

## Does Urbanisation Promote Foreign Direct Investment? Lessons and Evidences from China and India

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### Abstract

*The objectives of this paper is to study the linkage between urbanization and foreign direct investment in China through regression of urban population with FDI with the help of secondary data in post reform period from 1979 to 2010 and comparison with India. The paper focuses on determinants of FDI flow, pattern of FDI in India and China with linkages with urbanization. China has become largest FDI recipient in the Developing world and second largest globally after USA. Average annual growth rate over 9 % in China has been possible due to rapid urbanization and radical initiative attracting inward foreign direct Investment. Cities in China with good infrastructure, established industrial base are able to attract more FDI than other cities in China which establishes strong relation between urbanization and FDI. Higher growth & rapid urbanization in post reform period is partly a function of the Chinese political-administrative system and policies that favour higher-ranked cities in terms of fiscal resources, FDI policy, and transportation facilities, and partly the growth of the tertiary sector which tends to locate in major cities and administrative centres. Paper also highlights relative strengths, disadvantages and prospects of India and China who have pursued different approaches to industrialization and urbanisation. China is unique due to higher growth rate, large size of population, rapid urbanization after 1980, strong government, massive FDI from overseas & effective FDI strategy, strong bargaining power with multinational corporations.*

**Key Words-** Foreign Direct Investment, Growth, Linkage, Urbanisation

**JEL Code -** O18

### Introduction

Urbanization in China has taken on new dimensions as a result of increasing globalization since introduction of economic reforms in 1978. The urban growth and other economic activities during new round of globalization can be measured largely by the inflows and outflows of Foreign Direct Investment (FDI) which has become one of the driving forces binding countries into closer economic interdependence, and it continues to expand. The rapid increase in FDI flows has generated considerable impact on industrialization and urbanization in China. The role of foreign direct investments in the growth and urbanization of China and India has captured the attention of many researchers and analysts. China has historically attracted more FDI than India as a share of GDP, particularly in the early stage of its economic transformation. China achieved a significant growth rate of over 9 % per year during 1990 to 2010 which was highest in the world during that period. This achievement was mainly due to adoption of radical changes & huge inflow of FDI to Chinese cities. China used to be one of the most closed economies in terms of policy toward foreign investment and external debt. Starting from virtually no foreign-owned firms on

Chinese soil before 1979, China has now become one of the largest developing host countries for foreign investment. The coastal region enjoys more growth than inland region and most of the FDI ( 84 %) in China is invested in coastal region due to higher urbanization. China's need for FDI was related to its export oriented industrial structure – for example, it created special economic zones to attract foreign investment by exempting investors from regulations applicable elsewhere in China. There exist significant positive correlation between urbanization and flow of FDI to a particular region both in china and India. In this context , the objectives of the present study is to analyze the causality and linkage between urbanization and FDI inflow with evidences from China and India.

### **Review of Literature**

There is vast literature and research studies on relationship among urbanization, inflow of FDI and GDP growth rates. Henderson (2000) in his study mentioned that as engines of growth, cities are becoming the focal points of global and national economies. The evolution of the economic geography of developing countries in the process of urbanization has followed an urban growth pattern that differs from that of earlier industrializing countries, which urbanized much slowly. Yusuf, Wu, and Evenett, (2000) stated that the prominent contributors to successful urbanization include specialization in innovative or income elastic economic sectors, favorable national government policies in such areas as investment and infrastructure, economic development leadership from either local public or private sectors, flexibility and openness toward new and emerging industrial ensembles. China's urban policy has shifted with the economic boom since 1979. Guang Hua, Wan and Linda Wong estimated that the number of rural migrants into Chinese cities was around 100 million in the mid-1990s. Georgieva (1998) mentioned that the efforts to integrate investment and environmental policies are helped by the growing realization that the environmental and financial crises in developing countries have shared roots and responses. Gentry is an optimistic promoter for FDI; in his conclusion he shows that only FDI can meet the need for environmental infrastructure (Graham, 2000). Chen et al. (1995) study the effect of FDI on China's output and found that the FDI has a positive impact on the output growth between 1978 and 1990. Using cross-country data, Wei (1995a,b) found that despite the large amount of FDI China has received in recent years, the country still appears to host too little FDI compared to an 'average' host country. Heid and Ries (1996) study 931 joint ventures in 54 cities from 1984 to 1991. They intentionally exclude investments by overseas Chinese (Hong Kong, Macau, Singapore) which probably have a different set of location determinants due to familial, linguistic, and culturalties. Their conditional logit regression shows that cities with good infrastructure, established industrial base and foreign investment presence are more attractive to investors. Wei (1995a) also looked at individual cities. He found clear evidence that in the late 1980s, FDIs contribute to higher growth of the cities.

Kinoshita (1997) examined the data from a special survey conducted by the World Bank in 1992 on 468 firms in eight cities in China (six located in coastal provinces and two in inland cities). She investigates the possible effects of FDI on improving a firm's total factor productivity during the 1990–1992 period. She finds no evidence that foreign investment helps increase the productivity growth of local firms via foreign joint ventures, foreign linkages, and the mere presence of foreign firms in the industry. Hence, she concludes that opening up to foreign investments is not sufficient for a country to benefit from foreign technology spillovers. Branstetter and Feenstra (1999) have an interesting working paper, which does look at FDI in China at the provincial level. However, their focus is different. They use 29 provincial data over the years 1984–1995 to estimate the structural parameters of government's welfare function. They want to examine the tradeoff between the benefits of increased trade and FDI against the losses incurred by state-owned enterprises as a result of such liberalization. Indeed, they find that the government places much heavier

weights on the output of the state-owned enterprises than on consumer welfare, although such preference has declined somewhat over time. They hence post skepticism on China's entering into the WTO. Similar to our study is a paper by Cheng and Kwan (1999). They look at data from 29 provinces from 1986 to 1995 and observe agglomeration effects of foreign capital stock. However, there is an important fact that none of these studies has taken account into, and that is the big differences in the scale and nature of FDIs in the 1980s and the 1990s. In his important paper, Naughton (1996) points out the critical role that Hong Kong and Taiwan has played on the FDI in Guangdong and Fujian provinces, especially in the 1980s and early 1990s.

### Urbanisation , FDI & Growth in China from 1979 to 2010

China was one of the most closed economies in terms of policy toward foreign investment and external debt till 1978. Before 1979, virtually no foreign-owned firms operated in China, nor did China have many external loans. Chinese leaders used to take pride in this fact. The foreign aid volunteered by foreign governments or international organizations was viewed with suspicion. For example, after the great 1976 earthquake in Tangshang, the Chinese government refused an aid offer from the International Red Cross. This attitude toward foreign money took a dramatic turn in 1979 when Deng Xiaoping introduced economic reform and initiated the "open door policy." Several factors contributed to this change. Two primary ones are (1) the disastrous economic performance under rigid central planning before 1979 and (2) the glittering examples of Japan and the four Asian "tigers," particularly Hong Kong and Taiwan. Foreign capital going into China mainly takes the form of loans. In 1991, the value of FDI was slightly more than 60 percent of that of loans. Over the period 1990-91, the single fastest growing item in non-FDI foreign capital inflow was, in fact, portfolio investment in the form of Chinese bonds and equities purchased by foreigners. The urban population, FDI & per capita GDP growth are given below in table-1.

The urban population was only 184.98 million in 1979 which increased to 665.57 million in 2010 with average growth rate of urban population of 4.32 % per year. The total FDI in China was only 109 million USD in 1979 which increased significantly to 114734 million USD in 2010. The average FDI growth rate was 45.25 which contributed significantly to industrialization and urbanization. FDI had negative growth in 1999 and 2009. The average real per capita growth rate was 9.64 which is highest compared to all countries of the world during the same period. The time series data of urbanization and FDI are stationary and stable.

Table – 1 Urban Population, FDI and GDP in China from 1979 to 2011

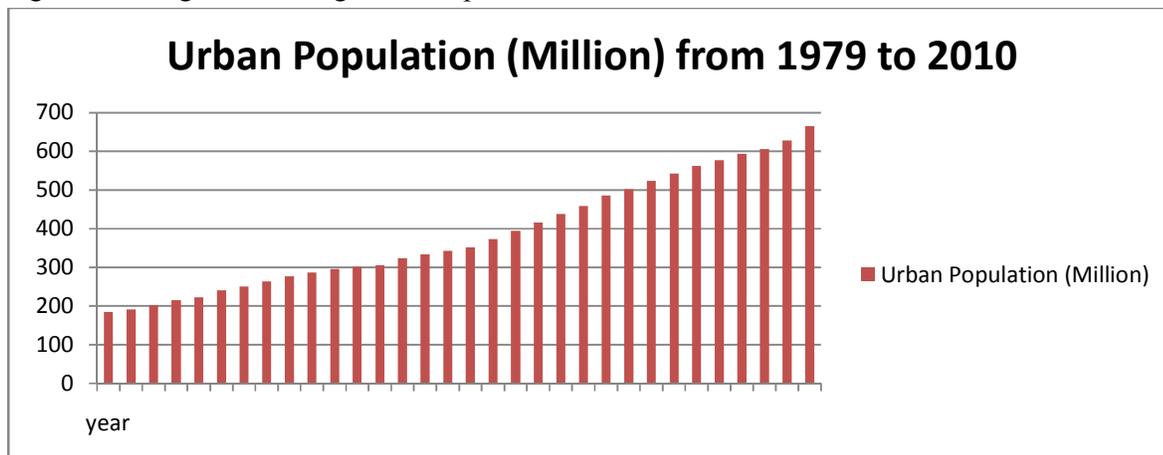
Year	Urban Population (Million)	Growth Rate of Urban Population(%)	Actual FDI( In Million USD)	FDI Growth Rate(%)	PGDP growth
1979	184.98	7.27	109	-	7.6
1980	191.40	3.47	195	78.89	7.8
1981	201.71	5.39	375	92.31	5.2
1982	214.80	6.49	470	25.33	9.1
1983	222.74	3.69	636	35.32	10.9
1984	240.17	7.83	1258	97.79	15.2
1985	250.94	4.48	1661	32.03	13.5
1986	263.66	5.07	1874	12.82	8.8
1987	276.74	4.96	2314	23.48	11.6
1988	286.61	3.57	3194	38.03	11.3

1989	295.40	3.07	3392	6.20	4.1
1990	301.91	2.20	3487	2.80	3.8
1991	305.43	1.17	4366	25.21	9.2
1992	323.72	5.99	11007	152.11	14.2
1993	333.51	3.02	27515	149.98	13.5
1994	343.01	2.85	33767	22.72	12.6
1995	351.74	2.55	37521	11.18	10.5
1996	373.04	6.06	41725	11.20	9.6
1997	394.49	5.75	45257	8.46	8.8
1998	416.08	5.47	45463	0.46	7.8
1999	437.48	5.14	40319	-11.31	7.1
2000	459.06	4.93	40715	0.98	8.0
2001	486.04	5.88	46875	15.13	8.3
2002	502.12	3.31	52700	12.43	9.1
2003	523.76	4.31	53505	1.53	10.0
2004	542.83	3.64	60630	13.32	10.1
2005	562.12	3.55	72406	19.42	9.9
2006	577.06	2.66	72715	0.43	11.1
2007	593.79	2.89	83521	14.86	11.4
2008	606.67	2.17	108312	29.68	9.6
2009	628.02	3.52	94065	-13.15	8.7
2010	665.57	5.98	114734	21.97	10.4
Mean	395.38	4.32	34565.09	45.23	9.64
SD	151.89	1.61	34624.04	25.67	2.59
ADF Test	Stationary		Stationary		

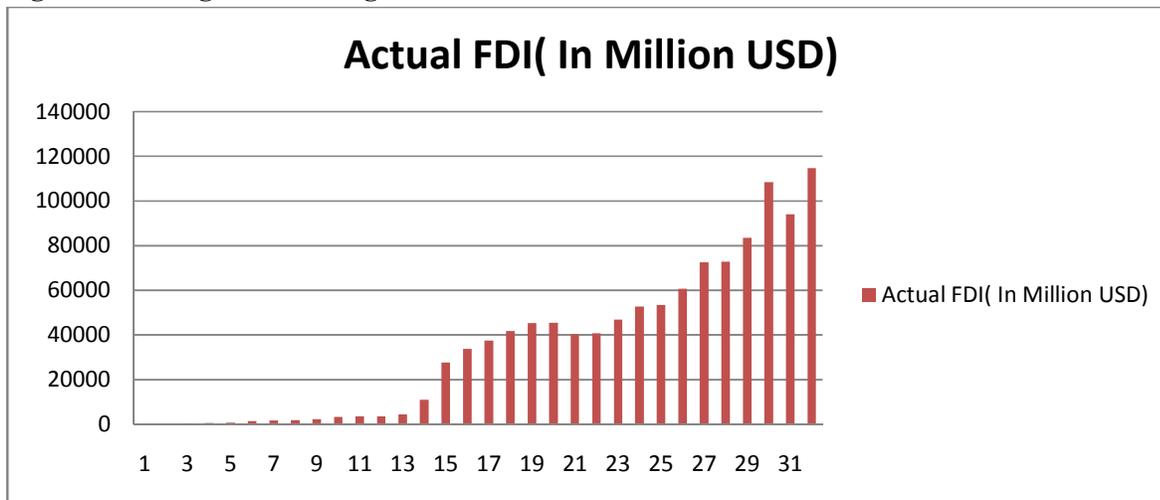
**Source-** Chinese Statistical YearBook, various Years & Author's Calculation & www.fdi.gov.cn

The bar diagram shows the trend of urban population from 1979 to 2010. The fig-1 indicates that there was rapid increase in Urban population in recent years.

Fig- 1 Bar Diagram showing urban Population in China from 1979 to 2010



The bar diagram( Fig-2) of FDI inflow to China indicates that there was less growth of FDI during 1994 to 2000 but it increased significantly in recent years reaching 114734 million USD in 2010.

**Fig – 2 Bar Diagram showing FDI inflow to China from 1979 to 2010****Least Square trend of Urban Population**

The trend of urban population and FDI in China was calculated through least square equation as stated below.

$$U_t = a + b t$$

$U_t = 131.61 + 15.56 t$  where  $U_t$  = Urban Population in China at time  $t$   
(  $t = 35.24$ ,  $SE = 0.44$  and  $R^2 = 0.98$ )

There is significant positive slope and coefficient & urban population increases at high rate every year.

**Least square trend of FDI to China from 1979 to 2010**

$$F_t = a + b t \quad \text{Where } F_t = \text{Foreign Direct Investment at time } t$$

The trend equation with help of data is stated below

$$F_t = -22855.99 + 3480.07 t$$

FDI has also positive and significant trend with large coefficient of 3480.07 per year.

**Urbanization and FDI linkage**

Urbanisation and FDI are closely interlinked. In China FDI was initially invested in four cities having special economic zones which promoted urbanization there. The proportion of the population in urban centers increased with development driven by investment of FDI(The World Bank, 1999). Hence a linear regression was done with secondary data as shown below.

$$\text{Urban population} = F(\text{FDI})$$

$$U_t = a + b F_t$$

The result from time series data is as follows

$$U_t = 247.38 + 0.004 F_t$$

$$(t = 19.09, SE = 0.0002, R^2 = 0.92)$$

The regression coefficient 0.004 is positive and highly significant as  $t$  value is obtained as very high, 19.09.

Since there is two way relation between urbanization and FDI, a linear regression was conducted with FDI as a function of urbanization. The coefficient( 230.15) is positive and significant.

$$F_t = a + b U_t$$

The results from data from 1979 to 2010 are as follows

$$F_t = -54305.75 + 230.15 U_t$$

$$(t = 19.23, SE = 12.06, R^2 = 0.92)$$

The FDI and per capita GDP are two significant determinants of urbanization. Urban Population was considered as a function of both FDI and Per capita GDP.

The function is as follows

Urban Population = F( FDI & GDP)

The result of regression is as follows

$U_t = 119.26 - 0.0016 F_t + 0.11 G_t$       Where  $G_t$  = Per Capita real GDP

Mackinnon P value  $Z(t) = 0.99$

The regression coefficients are also significant.

### Comparison of FDI and urbanization between India & China

China and India are two emerging economies who have vast population. Both countries have long fascinated Western policy makers and analysts, but, at least until recently, they were fairly small players in the world economy. The emergence of China as a big economic power has been accompanied by a more relaxed, albeit still important, economic transformation in India. China focused on industrial production while India focused on services. China's rise has been simply extraordinary – in 2010, its economy was 47 times larger than it was in 1980. China and India had similar levels of per capita GDP (at market exchange rates) in 1980, but China grew much faster and had overtaken India by the early 1990s. Since then growth in China has been so fast that its per capita income is now more than three and a half times that of India. China launched its economic transformation by using abundant, low-wage labour to establish manufacturing for export industries. In contrast, India developed a service export sector focussed on IT and BPO. As a consequence India had a much lower rate of investment than China and therefore 'capital deepening' was less prevalent. The basic differences between two countries with regard to urbanization and FDI are as stated below.

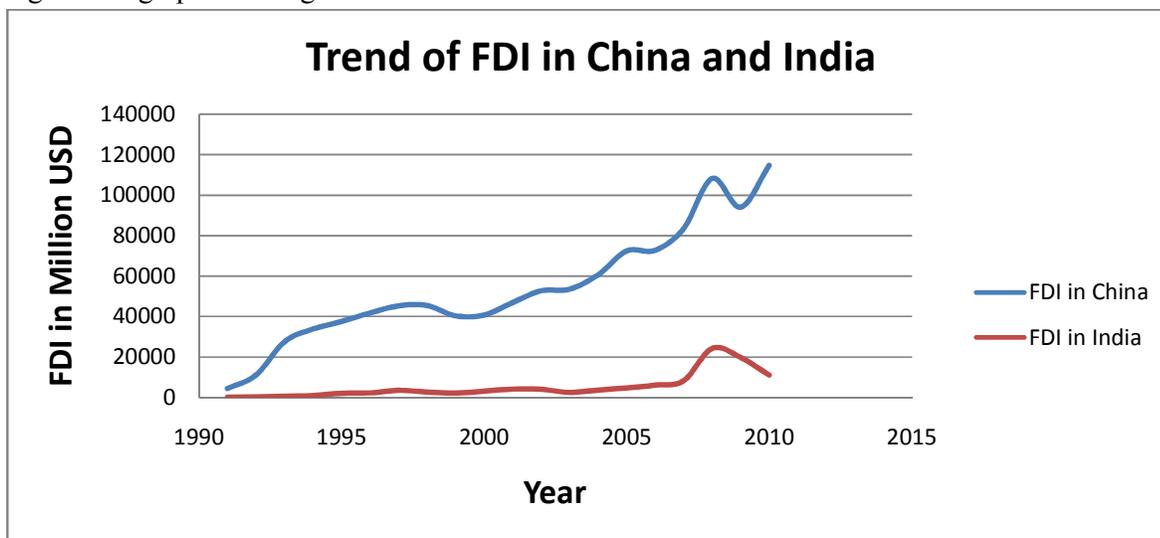
- (i) China derived substantial benefits from foreign direct investment – China encouraged FDI by multinationals looking to set up export-oriented manufacturing operations, and was able to benefit from foreign intellectual property and know-how. In contrast, India followed an import-substitution policy and relied on domestic resource mobilisation and domestic firms.
- (ii) China reformed earlier and more aggressively than India - China began reforming its closed, centrally planned, non-market economy in 1978. In contrast, India always had a large private sector, but its product, input and labour markets were subject to rigid state controls until the hesitant and piecemeal reforms of the 1980s. Only after experiencing a serious macroeconomic crisis in 1991, did the reform effort become more determined and the reforms broader. The FDI in India and China are shown below in table-2.

Table-2 Foreign Direct Investment in China and India ( In Million USD)

Year	FDI in China ( In Million USD)	FDI in India ( In Million USD)	FDI in India as % of FDI in China
1991	4366	74	1.69
1992	11007	277	2.52
1993	27515	550	1.99
1994	33767	891	2.64
1995	37521	2026	5.39
1996	41725	2187	5.24
1997	45257	3464	7.65
1998	45463	2587	5.69
1999	40319	2089	5.18
2000	40715	3075	7.55
2001	46875	4074	8.69

2002	52700	3948	7.49
2003	53505	2444	4.57
2004	60630	3592	5.92
2005	72406	4629	6.39
2006	72715	5992	8.24
2007	83521	8202	9.82
2008	108312	24150	22.29
2009	94065	19669	20.91
2010	114734	11008	9.59
Mean	54355.90	5246.4	7.47
SD	29250.50	6320.46	5.39

Fig-3 Line graph showing trend of FDI in India and China from 1990 to 2010



### Conclusion

China has been undergoing rapid rural-urban transition and transformation in the last two or three decades—although a precise measurement of the momentum is not straightforward, owing to China's complex system of urban boundaries and changing urban definitions. In any event, many expect China to continue on the path of high-speed urbanization for another one to two decades, a process which will entail massive population redistribution. The flow of FDI is much higher in China compared to India. The rapid urbanization and large flow of FDI are major challenges that China will have to face in the next two decades. Contemporary urbanization is induced by industrialization and technological change, and that it comes as labour shifts out of land-intensive agriculture into urban industrial production. Manufacturing, and later services, take advantage of economies of scale and some urban centres grow to large population sizes, often of several million or more. Urbanization requires developing countries to uproot most of their traditional rural population, to invest heavily in urban infrastructure and to create the institutions for cities to support and finance those investments, and to develop formal market institutions and a legal framework to replace the social mechanisms of traditional rural societies that are not workable in the anonymity of urban exchange.

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