EXPATRIATE VS. MULTINATIONAL INVESTMENT:

A Comparative Analysis of their Roles in Chinese and Indian Development

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Introduction

As vast, populous, continental economies, both based on river valley agriculture and both switching recently from *dirigiste* autarchy to an exposure to the global market, China and India have many similarities. Their differences too are striking. China is homogeneous in race, language and religion and a one-party dictatorship, India a veritable museum of the species and a federal democracy aptly described by Galbraith as a 'functioning anarchy'. The two economies obviously invite comparison. While comparing the two economies, however, we restrict ourselves to just one aspect of their development – the role of foreign direct investment (FDI). FDI inflow into China is of course far larger, and began much earlier, as did the process of economic reform. The larger volume of China's FDI receipts partly reflects its earlier start (in 1983 as against India's 1992). However, the sources, composition and sectoral distribution of foreign investment also differ strikingly between the two countries.

The Standard Model of FDI and its Implications for India and China

Traditional FDI theory (Vernon, Kindleberger, Hymer, Caves, Aliber, Buckley and Casson, summed up by Dunning in terms of the advantages of ownership, location and internalisation (OLI)) focuses on the transnational corporation. The TNC's foreign investments arise from the advantages of its intangible assets which offset the high administrative and communication costs of operating in an alien *milieu* in competition with indigenous firms. These assets are reputation, technology, a distribution network and financial power with easy access to global credit and equity. Once acquired, the almost unlimited capacity of such assets encourages continuous expansion; but this would lead to foreign investment only if more profitable than

(1) export (due to cheap labour, geographical or tax advantages or a market protected by tariffs or transport costs),
(2) the sale or licensing of the asset: licensing may be ruled out by asymmetric information, leading to moral hazard, adverse selection and the ultimate collapse of the lease market.

The Dunning model thus restricts FDI to a narrow field – technology-, capital- and reputation-intensive industries and the few labour-intensive phases of sophisticated industries which can be separated off. FDI of this variety cannot spearhead export growth from low-wage economies whose basic comparative advantage lies in labour-intensive goods. There may of course be exceptions. Mining or plantation agriculture for export may be heavily multinationalized because of their capital-intensive technology, the transaction costs saved through forward integration with user industries and their dependence on a world-wide distribution network. In countries where low wages of unskilled labour translate into cheap technically skilled manpower, a comparative advantage may emerge in human capital-intensive high-tech products, which could form the basis of export-oriented FDI (as in software). However, this remains the exception rather than the rule.

Expatriate Investment and Labour-Intensive Exports

All this accurately describes TNC's; but it misses the distinctiveness of expatriate investment. The latter reflects the advantages of expatriates over

(1) domestic producers in export industries because of their knowledge of foreign markets and technology,
(2) conglomerates because of their knowledge of local conditions and languages and their possible familiarity with the management of low-wage unskilled labour.

Why don't MNC's acquire the valuable and specific skills of expatriates by simply hiring them? The answer is simple. Such inputs are unobservable and therefore non-contractible. No employer can determine whether an employee is deploying his skill

in managing low-wage labour or exploiting his local connections to the fullest. The optimal contract for these inputs is one in which their owner is the residual claimant. If an MNC wishes to tap his abilities, it must sell itself to him rather than buy his services for a price. The net profit it could make from such a transaction is essentially zero.

It is the ownership of such non-contractible inputs that defines the identity of a firm and gives legitimacy to the notion of a firm's comparative advantage. Firms are not 'boneless wonders' – amorphous, perfectly malleable entities, capable of reinventing themselves in any shape or form through recourse to the market. They have a bundle of specific skills which constitute the basis of what Michael Porter calls their 'core competency' (Porter 1990). This is a concept that is central to the analysis and conclusions of this study.

Broadly then, in a low-wage economy, expatriate investment, with its core competency in labour-intensive exports, may be able to supply the export momentum which MNC labour-intensive exports, may be able to supply the export momentum which MNC investment, on account of its capital- and technology-intensive bias, is – with a few notable exceptions – ill-equipped to generate. However, for the expatriate investor, this ability is not an inborn, but an acquired characteristic; he must learn his distinctive skills, whether in language, familiarity with local conditions or ability to manage unskilled labour, and in the absence of this learning process, he may not do any better in the export arena than the MNC.

Where the sectoral patterns of expatriate and MNC investment differ, there will also tend to be a difference in timing. Light, labour-intensive manufactures involve small commitment and offer quick returns; the immediate stance of government policy is more

relevant to them than its long-term prospects. On the other hand, capital-intensive investment particularly in infrastructure, has a long gestation period and makes the investor a hostage to fortune. Thus, in countries such as India and China, that have experienced a major change in economic regimes, the large capital-intensive producer, generally the MNC needs (much more than the smaller light manufacturer), to assure himself that the bias in favour of foreign investment is an irreversible attitude and that the growth of the domestic market will be sustained in the long run. Such assurance takes a long time to build. In consequence, the MNCs response to the open door is often slow and hesitant. Who knows when the red carpet will be rolled up and the open door slammed shut again? MNCs reactions to policy changes may, therefore, often take as long as a decade.

Expatriate Investment in the New International Division of Labour

How does the theory of expatriate FDI fit into the process of East Asian growth? The explosion of world trade since the mid-sixties and the Pacific miracle that accompanied it were powered by the shift first of labour-intensive industries and then of standardized manufacturing to low-wage economies and the concentration of the West in services, research-intensive technologies and high-tech manufacturing.

The early beneficiaries of this specialization pattern were the open economies of the Pacific rim, the Gang of Four, where labour-intensive manufactured exports induced spectacular growth in the sixties and seventies. The consequences of this shift were as predicted by the factor-price equalization theorem – stagnant wages and employment in the West but a wage explosion in East Asia.

The rise in wges in the Four Tigers induced mechanization of techniques and a substitution of capital-intensive products for labour-intensive ones. Entrepreneurs in labour-intensive industries found themselves in possession of assets (experience of managing low-wage labour and links with world-wide export markets) nurtured by Arrovian learning-by-doing and in urgent need of redeployment. Some went to Malaysia, Indonesia, Thailand and the Philippines and triggered off an acceleration of growth. But the most obvious destination was China with its lower wages and rents and, unlike the smaller countries, a near-infinite elasticity of labour supply. The increasing demand for labour-intensive exports produced a Stolper-Samuelson effect on factor prices in the rest of East Asia with its inelastic factor endowment. In China, it induced an Arthur Lewis process.

Further, except in Korea, the pioneers of East Asian export-led industrialization were ethnic Chinese with linguistic and family affinities to the mainland. So from 1985, small and medium Chinese manufacturers flooded into Guangdong and Southern Fujian through Hong Kong. The external economies of two decades of labour-intensive growth in the Asia-Pacific were transmitted to China by the Overseas Chinese.

Moreover, the expatriates possessed another advantage over MNC's, one which they owed to their social structure. . All diasporas build up a network of long-term relationships of trust and reciprocity through repeated transactions in an alien, possibly hostile environment. In markets characterised by asymmetric information, where moral hazard, adverse selection and opportunism may otherwise reign, such relationships are invaluable in averting prisoner's dilemma outcomes. In more impersonal dealings, resolution of prisoner's dilemma often calls for elaborate contracts, costly to write, more so to enforce. Long-term personal networks with their implicit codes of conduct, standards of reputation and social sanctions minimise such transaction costs. The credibility of commitments relating to vital matters such as loan repayment, product quality and timely supply are stronger within a network. A network also supplies a channel for information flows; and a diaspora with its international spread has a reach which only a very few MNCs can match, a reach which is priceless to the exporter. In

addition, the familistic character of firms makes for strong managerial loyalty and for long-run dynastic planning with maximum reinvestment in the firm and in the education of the next generation. Finally, the personalised, informal, unwritten nature of promises within the diaspora protects their secrecy without necessarily making them less effective.

FDI in China's Economic Development: Stylized Facts

Chinese economic development since 1978 followed a broad sequence:

1978-1984: Agricultural transformation, massive increases in rural income and savings and release of labour to industry.

1984-1992: Growth of TVEs through exploitation of rural savings and demand and a simultaneous explosion of FDI, overwhelmingly from the overseas Chinese, in the special economic zones and related coastal areas, primarily for export of labour-intensive light manufactures.

1992-2000: Proliferation of multinational investments in heavier, more capital- and technology-intensive industries and infrastructure, mainly for the domestic market or the non-tradeable sector.

This of course is a stylised picture. For instance, even during the first phase, the legal barriers to foreign investment were dismantled and the four Special Economic Zones set up. Further, expatriate investment, even though primarily export-oriented, did not neglect the profit opportunities of an expanding domestic market. However, it is perhaps legitimate to model the Chinese development process as one in which the initial growth of a huge domestic market through an agricultural revolution followed by rural industrialisation and export explosion with its domestic multiplier effects acted as an irresistible lure for the in rush of large multinationals. The process gained momentum with the unfolding of the international division of labour.

FDI in India: MNC's and Expatriates

China's development is a logical sequel to the Pacific miracle. India's is not. Expatriate Indians had a negligible role in East Asia and expatriate investment a minor share in India's total FDI. MNC investment in contrast has accelerated after a slow start and its growth curve is not too dissimilar to that of early MNC investment in China.

In both countries too MNC investment has been oriented to the domestic market rather than exports and has pursued scale economies and large market sizes rather than cheap labour. NRI investment in contrast has favoured exports, small scales and labour-intensive technologies.

However, compared to China, expatriate investment in India has been small and volatile, its time-pattern echoing that of industrial output and investment. Like the latter, it has been sensitive to short run cyclical factors like inventory accumulation and the satiation of pent-up demand for consumer durables during booms (such as that of 1993-96), the East Asian crisis and the political instability of 1996-99. MNC investment in contrast has been largely independent of the short run vicissitudes of policy: it was based on the growing belief that reforms and globalisation in India had gone beyond the point ot no return regardless of the preferences of the political establishment.

The Empirical Analysis

Our empirical analysis has two components:

(1) descriptive statistics: time series of aggregate FDI and data on size distribution, industrial composition and location patterns of enterprises with foreign investment, both expatriate and conglomerate; in the Indian case, this is supplemented by data on the relative export intensities of units with foreign or NRI participation, in the Chinese case by reports of micro-surveys of small

overseas Chinese investors and some information about the investments of expatriate Chinese tycoons;

(2) econometric analysis of macro-level economy-wide data. The econometric exercise is confined to the aggregative plane because of lack of access to enterprise level data for the Chinese economy.

The Indian official statistics record expatriate investments separately as a simple time series. But in the Chinese data expatriate investment is not separately identified. We have therefore taken the figures for inflows from Hong Kong, Macau and Taiwan as representative of overseas Chinese FDI. Hong Kong is indeed the financial capital of the Chinese business sphere and the main point of entry into the mainland for overseas Chinese investors, not only from Hong Kong but from Singapore, Malaysia, Indonesia, Thailand and the Philippines as well. Until 1992, all Taiwanese investments too were per force routed through Hong Kong. Some of Hong Kong's investment in China (perhaps 15-25%) is actually mainland investment recycled via Hong Kong to take advantage of the concessions given by China to foreign investors. As against this, all expatriate Chinese investment from North America and Australia is reported as originating in these regions and has therefore been classified by us as MNC investment. Thus, our estimates of the relative proportions of expatriate and MNC investment may not be very wide off the mark.

The Evidence on China

Evidence of our hypothesis with regard to China can be gleaned from

(1) Table 1: the time-profile of aggregate FDI with its sharp accelerations in 1984 (70% growth), 1992 (163%) and 1993 (132%) and the changing share of overseas Chinese investment, rising from a minimum of 55% in 1983-85 to a peak of 83% in 1993 and then declining steadily.

(2) Table 2: differences in the sectoral composition of investment from different sources, with labour-intensive sectors (food and beverage, textiles and sewing, light manufactures) bulking relatively larger in Hong Kong and Taiwanese

investment and capital- and technology-intensive sectors (chemicals, pharmaceuticals, electronics and machinery) in US and European investment: the differences would have been sharper if labour-intensive assembly, which dominated the investment in electronics from Hong Kong and Taiwan had been separately classified.

(3) Table 3: differences in the scales of production of investment projects from different sources, with the average size of Taiwanese investments far smaller than those from the US, Britain or Germany; average Hong Kong investment sizes too had been small before 1991, but as the relocation of most of her labour-intensive manufactures was completed, the scale of the average Hong Kong investment began increasing, particularly because Hong Kong tycoons now began investing, often in large real estate and infrastructure ventures.

(4) The regional pattern of FDI from different sources (Table 4) and the correlation of FDI growth with changes in the export shares of different provinces (Table 5). While investors of all nationalities prefer to invest on the coast, those from Hong Kong concentrate on Guangdong, the Taiwanese on Fujian, Koreans on Shandong and Japanese on Liaoning for reasons of proximity and some times also because of ethnic, cultural and linguistic affinities. Western investors, on the other hand, spread their investment widely over the coastal region instead of focussing on one or two provinces. Between 1985 and 1990, China's exports doubled. They doubled again between 1990 and 1994, and continued to accelerate throughout the nineties. Meanwhile, the share of primaries (mainly petroleum) in exports dwindled sharply and labour-intensive and human capital-intensive light manufactures soared. The flood of FDI in the second half of the eighties was heavily skewed towards Guangdong and Fujian, the major targets of Hong Kong and Taiwanese investors, accompanied by a rise in the export shares of these provinces. The contribution of foreign-invested enterprises to China's exports rose steadily meanwhile; their role in Guangdong's exports was larger. This domination of China's export growth by Guangdong and of Guangdong's export growth by foreign-invested enterprises reflected the export-oriented

character of expatriate investment which was the prime motor of growth in Guangdong.

(5) These trends are confirmed by micro-surveys of expatriate investors in China. Lever-Tracy, Ip and Tracy surveyed about 400 such investors, about 100 each in Nanhai and Panyu in Guangdong and Quanzhou and Xiamen in Fujian. The enterprises were overwhelmingly small – by choice rather than on account of budget constraints of the investors, many of whom were in fact medium or large. The vast majority of them exported the bulk of their output.

(6) Studies of expatriate tycoons also revealed that many began investing in the mainland only in the 1990's – Oei hong Leong of the Indonesian Widjaja family, Li Ka-shing of Hong Kong, the Kuok brothers of Malaysia and Singapore for instance. Many limit the scale of each enterprise: the Chearavanont family, for example, though among the 25 wealthiest in the world, does not own a single concern in the largest 1000.There were exceptions of course, notably Gordon Wu of Hong Kong. However, Chinese billionaires, when they did invest in China in the eighties, preferred a diversified investment pattern dominated by small enterprises – very much like smaller expatriate businessmen.

Table 1
Foreign Direct Investment (NRC-Actuals)

Unit: US$ Million

Year	NRC	MNC	TO FDI
1983	472	327.9	799.9
1984	748	617.1	1365.1
1985	956	795.6	1751.6
1986	1329	697.9	2026.9
1987	1809	590.5	2399.5
1988	2429	957.2	3386.2
1989	2342	770.7	3112.7
1990	1913	1097.35	3010.35
1991	2959	1192.22	4151.22
1992	8762	2143.17	10905.17
1993	21001	4328.85	25329.85
1994	23565	6650.49	30215.49
1995	23790	9206.03	32996.03
1996	24940	11055.47	35995.47
1997	25296	13641.48	38937.48

Source: NRC::China Statistical Yearbook, 1998

Table 2
Industry Distribution of Pledged FDI in China from Different Sources (1992)

Industries	Per Cent Shares of Different Industries in Pledged Investment from					
	HK	Taiwan	Japan	USA	Europe	Others
Food & beverage	9	15.7	13.9	12.4	8.7	15.9
Textiles & sewing	22.4	16.5	27.8	14.2	16.4	17
Light manufacturing	14.4	13	8.8	8.6	7.3	23.2
Chemicals, plastic	19	15.8	9.7	22	27.1	7.3
Pharmaceutical	3.1	1.4	2.1	2.7	3.7	11
Electronics, machinery	23.6	26.9	27.4	27.8	31	17.3
Others	8.5	10.6	10.3	12.4	5.9	8.4

Source: Ministry of Foreign Trade and Economic Cooperation (MOFTEC),1993

Table 3
Average Size of Investment Projects in China from Different Sources 1983-1995

Source	Average Size (million $)
Hong Kong	1.41
Taiwan	0.91
USA	1.26
Japan	1.24
Singapore	1.87
Britain	5.43
S.Korea	0.89
Canada	1.35
Germany	2.92

Source**:** MOFTEC, Almanac of foreign Economic Relations and Trade of China, 1984-95; State Statistical Bureau (SSB); China Statistical Yearbook, 1994-97

Table 4
Shares of Different Regions in Pledged FDI in China from Different Sources 1987- 93

Major Regional Provinces	Per Cent Shares in Pledged FDI from			
	(I)	(II)	(III)	(IV)
	HK	Taiwan*	Japan	USA
Guangdong	41.7	13.6	11.2	13
Fujian	10.9	19.1	3.5	3.4
Tiangsu	7.9	18	13.8	16
Zhejiang	3.6	5.1	2.6	3.8
Shanghai	5.2	5.1	12	11.1
Shandong	4.9	8.2	8.9	11.1
Hebei	1.5	1.7	6.3	2.6
Beijing	4	4.3	7	10
Tianjin	1.4	2.3	4	5.6
Liaoning	2.7	2.8	17	6.2
Guangxi	3.1	2.4	1.3	1.7
Hainan	3.5	4.2	4.1	4

Source: SSB, Foreign Economic Statistical Yearbook, 1979-91 and 1994.
*Taiwan figures for 1989-93

Table 5
Contribution of FDI in China's and Guangdong's Exports

	Exports from					
Year	China			Guangdong		
	Total (billion$)	FIEs	per cent	Total (billion$)	FIEs	per cent
1985	27.4	0.3	1.1	3	0.22	7.3
1986	30.9	0.6	1.9	4.3	0.39	9.2
1987	39.4	1.2	3.1	5.4	0.62	11.4
1988	47.5	2.5	5.2	7.5	1.2	16.1
1989	52.5	4.9	9.4	8.2	2.3	27.9
1990	62.1	7.8	12.6	10.6	3.7	35.2
1991	71.9	12.1	16.8	13.7	5.3	38.9
1992	85	17.4	20.4	18.4	8.2	44.3
1993	91.8	25.2	27.5	37.6	14.4	38.2
1994	121	34.7	28.7	53.3	19.8	37.2
1995	148.8	46.9	31.5	59.1	25.8	43.6

Source: SSB, China's Foreign Economic Statistics, 1979-91, 94 & 96 and Statistical Yearbook of China, 1996.

The Evidence on India

Our hypothesis regarding India is borne out by

(1) The time series of aggregate FDI with its slow but steady acceleration, the initial rise in the NRI share and its later dramatic decline (Table 6)

(2) The industry distribution of plants with foreign and NRI participation respectively (Table 7), showing the preference of foreigners for capital-intensive industries (machinery, automobiles) and of NRI's for lighter labour-intensive ones (textiles, jewellery, services, paper and printing).

(3) The comparative export-intensities of NRI and MNC units (Table 8), showing the former exporting a larger proportion of their output and being attracted towards major export industries (textiles, jewellery, food and beverages) which are avoided by the latter. Analyses of variance (Tables 9a, 9a',9b, 9b') and chi-square tests (Tables 10a, 10b) confirm these impressions.

Table 6
Foreign Direct Investment (NRI-Actuals)

Unit:US $ million

Year	NRI	TO FDI
1992-93	61	341
1993-94	217	620
1994-95	442	1314
1995-96	715	2133
1996-97	639	2696
1997-98*	241	3197

Source: RBI Annual Report
*Figures for this year are provisional

Table 7
Industry-wise Distribution of Plants with Foreign Collaboration (FC) and with NRI Participation

Industry Name	In each industry no. of plants with		Per Cent share of each industry in total no. of plants with	
	FC	NRI	FC (per cent)	NRI (per cent)
Food & beverages	37	39	6.15	8.87
Textiles	51	92	8.47	20.91
Paper, printing, etc.	1	12	0.17	2.73
Leather & allied	14	6	2.33	1.36
Chemicals	102	94	16.95	21.36
Plastic, rubber, petro & coke	41	47	6.81	10.68
Non-metals	17	22	2.82	5
Metallic ores & manufacturing	34	34	5.65	7.73
Manufacture of machinery	201	41	33.39	9.32
Medical & photographic equipment	3	7	0.498	1.59
Jewellery	2	7	0.33	1.59
Software and computer systems	10	9	1.66	2.04
Automobiles & their parts	84	15	13.95	3.41
Services	5	13	0.83	2.95
Power generation & distribution		2		0.45
Total	602	440	100	100

Source: Capitalines 2000

Table 8
Comparative Export Intensities

Industry Name	FC (sample)	NRI (sample)	ALL (population)
Food	12.50	36.09	11.57
Textiles	14.73	23.93	19.89
Paper	0.03	2.77	2.86
Leather	8.86	84.15	33.05
Chemicals	8.82	11.53	10.15
Rubber, plastic, petroleum and coke	3.08	12.42	3.13
Non-metals	3.36	7.69	5.49
Metals	24.82	51.43	8.21
Machinery	8.94	12.42	6.95
Medical & photographic equipments	2.63	21.47	8.35
Jewellery	20.75	94.00	62.68
Software and computer systems	27.85	3.85	31.20
Automobiles	6.66	7.83	7.03
Services	44.19	52.58	5.20
Power distribution and generation		2.43	0.58

Source : CAPITALINES 2000
All figures are in percentage.

Table 9a:
Cross Tabulation of No. of Plants with Foreign Collaboration By Industry Group and Export Intensity

Foreign Collaboration Industry Name	Export Intensity 0-5 %	5-10%	10-25%	25-50%	50% &above
Food & beverages	12	0	16	6	3
Textiles	17	16	11	0	7
Paper, printing etc.	1	0	0	0	0
Leather & allied	7	0	3	0	4
Chemicals	57	13	18	8	6
Plastic, rubber, petro & coke	22	8	9	2	0
Non-metals	10	3	3	0	1
Metallic ores & manufacturing	14	1	12	4	3
Manufacture of machinery	85	67	29	11	9
Medical & photographic equipments	2	1	0	0	0
Jewellery	1	0	0	0	1
Software & computer systems	1	0	7	1	1
Automobiles & their parts	41	29	14	0	0
Services	4	0	0	0	1

Table 9a'
ANOVA (Foreign Collaboration)

Source of Variation	SS	D.f.	MS	F	P-value	F crit
Rows	7881.2	13	606.2462	5.331362	5.87E-06	1.913456
Columns	2774.514	4	693.6286	6.099808	0.000421	2.549761
Error	5913.086	52	113.7132			
Total	16568.8	69				

Table 9b
Cross Tabulation of Plants with NRI Investments by Industry Group and Export Intensity

NRI Industry Name	Export Intensity 0-5 %	5-10 %	10-25 %	25-50 %	50%& above
Food & beverages	17	0	0	1	21
Textiles	55	5	4	8	20
Paper, printing etc.	8	3	1	0	0
Leather & allied	0	0	0	0	6
Chemicals	59	6	15	6	8
Plastic,rubber,petro&coke	36	4	4	3	0
Non-metals	11	2	1	0	8
Metallic ores & manufacturing	18	3	1	7	5
Manufacture of machinery	26	1	3	6	5
Medical & photographic equipment	5	0	1	0	1
Jewellery	0	1	0	0	6
Software & computer systems	7	0	1	0	1
Automobiles & their parts	10	0	1	0	4
Services	11	0	0	0	2
Power generation & distribution	2	0	0	0	0

Table 9b'
ANOVA (Non Resident Indians)

Source of Variation	SS	D.f.	MS	F	P-value	F crit
Rows	2440.267	14	174.3048	2.824819	0.002965	1.872589
Columns	2778.933	4	694.7333	11.25899	8.99E-07	2.536581
Error	3455.467	56	61.70476			
Total	8674.667	74				

Table: 10
Export Intensity of Firms by Industry Groups

	Export Intensity					
Industry Group	**5**	**10**	**25**	**50**	**100**	**Total**
1	5	0	4	4	2	15
2	7	4	2	0	7	20
3	1	0	0	0	0	1
4	3	0	1	0	2	6
5	28	8	7	5	4	52
6	12	1	3	1	0	17
7	5	1	2	0	1	9
8	7	1	1	1	1	11
9	45	13	16	7	6	87
10	2	1	0	0	0	3
11	1	0	0	0	1	2
12	1	0	3	1	1	6
13	18	9	7	0	0	34
14	2	0	0	0	1	3
Total	137	38	46	19	26	266

Pearson chi2 (52)=67.6145 Pr = 0.072

Table 11:
Export Intensity of Firms by Foreign Collaborations

	Export Intensity					
Foreign Coll. Share	**5**	**10**	**25**	**50**	**100**	**Total**
15	13	3	5	1	3	25
25	30	5	4	3	12	54
50	56	17	16	6	9	104
75	35	13	21	9	2	80
100	3	0	0	0	0	3
Total	137	38	46	19	26	266

Pearson chi2 (16)=28.5541 Pr = 0.027

The Econometric Analysis

Our objective is to estimate econometric models of FDI inflows into China and India, making a clear distinction between multinational versus expatriate investments. Data on FDI is available according to source country specifications without making a direct distinction between the two categories of investments: MNC and expatriate. To capture MNC investment flows, we use FDI from the major countries investing in China and India. This gives us a panel of FDI inflow data from different source countries over a given period of time. Similarly, as explained earlier, we had to proxy expatriate investments into China by considering the main pockets of settlements of the Chinese diaspora from where there have been substantial flows of investments into main land China. These countries are Hong Kong, Taiwan, Macau and Singapore. FDI flows from these countries might be taken to reflect the extent of expatriate FDI into China.[1] For India, data on FDI by non-resident Indians (NRI) is directly available although it is not classified according to source countries. We, therefore, have a simple time series for NRI investments.

There are multiple data sources for both China and India, which we have been exploited. A detailed description of the data is presented in a subsequent section.

1. The Econometric Model Specification

FDI from a source country i at a given point of time t (Y_{it}) is believed to be determined by a set of source specific factor (X_{it}) and host specific factors (Z_t). Accordingly we posit the following panel model:

[1] The inclusion of Singapore, however, was muting the results of our estimated model, perhaps due to the fact that FDI from Singapore also contains a significant proportion of MNC investment into China. We therefore decided to exclude Singapore from our model of expatriate investments into China.

$$Y_{it} = \alpha + \beta_{it} X_{it} + \gamma_t Z_t + \varepsilon_{it}$$

The vector X_{it} includes all supply side determinants of FDI flows from a specific source country *i,* primarily reflecting their macro environment stipulated by macro variables such as interest rate, exchange rate, fiscal balance, inflation and so on. All of these can be captured by a summary measure of total FDI outflow from the source country.

The vector Z_t (capturing host country specific factors), as explained earlier, would vary according to the type of FDI (MNC or expatriate) for each of the two countries analysed. As hypothesised above, MNC investment is likely to respond to the strength of domestic demand or market size and perhaps the low relative wage cost advantage enjoyed by the two countries under consideration.

Expatriate FDI in China has essentially been a process of relocation of export oriented simple labor-intensive manufacturing units from the neighbouring expatriate settlements into China. Flow of NRC investment can, therefore, be expected to respond to low Chinese wages relative to its neighbours and rapid growth of manufactured exports. In addition, market size effect would also be included in our model specification.

NRI investment in India while sensitive to export opportunities does not have a relocation aspect, unlike in China, and would, therefore, be modeled using the conventional wage cost and market size factors. Since NRI investment data is not classified according to source country, we have a simple time series model for this category:

$$Y_t = \alpha + \gamma_t Z_t + \varepsilon_t$$

In all models, we include the time trends effects of FDI flows as well as possible structural breaks in the trend using intercept and slope dummies.

2. The Data and Variables

Dependent Variable (FDI Flows)

China

There are two data sources for FDI inflows into China: a) China Statistical Yearbook (CSY) published by the State Statistical Bureau, China and b) OECD's International Direct Investment Statistical Yearbook (OECD). While the former gives FDI inflows into China from all major countries, the latter reports the same only from OECD countries. Thus, we have only one data source (CSY) for expatriate Chinese investments from Hong Kong, Taiwan and Macau for the period 1983-97. But there are two independent data sources (CSY and OECD) for MNC investment flows. CSY data for MNC investment includes source countries such as US, France, Germany, UK, Japan, Italy and Korea and covers the period 1983-97. OECD data includes investments into China from France, Germany, Netherlands, Sweden, Switzerland, UK, Korea, US, Italy and Japan and covers the period 1986-1996.

Two observations are worth noting. First, there exist wide and random differences in the data from the two sources which cannot be attributed to any apparent or obvious reason. In fact, the data from CSY source is by and large much more inflated compared to the OECD data. Other authors have also reported such discrepancy in data (see Shang-Jin Wei 1998). Secondly, Japanese FDI in China has been behaving somewhat erratically according to the OECD data. It correlates negatively with Japan's total outflow of FDI. Therefore, we decided to exclude Japan from our model estimation based on the OECD data.

India

There are three sources of data for FDI in India: a) Reserve Bank of India, Annual Reports (RBI), b) OECD's International Direct Investment Statistical Yearbook (OECD), and c) Government of India's Secretariat of Industrial Approval Newsletters (SIA). RBI provides data on NRI investment (aggregate) and MNC investment from US, Korea, Japan, Netherlands, Germany, UK, Hong Kong, Italy, Switzerland, Singapore and France. However, the period covered by RBI data is too short, 1992-97. OECD provides a longer time series (1986-96), but only for MNC investment flows from France, Germany, Netherlands, Sweden, Switzerland, UK, Japan, Korea, US and Italy. The third source of data is SIA which presents approvals as opposed to actual flows of investments. But it covers a longer time period, 1981-96. NRI investments approvals are given in aggregate terms while MNC investment approvals are given according to the following source countries: Singapore, China, Sri Lanka, Malaysia, Thailand, Hong Kong, Bahrein, Denmark, France, Germany, Italy, Japan, Netherlands, Norway, Sweden, Switzerland, UAE, UK, USA, Mauritius, Korea, Australia, Israel, Belgium, Canada, South Africa. One might question the appropriateness of modeling FDI flows based on approvals data. But in so far as approvals reflect intentions to invest in India, it is legitimate to use this information to model the determinants of investment flows into India.

The Explanatory Variables

Source Specific Factors

As stated above all source specific factors are captured by a summary measure of the total outflow of FDI from the source country ($TOFDI_{it}$). The data is obtained from IMF's International Financial Statistics Yearbook (IFS) for all source countries.

Host Specific Factors:

Market Size or Domestic Demand: This is captured by two variables: lagged GDP (GDPL) and the rate of growth of GDP (GRGDP) of the host country.

$GDPL_t = GDP_{t-1}$

and $GRGDP_t = (GDP_t - GDP_{t-1}) / GDP_t$

where GDP is the real GDP index obtained from the IFS and CSY (for China).

Higher values of either of these would attract larger investment flows: the former (GDPL) through the simple demand (size) effect and the latter (GRGDP) through the acceleration principle.

Relative Wage Cost Differential: This variable (WAGEDIF) is measured as the absolute wage differential between the host country and those of its neighbours which also attract considerable FDI. For instance, Chinese wages were compared with those of Hong Kong, while Indian wages were compared with Chinese wages. Wages of these countries were obtained in local currency from the Yearbook of Labour Statistics (ILO) and from ADB's Key Indicators of Developing Asian and Pacific Countries. These were converted into SDR terms using exchange rates from IMF's International Financial Statistics Yearbook.

Manufactured Exports Growth: This was measured for China only. Lagged values of manufactured exports from NRC investment source countries (Hong Kong, Taiwan, Macau) in current US dollars (MFEXPL) were obtained from ADB and WTO sources.

Trend and Dummies

`For all models we incorporated a simple time trend variable *(t)*. For China, we used two time dummies, 1989 and 1992. The first one intends to capture the Tienanmen Square incident and the resultant slowdown in the process of FDI inflow second one

reflects a leap forward towards further liberalisation of the Chinese economy. For India, we used a time dummy at 1992 to capture India's policy break towards liberalisation and reforms. All dummies are used with respect to both the intercept and the slope of the time trend variable. The complete list of variables is provided below.

List of Variables

Source Specific Factor

TOFDI: Total FDI from a source country

Market Size or Domestic Demand

GDPL: Lagged values of GDP
GRGDP: Growth rate of GDP

Wage Differential

WAGEDIFF: Absolute differential between wages in host country and its neighbours

Manufactured Exports

MFEXPL: Lagged values of manufactured exports from source countries (Hong Kong, Macau and Taiwan) for the case of NRC investment model.

Trend and Dummies

TR: Simple time trend TR=1,2,3,… for successive

DEN: A time intercept dummy: 0 for t<1989, 1 otherwise

DNT: A time intercept dummy: 0 for t<1992, 1 otherwise

TRDEN: A time slope dummy TR*DEN

TRDNT: A time slope dummy TR*DNT

A Principal Component Variable

WDMEL: A principal component of WAGEDIF and MFEXPL

3. The Econometric Methodology

Our model (1) is a panel regression. This can be specified as either a *Fixed Effects Model* or a *Random Effects Model*. The former assumes that differences across cross sectional units (source-country, in our case) can be captured in differences in the constant term reflecting parametric shifts of the regression function for different units. The fixed effects model is thus specified as:

(1a) $Y_{it} = \alpha_i + \beta_{it} X_{it} + \gamma_t Z_t + \varepsilon_{it}$

The random effects model, on the other hand, views individual specific constant terms to be randomly distributed across cross sectional units. This model is specified as:

(1b) $Y_{it} = \alpha + \beta_{it} X_{it} + \gamma_t Z_t + u_i + \varepsilon_{it}$

We apply the Hausman χ^2 to test for the presence of fixed versus random effects in our models. For the fixed effects specifications, we use the *Least Squares Dummy Variables (LSDV) Model*, while the random effects models are estimated using *Feasible Generalised Least Squares Method*, correcting for possible heteroscedastic errors and panel specific serial correlation. For our model equation (2), we apply OLS using robust methods to correct for possible heteroscedastic disturbances. We performed the Durbin-Watson test but failed to detect any presence of serial correlation.

Before estimating the models, we obtained a matrix of correlation coefficients between the explanatory variable to rule out possible multicollinearity problems. In some cases we were constrained to include some of the variables separately to avoid multicollinearity. However, in the case of the China expatriate FDI model, the two principal determinants, WAGEDIF and MFGEXPL were highly correlated. Since both of these variables essentially jointly determine the extent to which expatriate FDI will be attracted into China, we calculated a principal component of the two variables (called

WDMEL) which is then used as a regressor in our model. WDMEL is the first principal components of WAGEDIF and MFGEXPL, which explains 97.6 per cent of the variation.

4. The Results and Analysis

The Chinese Expatriate Model:

The correlation matrix for this model (Table 12) displays a serious multicollinearity problem between WAGEDIF and MFGEXPL which are used together in the form of a principal component WDMEL. GDPL and the time variables are also highly correlated and had to be included separately. Table 13 reports the estimated regressions. The results confirm the relocation hypothesis for expatriate FDI in China. WDMEL is positive and highly significant in all specifications, suggesting that the combined effect of rising wage costs in neighbouring countries and rapid growth of manufactured exports led to massive inflow of NRC investments into China in the form of relocation of export oriented labour intensive manufacturing units.[2] Interestingly, market size or domestic demand (particularly captured by GDPL) has also been positive and significant. This suggests that expatriate investment in China has also, at least in part, responded to the growing domestic Chinese market. The time trend variables display an overall negative trend with 1992 as a turning point for the level as well the slope of the function. This negative trend, however, disappears with the inclusion of the dummy at 1989 (model 2) which experienced a major slowdown.

[2] Each element of this principal component also appears positive and significant when applied separately.

The NRI Model

NRI investment flows are available in aggregate terms constituting a simple time series as opposed to a panel. The actual flows obtained from RBI sources were available only for 1992-97 and, therefore, could not be used for model estimation for lack of adequate data points. The NRI model was estimated with the approvals data from SIA. The correlation matrix (Table 14) shows multicollinearity problems for GDPL, WAGEDIF and the time variables and they are applied separately.

The results (Table 15) show that low wage cost as well as domestic market size appear to be significantly attracting NRI investments into India. There is no significant time trend for this inflow, although there are positive signs of an upward shift of the function in 1992.

The MNC Investment Model for China

There is high degree of multicollinearity between WAGEDIF, GDPL and time variables (Tables 16A & 16B), which are applied separately. The estimated models are reported in Table 17.

We must note that despite disparities between the data obtained from the two sources, the results of our econometric estimation are largely similar. Apart from the supply side determinant of TOFDI, the low wage cost advantage (WAGEDIF) and the strength of a large domestic market (GDPL) both appear to significantly attract MNC investments into China. From the trend and the time dummy variables, we find that although there was a downward shift of the inflow curve in 1989, from 1992 inflow has again taken off at a higher pace as reflected in a positive and significant slope dummy (TRDNT). To ascertain the relative importance of two host specific attractions (low wage

cost versus large domestic market) for FDI, we estimated a model (see models 4 and 8 in Table 17) incorporating all variables, notwithstanding the multicollinearity problem. We find that WAGEDIF is knocked out as a significant variable while GDPL continues to be positive and significant. It thus appears that it is the large Chinese market which proves to be more important than China's lower relative wages in attracting MNCs.

The MNC Investment Model for India

The Indian data from OECD and SIA sources cover overlapping periods and the results obtained from these two data sets are almost identical. The correlation matrices (Tables 18a,18b and 18c) indicate high multicollinearity of WAGEDIF with GDPL and time variables and GDPL with time variables.

The estimated models in Table 19 (models 1-6) show that TOFDI as well as the low Indian wages (WAGEDIF) and domestic market size (GDPL and GRGDP) are important determinants of MNC investment in India. We further observe a distinct rise in the pace of FDI inflow from 1992 with a positive and significant coefficient of the slope dummy at 1992 (TRDNT). The RBI data covers this period only (1992-97). The results from this data (Table 19, models 7-9) reveal that FDI in the post 1992 period has been primarily driven by the supply side determinant of TOFDI with some weak indication of a positive time trend and a positive impact of GDPL. WAGEDIF is no longer significant. But GRGDP is (surprisingly) negative and significant, for which we do not have any obvious explanation.

Table 12
Correlation Matrix (Chinese NRC Inv.-CSY Data)

	gdp1	grgdep	tr	Den	dnt	Trdnt	wdmel
Gdp1	1.0000						
Grgdp	-0.1718 0.2592	1.0000					
Tr	0.9763 0.0000	-0.1724 0.2574	1.0000				
Den	0.7662 0.0000	-0.3694 0.0125	0.8504 0.0000	1.0000			
Dnt	0.8481 0.0000	0.2236 0.1397	0.8504 0.0000	0.6667 0.0000	1.0000		
Trdnt	0.9393 0.0000	-0.0104 0.9459	0.8528 0.0000	0.5641 0.0001	0.8461 0.0000	1.0000	
Wdmel	0.3467 0.1237	-0.0456 0.8443	0.2948 0.1946	0.1417 0.5402	0.2355 0.3041	0.3669 0.1018	1.0000

Table 13
China Expatriate(CSY Data)

Specification:	**Model 1a**	**Model 1b**	**Model 2**	**Model 3**
	fgls,p(h)	**fgls,p(h) c(psar1)**	**Fe**	**Fe**
Dependent Variable:	**nrc(fdi)**	**nrc(fdi)**	**nrc(fdi)**	**nrc(fdi)**
Independent Variables:				
Gdpl	3.695684 z=4.863***	2.278801 z=2.612***		
Grgdp	28440.89 z=1.874*	6588.839 z=0.567		
Tr			-442.205 t=1.068	-1142.17 t=2.466**
Den			-4579.96 t=2.347***	
Dnt			3410.721	3459.704

			t=2.039*	t=-1.900*
Trdnt				889.0398
				t=1.730*
Wdmel	4583.907	4591.855	9699.855	9037.278
	z=11.553***	z=8.633***	t=6.908***	T=6.221***
Intercept	-4972.55	701.9752	11696.79	13190.59
	z=-2.051**	z=0.279	t=3.539***	T=3.500***
R-Sq			0.7329	0.7588
Hausman Chi-Sq	H(3)=5.36	H(3)=5.36		
Wald Chi-Sq/F	W(3)=	W(3)=	F(4,15)=	F(4,15)=
	211.68***	94.30***	60.87***	52.94***

*=10 %
**=5 %
***=1 %

Table 14
Correlation Matrix (Indian NRI INV.-SIA Data)

	Wagedif	**Gdp1**	**Grgdp**	**Tr**	**dnt**	**Trdnt**
Wagedif	1.0000					
Gdp1	0.9328	1.0000				
	0.0000					
Grgdp	0.1304	0.0874	1.0000			
		0.7568				
Tr	0.9184	0.9936	0.1121	1.0000		
	0.0000	0.0000	0.6906			
Dnt	0.8536	0.7731	0.2256	0.7676	1.0000	
	0.00001	0.0007	0.4188	0.0008		
Trdnt	0.7903	0.7715	0.3317	0.7423	0.8864	1.0000
	0.0005	0.0008	0.2271	0.0015	0.0000	

Table 15
India Expatriate(SIA Data)

Specification:	**Model 1 ols**	**Model 2 ols**	**Model 3 Ols,robust**
Dependent Variable:	**nri(fdi)**	**nri(fdi)**	**nri(fdi)**
Independent Variables:			
Wagedif	158.2839 t=5.020***		
Gdpl		2.205797 t=3.644***	
Grgdp	6965.044 t=0.290	13445.26 t=0.464	
Tr			11.29791 t=1.620
Den			
Dnt			5872.805 t=1.845*
Trdnt			248.0021 t=0.294
Intercept	3757.317 T=2.388**	-8863.859 t=-2.831***	62.268 t=1.493
R-Sq	0.6327(adj)	.4593(adj)	0.8507
Hausman Chi-Sq			
Wald Chi-Sq/F	F(2,12)= 13.06***	F(2,12)= 6.95***	F (3,11)= 20.89***
*=10 per cent			
**=5 per cent			
***=1 per cent			

Table 16a
Correlation Matrix (Chinese MNC INV.-CSY Data)

	wagedif	Tofdi	Gdp1	Grgdp	Tr	Trdnt	den
Wagedif	1.0000						
Tofdi	0.4528 0.0000	1.0000					
Gdp1	0.9763 0.0000	0.4703 0.0000	1.0000				
Grgdp	-0.1886 0.0540	-0.1718 0.0797	1.0000				
Tr	0.9725 0.0000	0.4699 0.0000	0.9763 0.0000	-0.1724 0.0786	1.0000		
Trdnt	0.9858 0.0000	0.4364 0.0000	0.9743 0.0000	-0.0546 0.5803	0.9515 0.0000	1.0000	
Den	0.8209 0.0000	0.3994 0.0000	0.7662 0.0000	-0.3694 0.0001	0.8504 0.0000	0.7746 0.0000	1.0000

Table 16b
Correlation Matrix (Chinese MNC Inv.-OECD Data, Without Japan)

	wagedif	tofdi	Gdp1	grgdp	Tr	trdnt	den
Wagedif	1.0000						
Tofdi	0.2971	1.0000					
	0.0028						
Gdp1	0.9570	0.3118					
	0.0000	0.0017	1.0000				
Grgdp	0.3114	0.0221	0.2362	1.0000			
	0.0017	0.8277	0.0186				
Tr	0.9923	0.3083	0.9715	0.2888	1.0000		
	0.0000	0.0019	0.0000	0.0037			
Trdnt	0.8818	0.2859	0.9662	0.3164	0.8922	1.0000	
	0.0000	0.0041	0.0000	0.0014	0.0000		
Den	0.7873	0.2426	0.6601	-0.1189	0.7746	0.4712	1.0000
	0.0000	0.0155	0.0000	0.2412	0.0000	0.0000	

Table 17

Specification:	**China MNC(CSY Data)**				**China MNC(OECD Data)**			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**
	fgls,p(h)	**fgls,p(h)**	**fgls,p(h)**	**fgls,p(h) c(psar1)**	**fgls,p(h) c(psar1)**	**fgls,p(h) c(psar1)**	**fgls,p(h)**	**fgls,p(h) c(psar1)**
Dependent Variable:	**fdi**	**fdi**	**Fdi**	**Fdi**	**fdi**	**fdi**	**fdi**	**fdi**
Independent Variables:								
Wagedif	1.171727 z=3.766***			0.6617997 z=1.691*	0.4041637 z=4.025***			0.1098075 z=0.445
Tofdi	0.0238111 z=8.560***	0.0230531 z=8.527***	0.0244256 z=10.359***	0.006764 z=3.805***	0.0043559 z=4.293***	0.0030557 z=2.993***	0.005062 z=5.156***	0.0035645 z=3.726***
Gdpl		0.343263 z=4.519***		1.494747 z=8.569***		0.1725492 z=6.756***		0.3853194 z=6.097***
Grgdp	2061.733 z=1.240	2878.891 z=1.727*	-860.3288 Z=-0.503	1147.16 z=2.881***	173.0969 z=0.897	236.1003 z=1.190	-498.2794 z=1.142	494.4692 z=2.417***
Tr			-82.73123 z=-1.696*	-183.1776 z=-6.506***			5.670247 z=0.290	-45.84914 z=-2.633***
Trdnt			245.8622 z=4.409***				58.63861 z=2.697***	
Den			-422.1466 z=-1.958**				-71.53631 z=-0.966	
Intercept	-910.3536 z=-3.702***	-1021.622 z=-4.154***	184.8947 Z=.0627	-1363.829 z=-8.621***	-176.7411 z=-2.962***	-277.5155 z=-5.290***	13.74709 z=0.355	-537.5907 z=-5.505***
R-Sq								
Hausman Chi-Sq	H(3)=0.63	H(3)=0.61	H(5)=0.36	H(5)=0.38	H(3)=1.21	H(3)=0.44	H(5)=0.63	H(5)=0.66
Wald Chi-Sq/F	W(3)=143.92***	W(3)=161.74***	W(3)=259.34***	W(3)=236.22***	W(3)=46.83***	W(3)=88.90***	W(3)=194.58***	W(3)=157.65***

*=10 per cent
**=5 per cent
***=1 per cent

Table 18A
Correlation Matrix (Indian MNC Inv.-OECD Data, with Japan)

	tofdi	wagedif	gdp1	Grgdp	tr	dnt	trdnt
Tofdi	1.0000						
Wagedif	0.2275 0.0228	1.0000					
gdp1	0.2693 0.0044	0.9441 0.0000	1.0000				
Grgdp	0.1070 0.2660	0.0799 0.4296	0.1544 0.1073	1.0000			
Tr	0.2640 0.0053	0.9667 0.0000	0.9904 0.0000	0.1821 0.0569	1.0000		
Dnt	0.1797 0.0603	0.8553 0.0000	0.8123 0.0000	0.2746 0.0040	0.8660 0.0000	1.0000	
Trdnt	0.2314 0.0150	0.7902 0.0000	0.9012 0.0000	0.3852 0.0000	0.8922 0.0000	0.8429 0.0000	1.0000

Table 18b
Correlation Matrix (Indian MNC Inv.-SIA Data)

	tofdi	wagedif	gdp1	grgdp	tr	dnt	trdnt
Tofdi	1.0000						
Wagedif	0.2855 0.0000	1.0000					
gdp1	0.3102 0.0000	0.9417 0.0000	1.0000				
Grgdp	0.0951 0.0816	0.0849 0.1194	0.1708 0.0005	1.0000			
Tr	0.3081 0.0000	0.9366 0.0000	0.9909 0.0000	0.1808 0.0002	1.0000		
Dnt	0.2268 0.0000	0.8492 0.0000	0.8099 0.0000	0.2783 0.0000	0.8044 0.0000	1.0000	
Trdnt	0.2484 0.0000	0.7849 0.0000	0.8326 0.0000	0.3722 0.0000	0.7840 0.0000	0.8693 0.0000	1.0000

Table 18c
Correlation Matrix (Indian MNC Inv.-RBI Data)

	Tofdi	wagedif	gdp1	grgdp	tr
tofdi	1.0000				
wagedif	0.1168 0.4730	1.0000			
gdp1	0.2407 0.0663	0.6401 0.0000	1.0000		
grgdp	0.0053 0.9682	0.1796 0.2434	0.0894 0.4754	1.0000	
tr	0.2377 0.0699	0.6450 0.0000	0.9911 0.0000	0.1947 0.1173	1.0000

Table 19

Specification:	India MNC(OECD Data)			India MNC(SIA Data)			India MNC(RBI Data)		
	Model1	Model2	Model3	Model4	Model5	Model6	Model7	Model8	Model9
	fe	fe	fgls,p(h)	Fe	Fe	Fe	fe	fe	fe
Dependent Variable:	fdi	fdi	fdi	Fca	Fca	Fca	fdi	fdi	fdi
Independent Variables:									
Tofdi	0.0009833 t=2.343***	0.0008674 t=1.734*	0.0019066 z=7.787***	0.0115040 t=9.516***	0.01572 t=12.118***	0.0166285 t=14.022***	0.0020592 t=2.208***	0.0051928 t=3.811***	0.0051388 t=3.796***
Wagedif	1.256561 t=4.297***			1.551724 t=2.505***			1.885977 t=1.038		
Gdpl		0.0396581 t=6.844***			0.0220959 t=2.286***			0.0400259 t=1.719*	
Grgdp	325.8088 t=1.927**	438.8647 t=2.156**	-117.9933 z=-0.632	878.0175 t=2.236***	981.7763 t=2.195**	-394.9442 T=-0.896	793.4022 t=1.474	-1581.16 t=-2.011**	-1822.682 t=-2.303**
Tr			-4.759299 z=-1.480			-17.08796 t=-4.684***			17.28084 t=1.794*
Dnt			-14.62867 z=-0.929			-18.20847 T=-0.451			
Trdnt			32.59999 z=5.965***			82.07616 T=6.905***			
Intercept	5.066042 t=0.398	-205.6775 t=7.026*	8.264798 t=0.453	-59.43762 t=-	-209.2729 t=-	43.76634 T=1.213	-65.42457 t=-2.017**	-203.0469 t=-1.522	4.863106 t=0.087

		**		2.162**	4.435***				
R-Sq	0.4279	0.4862		0.4003	0.4419	0.5059	0.6763	0.6049	0.6087
Hausman Chi-Sq			H(5)=5.00						
Wald Chi-Sq/F	F(3,87)= 14.24***	F(3,97)= 28.83***	W(5)= 208.23***	F(3,248) = 53.12***	F(3,311)= 84.30***	F(5,309)= 74.48***	F(3,18)= 6.62***	F(3,32)= 17.52***	F(3,32)= 17.73***

*=10 per cent
**=5 per cent
***=1 per cent

Explanations and Implications

In both India and China, investment by large transnational corporations (TNC) has been primarily directed towards the domestic market and infrastructure development; and in both countries, TNC investment responses have been delayed, though, at least in China, they have by now acquired substantial momentum.

There is a striking difference, however, in the role of the expatriate in these two countries. While the overseas Chinese have dominated the inflow of FDI into China, the non-resident Indian (NRI) has figured only marginally in FDI in India. Indeed, it is this disparity that primarily accounts for the vast discrepancy in FDI volumes between India and China. The time profiles of OECD investment in the two countries are not radically different (after taking into account the difference in the dates of exposure to the outside world). But the volumes of expatriate investment differ astronomically.

What explains India's abysmal failure to tap NRI investment? One theory attributes this to the risk-aversion of the typical NRI – usually salaried professionals in the West or wage-earning labour in the Middle East – as against the mercantile, entrepreneurial character of the Chinese diaspora. However, the NRI community also has its share of entrepreneurs – from the tycoons of the West, the Mittals, the Hindujas, the Pauls, the Bagris etc. to the Gujaratis of East Africa, the Chettiyars of Southeast Asia and the Sindhis of Hong Kong. What distinguishes them qualitatively from the expatriate Chinese entrepreneurs is the lack, by and large, of a learning process in the management of export production with low-wage labour such as Taiwan, Hong Kong and the Southeast Asian Chinese experienced in the 1960s and 1970's.

How significant were policy differences between India and China in shaping the differential response of the expatriate? The Chinese FDI policy regime, like Chinese economic policy generally, has been more decentralised: the small foreign investor (primarily the expatriate) has exploited this fact to side-step the red tape of the central and provincial bureaucracies by investing in local small-scale industry. Up to a limit, this is permissible without elaborate sanctions from the central and provincial governments. The consequent savings in time and unpaid bribes are large enough to be a major inducement to invest for the small overseas Chinese businessman. No comparable inducement exists in India for the NRI investor, who must run the gauntlet of the central, state and local authorities. However, the introduction of automatic approvals within 90 days for investments below $2 million in basic and capital goods industries or 100 per cent export-oriented units has minimised this problem.

The policy advantage of China, if any, is the unintended consequence of an anarchic dispersion of power that began with the Cultural Revolution. It is not a deliberately designed device. One cannot, for instance, plausibly argue that the larger inflow of FDI into China reflected the generally greater receptivity of the Chinese government to foreign capital. Innumerable examples exist of the central government seeking to force foreign investors into joint ventures with loss-making state-owned enterprises, essentially as rescue packages for the latter. Foreign investment approvals have been increasingly linked to high technology content, location in backward areas, promised indigenisation of supply sources and the like. Official decisions suddenly reversed, agreements abruptly cancelled are no less common in China than in India, the Enron, Cogentrix and Tata-Singapore Airlines fiascos notwithstanding. Corruption is widespread in dealings with foreign investment in

India, but hardly less so in China (particularly in the case of MNCs unschooled in the arts of *guanxi*). Indeed, Transparency International's rating of corruption levels in the two countries is strikingly similar (3.75 for India as against 3.88 for China on the Transparency International 1997 index for immunity to corruption). Judicial intervention against foreign investment is more common in India, but this may well be offset by the greater transparency and codified character of Indian law with its close links to Anglo-Saxon legal tradition. Harvard economist Shang–jin Wei has argued that Hong Kong's investments in China should not really be considered as FDI, that OECD investments in China have been grossly inflated in Chinese official statistics and that OECD data on capital outflows to China are more reliable. Once these corrections are made, the only puzzle that remains is the one propounded in the title of Shang's paper "Why does China attract so little foreign direct investment?" given its GDP, wages and other economic parameters. Shang's solution to this puzzle lies in the deterrent force of China's red tape and corruption. Much the same could be said of India – so that the disparity between the two countries cannot be accounted for by such factors.

What kind of a perspective for the future is foreshadowed by our analysis of the past? First, in both China and India, rapid growth of GNP and the domestic market is likely to continue, sustaining the incentive to invest of the MNC. In China, this may be threatened by the political consequences of an explosion of unemployment as the overmanned state-owned enterprises are restructured. This may temper the hectic recent pace of growth and foreign investment down to more moderate levels. On the other hand, India, with her new-found political stability, could well be poised for a surge of multinational FDI somewhat similar to what China experienced from 1992 onwards. A crucial factor here may be the positive signals on reform emanating from

the new government. Fortunately for the believers in reform, the reformist signals are not just a reflection of the pious intentions of the government but of its lack of other options: thanks to the bankruptcy of the state precipitated by the instability and consequent indecisiveness and populism of the last three years, major reforms (eg. privatisation of public enterprises and cuts in subsidies) have become inescapable. This could well trigger an FDI boom.

Second, given the high elasticity of labour supply in both countries, wages will continue to be well below world levels, encouraging investment in labour-intensive manufacturing for export. But China's advantage in the supply of expatriate capital to this sector will probably persist for two reasons: (a) the acquired skills of the Chinese diaspora, (b) the fifty year-old Indian policy of reservation of the most important labour-intensive products for small (or, more precisely, tiny) industries, thus decimating the textile industry, the cutting edge of export-oriented growth in the rest of the labour-abundant world.

Third, India has however one area of distinct advantage. Thanks to her colonial past and her well-established university system, she has transformed some of her low-wage labour into cheap human capital. With some knowledge of English in software and information services, this is an immeasurable asset. So both NRIs and MNCs have an incentive to invest in India in what promises to be the major growth industries of the millennium. In fact, this is one of the few areas in which the NRI is the beneficiary of a learning process appropriate to India thanks to the proliferation of Indian engineers and entrepreneurs in the Silicon Valley. Perhaps, cyberspace will be the main focus of FDI, both by MNCs and NRIs, in India over the next decade.

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