

The convergence hypothesis tested concluded that there were considerable variations in FDI inflow across various regions in the country but these flows are converging over the years. As the economy transformed from the state led policies to market led policies some of the developed states started to open their wings to fly²⁰. These states are also well developed in human and physical capital compared to other states, which helps them to attract higher private investment to the economy. One of the elements of private investment is FDI, which is considered as a tool for the development in modern era. If the states provide the basic infrastructure facilities and good quality of bureaucracy then the states have chance of attracting higher Foreign Direct Investment into the region. In the post liberalization period, states are competing with each other to attract the higher FDI and enhance their the economic development. The states are providing the special packages in terms of tax holiday and free power supply. Even after all these effort few states are able to get the lion share in the FDI which can observed form the Table 2.14. With this background we tested whether the states are converging and

²⁰ See Footnote 6

divergence over a period of time across the states in term of FDI. Our analysis was carried out in three stages. First stage we estimated β -convergence of 18 states, we found result was not statistically significant, in the next step we took 16 states then also we found the result is not statistical significant. Finally when we plotted the scatter plot (Figure 3.2) we found that Orissa is an outlier. Finally we took 12 major states²¹, we found the result is statistically significant at 5 per cent level. This means among these 12 major states FDI is converging over a period of time but still the major shareholders are in the top 5. To examine performance in terms of FDI over a period of time we followed alternative method (compound average growth rate method) to examine convergence and divergence. The results improved compared to earlier result

²¹ Other three states not having initial FDI, so we exclude these states

CHAPTER 4

SUMMARY AND CONCLUSION

Until about 1980s the developing countries in general followed a conservative approach towards the inflow of foreign capital and viewed MNCs with suspicion. It was generally feared that MNCs crowds out the domestic entrepreneurs and dominates domestic market with very little contribution towards their overall development. No wonder, FDI was not the preferred mode of investment for economic growth and social transformation. But after 1980, as part of the ongoing process of globalization, the attitude of developing countries towards the MNCs began to change (Dunning and Narula, 2004) and also started to liberalize their policies relating to trade and investment. Thus FDI has increasingly become an instrument to overcome the deficiency of capital and integrate the economy to the external world in terms of trade, technology and managerial activities. With this optimistic approach developing countries are competing with each other for FDI by providing special packages as well as financial and fiscal incentives to investors. Such competition is found prevalent not only among countries but also between regions with in countries.

Along with other developing countries, India also began to liberalize the policy from 1980s, but the real push took place in the policy frame with the New Industrial Policy of 1991. Moreover, Indian policy makers began to give importance to external capital inflow. These changes in the policy can be seen partially in the magnitude of FDI inflow. After 1991 the magnitude of FDI inflow increased from 155 US\$ million to 5335 US\$ Million in 2004 (WIR, 2005). Yet, it has been argued that India is yet to reach its potential and lags much behind countries like China. In this regard Nagesh Kumar (2000) pointed out that the increase in the magnitude of FDI inflow could not be entirely attributed to policy liberalization, but needs to be seen as part of the over all expansion in the FDI activities at the Global level during the 1990s.

There is an intense discussion going on amongst the economists on the reasons for India lagging behind China in terms of attracting FDI. Another area that has attracted attention of researchers related to the contribution of FDI towards

development and impact of FDI on different sectors of the economy. One set of studies point out that irrelevant policy framework (business policies in particular) is one of the major reasons for not attracting FDI up to potential in this era of globalization [Bajpai *et al*, 2000; Siddharthan, 2004; and Kumar, 2002]. Other studies suggest that backwardness of export performance and FDI is not contributing to acceleration of export in case of India [Lal, 1999; Sharma 2000; Kumar 2002]. Plethora of literature [Kumar and Pradhan, 2002; Mazumdar, 2005] is concentrated on the impact of FDI on growth. However, studies on the determinants of Foreign Direct Investment are very few as compared to literature in the U.S.A, France, U.K, China and Japan²². In Indian case, there are few studies on the regional determinants of FDI [Sebastian Morris, 2004; Venkatramany, 2001; etc.]. Another study by Aggarwal (2005) analyzed the sensitivity of Foreign Direct Investment on labour market condition. Thus, the above-mentioned studies tried to concentrate at the national level as well as at the regional level with respect to labour market rigidity. These studies used variables like market size and cost, labour factors (unionization, man day loss per worker, etc.) and policy variables such as special economic zones. These studies failed to capture the impact of state level policies, quality of governance and incentives, which are emerging factors in a globalized world. Against this background, present study made an attempt to explore the bearing of region-specific factors on the FDI inflows to different states in India.

In concrete terms, the present study, using a panel data set, examine the regional determinants of FDI among the Indian states. By incorporating the traditional factors (market size and cost), manufacturing density, special economic zones, and incentives into our model, the present study provided a better vantage point for assessing the role of various determinants of FDI. Some of our findings are also consistent with prevailing studies in this area. Such an analysis has been undertaken against the backdrop of detailed examination of the trends and patterns in FDI inflows to the country and states within with a detailed exposition of the various policy initiatives undertaken at the national and state level.

The study finds that the policies governing FDI inflows into the country today is liberal than ever before. As a result, though there has been an unprecedented

²² See Chang and Kwan (2000)

increase in the inflow of FDI into the country, the observed performance appeared much below the potential and that of other countries like China. Bulk of the FDI inflow in recent years has been directed towards priority sectors like infrastructure. Also it has been noted that thanks to the various initiatives, the ratio of actual FDI inflow to the approved FDI has been increasing over the years. The states are also competing among each other through various policy instruments at their disposal to attract FDI. Despite the growing competition among the states to attract FDI, our examination of the regional patterns of FDI has shown that bulk of the FDI is concentrated in a select set of industrially developed regions. The states that are less developed, but having more liberal policies, are yet to figure into the location calculus of foreign investors. Thus, inter-state competition for FDI appears to be detrimental to their interests. This trend, if allowed to continue, could lead to a situation where FDI becomes an instrument of aggravating rather than mitigating the disparities in regional development. This in turn calls for more coordination among states with respect to their policies towards attracting investment.

The study finds that the size of region's market as approximated by Gross State Domestic product has positive and wages cost has a negative effect on FDI. Similar situation is found in terms of good infrastructure measured in terms of use of power consumption. However, the infrastructure measured by density of all roads is showing negative effect. To measure the quality of governance we have taken state capital expenditure and crime rate. While the former is found negatively significant the latter was found statistically insignificant.

Furthermore, Wage rate is found having a negative and significant effect. In broader terms, the policy variables such as special economic zone and incentives are becoming one of the important instruments to attract the FDI at regional levels. However, study further found that special economic zones have a positive effect in attracting the FDI, but the state incentive is not statistically significant.

Further, we have taken the number of factories per square Km as a proxy variable for measuring the manufacturing density and we found that it showed strong and positive relationship with the FDI. We used Capital expenditure per head and state

cognizable crime rate as a proxy for measuring the quality of Governance. Capital expenditure per head had a negative effect and crime rate is insignificant. Lastly, we have taken policy variable such as special economic zone and state incentive. It is found that existence of special economic zone has a significantly positive effect whereas state incentive is not significant in the random effect model, but significant in simple regression.

After making comparison to other studies, we concluded that market size measured in terms of real GSDP is positive and significant in attracting FDI. These findings are consistent with a number of earlier studies [Bartik, 1989; Coughlin *et al*, 1991; Douglas, 1992; Shamsuddin, 1994; Cheng and Kwan, 2000; Gao 2002; Fung *et al*, 2002, etc.]. The finding of this study with regard to good infrastructure (road density) is in contrast with a study done by Cheng and Kwan (2000), which find infrastructure (Road) to have positive impact. Wages cost is showing negative effects on FDI and found consistent earlier studies (Coughlin, Treza & Arromdee 1991, Woodward, 1992 and Cheng and Kwan 2000) and union intensity is not significant.

The present study also tested whether the states are converging and diverging over a period of time in terms of FDI. Our analysis was carried out in three stages. First stage we estimated β -convergence of 18 states, we found result was not statistically significant, in the next step we took 16 states then also same result had been found. It was found that Orissa is an outlier then, finally, we took 12 major states. We found the results to be statistically significant at 5 per cent level. To examine performance in terms of FDI over a period of time we followed alternative method (compound average growth rate method) to examine convergence and divergence. The results improved compared to earlier result and indicated a tendency towards convergence.

On the basis of above-mentioned results, the overall conclusion is that incentive as such is not the proper way of attracting the investment. The states should provide better infrastructure like power supply to firms, create better export environment to compete globally, etc. However, the state should also give special preference to setting up the special economic zone, which can attract the further investment.

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APPENDIX

Table 2.1: Locational Determinants of FDI (Selected Literature)

<i>Name</i>	<i>Variables</i>	<i>Model</i>	<i>Theories</i>
Bartik (1989)	Size of market (+), higher property tax(-), public services(+), Financial market(+), unionization (-) higher labor cost(-), foreign immigrants(+), Education level of labour force (high school graduate (+)	Panel data estimation (U.S.A)	Profit Maximisation
Coughlin, Treza & Arromdee (1991)	Percapita income to measure market demand(+), Manufacturing density(+), higher wage rate(-), unemployment rate(+), highly developed infrastructure(+), Unionization(-), high tax(-), unitary taxation(-), state government expenditure (+).	Condition logistic model (U.S.A)	Profit Maximisation
Woodward, Douglas (1992)	State Variable: Regional Market(+), Unionization (-), climate (summer (+), winter(-)), Corporate Profit Tax Rate(-), Domestic Unitary Tax (1), Worldwide unitary Tax(-), State Effort(+), Japanese Office (+), Land Area(+), Country variable: Manufacturing Agglomeration (+), Population density (+), Interstate connection (+), wage rate (-), productivity (+), Education attainment (+), Black Density (-), poverty Rate(-), Non-poor Black Density (-), Unemployment rate(-), Property Taxes Per capita (-), Land Area (+).	Condition logistic model (U.S.A)	Profit Maximisation
Wheeler and mody(1992)	Classical variables: Labour cost, Level of corporate taxation, market size Agglomeration benefit indices: Infrastructure quality, degree of Industrialisation, level of foreign Direct investment. Risk: Geopolitical considerations: Relationship with the west, Relation with neighbours. Risk: First principal components from: Political change, attitude of opposition groups, probability of opposition take-over, stability of labour terrorism risk, Desire for foreign investment, Attitude toward private sector, Cultural interaction, Expatriate environment, Bureaucracy and red tap, corruption, quality of legal system Distribution of Wealth. Open: First principle component from: Restriction on imports, Export controls, Local content requirement, Expropriation risk, Currency convertibility, Profit repatriation controls, Ownership limits: Existing investment Ownership limits: new investment.	Translog specification	Profit maximisation

Shamsuddin (1994)	Per capita GDP (+), wage cost, per capita debt, per capital inflow of public aid(+), volatility of price(-), economic instability	Single equation Econometric model (36 LDC countries)	Profit maximisation
Cheng and Kwan(2000)	Regional market (+), wage cost (-), Good infrastructure (+) special economic zone and key policy designation(+).labour quality (-)	Dynamic panel regression, Generalised Method of Moment (GMM).(china)	Profit Maximisation
Gao(2002)	GDP(+), preferential policy (SEZs)(+), real wage variable (+), labour quality (+)	Balanced panel data	
Fung et all (2002)	GDP (proxy for regional market) (+), Average wage of region (Higher wage (-), quality of labour (proxy ratio of number of student enrolled in higher education in region) (+), Infrastructure (+), Special economic Zone(+), open coastal cities in region(+), Number of technological and development Zones in region(+)	Random effect model	
Campos & kinoshita (2005)	Institution (+) natural resources(+), agglomeration economics(+), labour cost	Panel data estimation (Transition economies)	Economic of scale

Table 2.2: OBJECTIVE FUNCTION OF THE MULTINATIONA FIRM (Selected Literature)

<i>Name</i>	<i>Theories supported</i>	<i>Decision studies</i>	<i>Type of Evidence</i>
Ahoroni (1966)	Behavioral	Location	Interviews
Aliber (1970)	Profit maximisation	Location	Relies on other studies and general knowledge (O.S. + G.K)
Balassa (1966)	Profit maximisation	Location	O.S and G.K
Banders & White (1968)	Profit maximisation	Flow of direct investment (financial) data	Regression: Macro data
Barlow & wender(1955)	Behavioral and "gambler's" earnings	Location; finance	Interviews
Behrman(19620)	Profit Maximisation; Growth	Finance	Inteviews
Behrman(19690)	Growth; Profit maximisation	Real Investment finance;real investment	Interviews;macro and micro data
Belin(1971)	Profit maximisation; growth	Finance	Interviews

Behrman(1969)	Growth; profit maximisation	Real Investment finance; location	Interviews;macro and micro data
Berlin (1971)	Profit maximisation	Finance ;Real Investment location	(office of Foreign direct investments)
Billsborrow (1968)	Profit maximisation	Plant and equipment	Regression:micro (colombian sub-sidiaries)
Brash(1966)	Profit maximisation	Location; Finance	Interviews and micro data (Australia)
Carlson(1969)	Profit maximisation - subject to risk	Finance	O.S and G.K
Caves(1971)	Profit maximisation - oligopoly factors emphasised	Location	O.S and G.K
Horst(1972(a))	Profit maximisation	Location	Regression :macro
Horst(1972(b))	Profit maximisation	Location	Regression :micro (Harvard project and compustat)
Hymer(1960)	Profit maximisation oligopoly factors emphasised	Location	Macro and micro company reports
Hymer and Rowthorn (1970)	Market share and growth	Comparatives growth of US and European and multinational	Micro; regressions and other tests (fortune magazine)
Johns(1967)	Profit maximisation	Flow of direct investment	Macro by industry(Australia)
Kindleberger (1969)	Profit maximisation	Location and other decision	O.S and G.K
Kinickerbocker (1973)	Oligopolistic matching of investment	Location	Micro: regression and other tests (Harvard project)
Kopits (1972)	Profit maximisation	Repatriated dividends	Regression; macro
Kwack(1971)	Profit maximisation and risk minimisation	Flow of direct investment: other financial and real flows	Regression: macro
Miller and weigel (1971)	Behavioural and profit maximisation	Location	Discriminant analysis; macro (Brazil)
Moose (1968)	Profit maximisation	Plant and equipment, dividends, net capital outflow	Regression: macro
Morley (1966)	Profit maximisation	Flow of direct investment: financial	Regression: macro
Penrose(1956)	Elements of behavioural, profit maximisation, growth	Real and financial investment	General Knowledge and Australian data
Polk, Meister & veit (1966)	Profit maximisation	Location expansion	Interviews; macro

Popkin(1965)	Profit maximisation under uncertainty	Location	Regression: micro(company reports)
Prachowny(1969)	Profit maximisation	Flow of direct investment (financial)	Regression: macro
Reuber(1973)	Profit maximisation	Location and other decision	Interviews; macro
Rhomberg(1968)	Profit maximisation	Balance - of - payment flows	Regression: macro
Richardson(1971)	Profit maximisation	Location and expansion	O.S and G.K
Rolfe(1969)	Profit maximisation	Location and Finance	O.S and G.K
Ruckdeschel (1971)	Profit maximisation	Net capital out-flow	Regression: macro
Scaperland and Mauer (1969)	Profit maximisation	Flow of direct investment	Regression: macro
Severn (1972)	Profit maximisation	Finance; net financial flow; plant and equipment abroad and in Us	Regression: macro (Office of Business Economics)
Spitaller	Profit maximisation	Financial and real investment	Relied on other studies
Stevens (1969a)	Profit maximisation	Plant equipment and	Regression: macro (Office of Business Economics)
Stevens (1969a)	Profit maximisation	Flow of direct investment	Regression: macro
Stevens (1972)	Profit maximisation and risk minimisation	Plant equipment balance-of-payment flows	Regression: macro
Stoubaugh (1970)	Profit maximisation	Finance	Interview; micro and macro data (Norway)
Stonehill (1965)	Profit maximisation	Flow of direct investment	Interview; micro data and statistical tests
Stubenitsky (1970)	Growth or sales maximisation	Location; others	Interview; micro (Netherlands)
Vernon(1971)	Profit maximisation	Location	Marco; micro (Harvard project)
Wolf (1971)	Profit maximisation	Location	Regression:macro

