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Main Determinants
and Impacts of Foreign
Direct Investment
on China's Economy

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**MAIN DETERMINANTS AND IMPACTS OF FOREIGN DIRECT
INVESTMENT ON CHINA'S ECONOMY**

December 2000

This study has been prepared within the framework of the OECD Co-operation Programme with the People's Republic of China in the area of foreign direct investment.

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MAIN DETERMINANTS AND IMPACTS OF FOREIGN DIRECT INVESTMENT ON CHINA'S ECONOMY¹

I. Introduction

The present note summarises the main findings of the research conducted under the auspices of the OECD/MOFTEC Co-operation Programme on Foreign Direct Investment (FDI) between the fall 1999 and the spring 2000 on *Main Determinants and Impacts of FDI on China's Economy*.² The OECD/MOFTEC Co-operation Programme on FDI was established in the spring of 1999. The present study was one of the most important activities conducted during this initial phase of joint work.³ It will provide the analytical underpinning to the investment policy dialogue which both parties have agreed to pursue over the coming year.

Because of its size, China's "open door policy" launched twenty years ago constitutes a unique and vast laboratory for the study of major structural changes in China and the world economy. It also provides an opportunity to test the benefits and the shortcomings of the economic policies which have been followed by the Chinese authorities and identify the improvements that could be brought about to increase the economic positive fall-outs of Chinese economic reforms.

Despite shortcomings in available data,⁴ the synthesis note clearly shows that FDI has brought substantial and definite changes in China's external and internal economic structure. In fact the findings of the study are amazingly consistent with economic theory and existing economic literature. They confirm the

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1. This Note has been prepared by Marie-France Houde, Outreach Co-ordinator for FDI; OECD Directorate for Fiscal, Financial Affairs and Multinational Enterprises Affairs and Mr. Hak-Loh Lee, Project Manager, OECD Directorate for Fiscal, Financial Affairs and Multinational Enterprises Affairs. It summarises the main findings of the research conducted under the OECD/China Co-operation Programme on Foreign Direct Investment by Mme Françoise Lemoine, senior economist at the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII), Paris, France, Dr Chunlai Chen, research fellow at the Adelaide University, Australia, Madame Sylvie Démurger, research fellow at the Centre National de Recherches Scientifiques, Clermont-Ferrand, France and Mr. MA Yu, senior economist, Academy of Social Sciences, Beijing, China. These findings were reviewed in autumn 2000 by the Steering Group responsible for the implementation of this Programme. The opinions expressed herein are the sole responsibility of the authors and do not necessarily reflect those of the OECD or of the governments of its Member countries.
 2. In the autumn of 1999 and the spring of 2000 on the Determinants and Impacts of FDI on China's Economy. This work is part of an ongoing co-operation programme between the OECD and China on various FDI issues.
 3. FDI statistics and investment promotion are the other two activities conducted during the first phase of the programme.
 4. The study is essentially based on Chinese data, namely the FDI statistics produced by MOFTEC, Chinese balance of payments data and customs statistics, statistics from the Third National Industrial Census (1977), China's Statistical Yearbooks and China Industrial Yearbooks. There are a number of methodological discrepancies between Chinese data and OECD data but they are not thought to affect the nature of the main conclusions of the study.

complexity and diversity of China's economic situation and the broad ramifications of Chinese economic reforms. While the paper may represent a token contribution to the important policy debate on China's integration into the world economy, it nonetheless constitutes original work and provides valuable information to Chinese policy-makers at a crucial juncture of China's economic transformation process.

II. Main FDI Trends and Prospects

(1) Total inward and outward FDI flows

Inward FDI – Since it launched the economic reforms and called for foreign capital participation in its economy in 1979, China has received a large part of international direct investment flows. China has become the second largest FDI recipient in the world, after the United States, and the largest host country among developing countries. China's position as a host to FDI is in fact too far removed from any other developing country – and most developed countries – to be equalled. For twenty years (1979-1999), actual FDI inflows into China from 1979 to 1999 amounted to US\$306 billion, which is equivalent to 10 per cent of direct investment worldwide and about 30 per cent of the investment amount for all the developing countries put together.

Chinese FDI trends can be distinguished according to changes in policy directions – first phase: 1979-83, second phase: 1984-91, and third phase: 1992-99.

In the first phase, the Chinese government established four Special Economic Zones (SEZs) in Guangdong and Fujian provinces,⁵ and offered special incentive policies for FDI in these SEZs. While FDI inflows into China were highly concentrated in these SEZs, the amount was rather limited. The total inflows of realised FDI during these 5 years amounted to only US\$1.8 billion, averaging US\$360 million annually.

Since 1984, when Hainan Island and fourteen coastal cities across ten provinces were opened, the previously recorded modest FDI levels started to take off. Total FDI inflows amounted to US\$10.3 in the 1984-88 period; with an annual average of US\$2.1 billion. This remarkable upward trend, however, dropped steeply in 1989, mainly due to the impact of the Tiananmen incidents. The growth rates of FDI inflows into China slowed down at a meagre 6.2 per cent level in 1989 and only 2.8 per cent in 1990. Even though FDI started to resume its growth path in 1991, by recording 25.2 per cent increase *vis-à-vis* the previous year, the annual growth rate for this overall period was lowered to 11.0 per cent, which paled in comparison to 38.1 per cent during 1984 to 1988.

The third phase started in the Spring of 1992, when Deng Xiaoping circuited China's southern coastal areas and SEZs. His visit, which intended mainly to push China's overall economic reform process forward and to emphasise China's commitment to the open door policy and market-oriented economic reform, proved to be a success in garnering the confidence of foreign investors in China. China adopted a new approach, which turned away from special regimes toward more nation-wide implementation of open policies for FDI. The government issued a series of new policies and regulations to encourage FDI inflows. The results were remarkable: Since 1992 the inflows of FDI into China have accelerated and reached the peak level of US\$45 463 million in 1998. In 1999, mainly because of the impact of the Asian financial crisis and the rise of acquisition transactions in both OECD and non-OECD countries, FDI inflows into China dropped to US\$40 398 million.

5. Shenzhen, Zhuhai, and Shantou in Guangdong Province, and Xiamen in Fujian Province.

Table 1. FDI inflows into China (current prices)

Phase (Years)	FDI inflow (US\$ million)	Annual average (US\$ million)	Annual rate of increase (%)
First Phase (1979-1983)	1 802	360	55.4
Second Phase (1984-1991)	21 546	2 693	27.2
1984-1988	10 301	2 060	38.1
1989-1991	11 245	3 748	11.0
Third Phase (1992-1999)	282 653	35 331	32.1

Note: Compiled from Table 1, OECD/FDI/STUDY/CHINA/Document-2-2000

Outward FDI⁶ – The figures on FDI outflows vary. According to China's BOP statistics, the cumulative total during 1990 to 1997 was US\$18.9 billion, consisting exclusively of equity capital. Since the 1980s, China has been fast acquiring assets abroad. Researchers⁷ estimate that Chinese FDI in Hong Kong totalled US\$20-30 billion by the end of 1993 or 1994. In fact the net wealth of Chinese affiliates abroad can be measured in hundreds of billion dollars. Officially, the Chinese SOEs had as many as 5 666 affiliates abroad at the end of 1998 with a combined FDI of US\$6.33 billion.

(2) FDI inflows in comparison with other capital sources

A sufficient amount of capital has been necessary to build-up China's economy and FDI has made a substantial contribution to this. The share of FDI during 1993-1999 in Chinese domestic fixed assets investment has been around 10 per cent.

Where in other countries foreign capital may have crowded out domestic capital, this has not been the case in China. Investors' future expectations about the Chinese economy, similar to the vigorous growth rates of the early and mid-1990s have been the driving force behind FDI's spectacular growth in China. These expectations have also been fuelled by the adoption of more friendly market policies; the raising up of technical competence and labour force quality. FDI has grown in tandem with domestic investment.

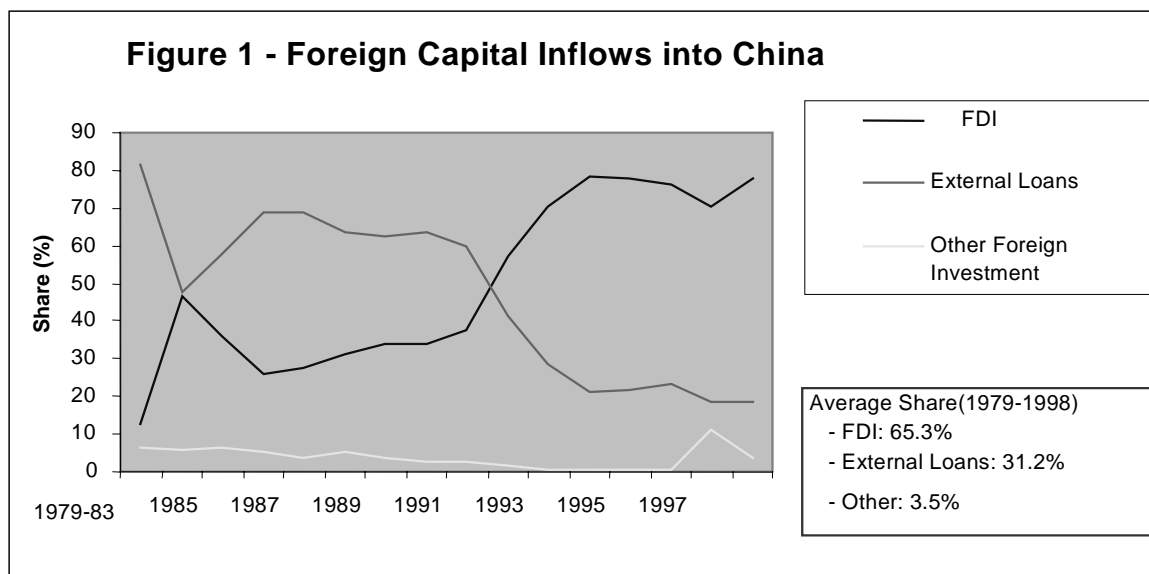
Overall China has seen a twenty-fold increase in capital inflows from the early 1980s to 1998. The aggregate capital inflows into China grew steadily during the 1980s, but they have increased very rapidly since the early 1990s, which was overwhelmingly led by the large inflows of FDI.

Among the three forms of capital inflow – foreign direct investment, external loans, and other foreign investment – the shares of these flows have changed gradually from the 1980s to the 1990s. During the 1980s, capital inflows into China were dominated by external loans, accounting for around 60 per cent of China's total capital inflows. Since 1992, however, the inflows of FDI surpassed external loans and have been the dominant source of capital inflows, accounting for around 70 per cent of the total capital inflows.

Other foreign investment, which includes foreign portfolio investment and international leasing, only accounted for about 3.5 per cent of the total capital inflows into China during the period from 1979 to 1998 and its annual share in the total capital inflows has been declining since then. There was a temporary increase in the share of other foreign investment in 1997 and 1998 owing to the discrete issues of bonds and shares by China abroad.

6. "FDI and Domestic Economy: Neoliberalism in China", N.K. Chandra, EPW Special Articles (www.epw.org.in/34-45/sa3.htm)

7. FDI and Domestic Economy, *ibid.*



Source: MOFTEC

(3) *Main countries of origin and destination of investment*

Source countries – While the number of FDI source countries in China is quite large, a handful countries account for the sums invested. Hong Kong comes first as a single investor and the newly industrialised economies (NIEs) have been the largest investors as a group. Four ASEAN countries (Thailand, Philippines, Malaysia, Indonesia) have substantially increased their presence in China since the early 1990s. Among the developed countries, Japan and the United States have been the most important investors in China. The other developed countries have made rather small amounts of investment in China, even though they have shown an increasing interest in China in recent years.

Destination of outward FDI – As stated in Table 2, Hong Kong is the main destination of Chinese outward FDI. Detailed and reliable data are not available for an expanded analysis of this matter.

(4) *Sectoral and geographical distribution of FDI in China*

Sectoral Distribution – So far, the major proportion of FDI is drawn for the manufacturing field, which takes up almost 60 per cent of the total contracted FDI by 1998. Next follows real estate with the share of 24.4 per cent. The portion of the distribution industry including transport, wholesale and retailing is 6.0 per cent. Construction comes next with 3.1 per cent. The primary industry such as agriculture, forestry and fishing takes 1.8 per cent. In the future, service trade, such as finances, telecommunications and wholesale and resale commerce, will take up a larger share as a result of Chinese accession to WTO and further liberalisation. Further investment liberalisation should also take place in traditional industries. Especially, the expansion of FDI in agriculture will depend on the degree of opening up to the market circulation of agricultural products and the industrialised process of production operations.

Table 2. Accumulated FDI stock in China by source countries (1995 constant US\$, %)

Source Countries	Year 1983-90		Year 1991-95		Year 1996-98		Year 1983-98	
	Amount	Share	Amount	Share	Amount	Share	Amount	Share
NIEs	14 881	60.67	87 220	73.86	79 232	62.82	181 333	67.48
Hong Kong	14 357	58.53	69 495	58.85	57 030	45.22	140 882	52.42
Taiwan	259	1.06	11 624	9.84	9 212	7.30	21 095	7.85
Singapore	266	1.08	3 788	3.21	7 819	6.20	11 873	4.42
S. Korea	0	0.00	2 314	1.96	5 170	4.10	7 484	2.78
ASEAN 4	110	0.45	2 207	1.87	2 418	1.92	4 735	1.76
Japan	3 355	13.68	8 109	6.87	10 852	8.60	22 315	8.30
United States	2 960	12.07	8 736	7.40	10 041	7.96	21 738	8.09
West Europe	1 608	6.56	5 262	4.46	11 001	8.72	17 871	6.65
United Kingdom	400	1.63	1 937	1.64	4 119	3.27	6 456	2.40
Germany	303	1.24	993	0.84	2 131	1.69	3 427	1.28
France	265	1.08	693	0.59	1 527	1.21	2 485	0.92
Italy	214	0.87	641	0.54	624	0.49	1 479	0.55
Other WE	430	1.75	997	0.84	2 600	2.06	4 027	1.50
Other DCs	325	1.32	1 339	1.13	1 785	1.42	3 449	1.28
Australia	234	0.95	597	0.51	739	0.59	1 570	0.58
Canada	74	0.30	699	0.59	949	0.75	1 721	0.64
Other Asia	171	0.70	2 219	1.88	1 538	1.22	3 929	1.46
East Europe	35	0.14	158	0.13	142	0.11	335	0.12
Latin America	29	0.12	598	0.51	6 951	5.51	7 578	2.82
Africa	4	0.02	73	0.06	233	0.18	309	0.12
Total	24 528	100.00	118 086	100.00	126 119	100.00	268 733	100.00

Source: MOFTEC.

Note: The ASEAN 4 countries include Thailand, Philippines, Malaysia and Indonesia.

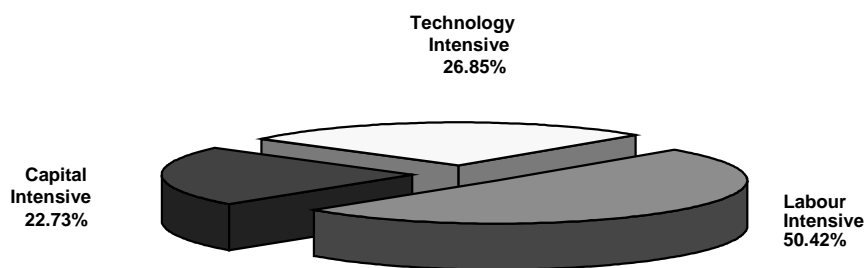
Table 3. Contracted FDI by Sectors by the end of 1998 (US\$ billion, %).

Sector	Number of Projects	Share	Contracted Value	Share
Manufacturing	249 352	73.0	365.547	59.6
Real Estate	33 877	9.9	149.977	24.4
Distribution industry	21 279	6.2	36.929	6.0
Wholesale, Retailing, Catering	17 558	5.1	21.960	3.6
Transport, Warehouse, Telecommunication	3 721	1.1	14.969	2.4
Construction	8 826	2.6	18.860	3.1
Agriculture, Forestry, Animal Husbandry & Fishing	9 534	2.8	10.827	1.8
Scientific Research Technical Service	2 410	0.7	1.874	0.3
Education, Broadcasting, Film & Television Industry	1 317	0.4	2.040	0.3
Healthcare, Sports & Social Welfare	999	0.3	4.618	0.8
Other Sectors	13 944	4.1	23.045	3.8
Total	341 538	100	613.717	100

Source: FDI Statistics, MOFTEC.

Amongst the manufacturing sectors, approximately half of FDI has been directed towards the labour intensive industries.⁸ Technology intensive and capital intensive sectors almost equally share the rest in that the share of the former is 26.9 per cent and capital intensive sector is 22.7 per cent. This suggests that the main motivation of foreign companies is to take advantage of China's low labour costs.

Figure 2. Sectoral Composition of Foreign Funded Enterprises (FFE) in China's manufacturing (end 1995)



Source: Calculated from the Office of the Third National Industrial Census (1997), Zhonghua Renmin Gonghe Guo 1995 Nian Disanci Quanguo Gongye Pucha Ziliao: Zonghe Hangye Juan [Data of the 1995 Third National Industrial Census of the PRC: All Enterprises], Zhongguo Tongji Chubanshe, Beijing.
Note: The calculation is based on the total assets of FFEs at the year end of 1995.

Investment fields, even in the manufacturing sector, are different between developing source countries and developed source countries. Developing source countries tend to invest towards labour-intensive production technology and standard manufacturing products while developed countries are inclined to invest in high technology and differentiated products. This is consistent with economic theory.

Geographical distribution –The FDI patterns in China show a great disparity among regions: For the period from 1983 to 1998, FDI in the eastern region took up 87.8 per cent while the central region attracted 8.9 per cent and the western region recorded only 3.3 per cent. This inequality stems from the FDI policies taken by the Chinese authority. The open door has started with the creation of special economic zones (SEZs) and preferential regimes for fourteen coastal cities. This has resulted in an overwhelming concentration of FDI in the east. With the adoption of more broadly-based economic reforms and open door policies for FDI in the 1990s, FDI inflows into China have started to spread to other provinces.

Among the eastern region provinces, Guangdong's performance in attracting FDI has been very impressive. Its share of accumulated FDI stock from 1983 to 1998 was 29.4 per cent of the national total, far exceeding all other provinces including Jiangsu and Fujian, each of which possessed around 10 per cent

8. Labour-intensive sectors include Food processing, Food manufacturing, Textiles, Clothing & other fibre products, Leather & Fur products, Timber processing, Furniture, Paper & Paper products, Printing, Cultural, Education & Sports goods, Rubber products, Plastic products, Non-metal mineral products, Metal products, and Others. Capital-intensive sectors include Beverage manufacturing, Tobacco processing, Petroleum refining & Coking, Chemical materials & products, Chemical fibres, Ferrous metal smelting & pressing, Non-ferrous metal smelting & pressing, and Transport equipment. Technology intensive sectors include Medical & Pharmaceutical products, General machinery, Special machinery, Electrical machinery & equipment, Electronics & Telecommunication equipment, and Instruments & Meters. Details for the classification of China's industries into labour intensive, capital intensive, and technology intensive categories are in Zhang Xiaohe (1993).

of the national total, and ranked second and third among China's thirty provinces. However, if we analyse this province group one step further, we find that the shares of each province have gradually changed. The share of Guangdong has declined from 46.13 per cent in the 1980s to 27.98 per cent in the 1990s. In contrast, the shares of other coastal provinces, such as Jiangsu, Fujian, Zhejiang, Shandong, Tianjin and Hubei, have increased steadily.

The share of the central provinces in the national total accumulated FDI stocks has increased gradually from 5.3 per cent during the 1980s to 9.2 per cent during the 1990s. The main contributors are Henan, Hubei, and Hunan provinces, and their shares of accumulated FDI in the national total doubled from the 1980s to the 1990s. These figures suggest that the provincial distribution of FDI inflows has spread somewhat from the opened coastal provinces into the inland provinces.

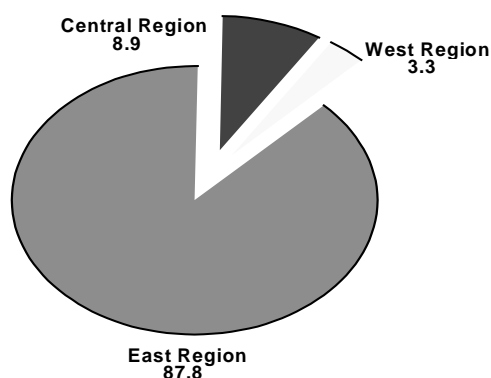
The western less developed provinces received a very small amount of FDI inflows. Their share in the national accumulated FDI stocks has been declining from 4.7 per cent in the 1980s to 3.2 per cent in the 1990s. However, Sichuan and Shaanxi attracted relatively more FDI inflows than the other provinces in this group.

In the final analysis, FDI inflows in the 1990s have diffused from the initially concentrated southern coastal areas towards the south-eastern and eastern coastal areas as well as towards inland areas. The three provincial groups of the eastern, central and western regions experienced different patterns in FDI inflows. For the eastern region provinces FDI inflows have been increasing steadily with a remarkably high growth rate, particularly from 1992 to 1998. For the other two provincial groups, the inflows of FDI have been much less, especially for the western region provinces. As a result, the gap between the eastern region and the central and western regions in terms of the absolute magnitude of annual FDI inflows has actually broadened since 1992.

Research has shown that the provinces with larger GDP, higher per capita income, higher level of accumulated FDI stock, more intensive transport infrastructure and higher level of telecommunications have attracted relatively more FDI inflows, while higher labour costs (approximated by efficiency wages and lower labour quality) have actually deterred FDI inflows.

The future of central and western regions in terms of FDI will be more promising as the development of infrastructure and further openness of the market attracts more FDI into these regions. Their comparative advantages lie in abundant natural resources, further opening up and development of the market. If the state-owned enterprises (SOEs), many of which are in the central and western regions, are open to foreign investors, a great deal of FDI could flow into these regions.

Figure 3. Regional Distribution of FDI in China (1983-1998) (1995 constant US\$)



Source: MOFTEC data

(5) *Forms of investment (greenfield, acquisition, joint ventures, alliances, subcontracting, licensing)*

The establishment of new enterprises such as new foreign funded and joint venture companies has been the main mode of absorbing FDI into China. During the period from 1979 to 1997, equity joint ventures took the lion's share of inward direct investment inflows (61.3 per cent in terms of the number of contracts and 46.0 per cent in terms of contracted amounts). Wholly foreign-owned enterprises took 24.7 per cent of FDI (in terms of the contract number and 30.0 per cent in terms of contracted amounts). Contractual joint ventures have been the third most important mode (14.0 per cent in terms of the numbers and 23.2 per cent in terms of the contracted amounts). As mergers and acquisitions have become the popular mode of global FDI with more than a 60 per cent share, this entry mode presents great potential for the future expansion of FDI in China. Also, the share of wholly foreign-owned enterprises is expected to increase as China implements its WTO commitments. Recent trends show that FDI tends to be more and more directed into wholly foreign-owned enterprises, which accounted for more than half of total commitments in 1999.

Table 4. FDI in China (1979-97)
(%)

Contracted value	1979-1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Joint Ventures	38.7	41.0	50.8	50.1	49.5	48.6	43.5	43.5	40.6	33.2	32.3
Co-operative Joint-Ventures	41.9	19.0	17.8	22.8	22.9	24.6	19.5	19.5	23.7	22.4	16.5
Wholly Foreign Enterprises	9.7	37.1	30.6	27.0	27.3	26.5	36.9	36.6	34.6	41.8	50.7
Others	9.7	2.9	0.8	0.1	0.3	0.3	0.1	0.4	1.1	2.7	0.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0

Source: MOFTEC

(6) *Main characteristics of investors (e.g. large MNEs, SMEs,)*

Both foreign-country and overseas-Chinese affiliates are larger on average and have higher average capital/labour ratios or are more capital-intensive than China's domestic enterprises. Of these two groups, foreign-country affiliates are larger and more capital-intensive than overseas Chinese affiliates.

Table 5. Factor Intensity and Factor Productivity of Chinese Firms (1995)

	Foreign-Country Affiliates (A)	Overseas- Chinese Affiliates (B)	China's Domestic Enterprises (C)	(A)/ (C)	(A)/ (B)
Average Size of Enterprises (Million Yuan)	32.77	23.53	14.41	2.27	1.39
Average Capital/Labour ratio (Yuan/Labour)	220 358	165 686	86 184	2.56	1.33
Average Labour Productivity (Yuan/Labour/Year)	45 365	28 808	16 889	2.69	1.57
Average Efficiency Wage	0.17	0.25	0.30	0.59	0.71

Source: Calculated from the Office of the Third National Industrial Census (1997), Zhonghua Renmin Gonghe Guo 1995 Nian Disanci Quanguo Gongye Pucha Ziliao: Zonghe Hangye Juan [Data of the 1995 Third National Industrial Census of the PRC: All Enterprises], Zhongguo Tongji Chubanshe, Beijing.

III. Main determinants of FDI in China

Theory classifies FDI into two types: market-oriented and export-oriented FDI. In terms of market oriented FDI, the most important factor to attract FDI is the size and growth of the host country. The export oriented FDI mainly looks for cost competitiveness. There are also some factors in common for both types of FDI. China is thought to have all these characteristics.

(1) *Size and growth of the Chinese economy and prospects*

Market-oriented FDI aims to set up enterprises to supply goods and services to the local market. This kind of FDI may be undertaken to exploit new markets. Apart from the traditional reason for circumventing tariff barriers, the market size, prospects for market growth, and the degree of development of host countries are very important location factors for market-oriented FDI. The general implication is that host countries with larger market size, faster economic growth and higher degree of economic development will provide more and better opportunities for these industries to exploit their ownership advantages and, therefore, will attract more market-oriented FDI. Even for export-oriented FDI, the market size of host countries is important because larger economies can provide larger economies of scale and spill-over effects.

China has a population of 1.2 billion, with a vast potential for consumption. Investors regard the Chinese market as the last enormous market that has not been developed in the whole world. Over the past decades or more, the scale of China's economic reconstruction has been expanding increasingly, with the purchasing power of the people strengthening rapidly and markets becoming increasingly brisk. Although China's per capita GDP is still very low, its rapid economic growth and continuously increased purchasing power has made China attractive to market oriented FDI, such as in the fields of basic chemicals, drinks, household electrical appliances, automobiles, electronics, pharmaceutical industries.

The economic growth rate in China has slowed down since 1996 due to the adjustment of overall growth at the beginning of the 90s. In recent years, the economic growth rate still remains at around 7 per cent.

Considering such important factors as the level of economic development, the potential for technology advancement and the effect of restructuring, it is quite possible for China to keep economic growth at a rate of 6-7 per cent in the next 10 years. If this is the case, China will remain a fast expanding huge market for foreign and domestic investors.

There exists, however, a downside factor: the rapid increase in the production capability and the slow growth of per capita income and consumption have resulted in periodical saturation in China. The phenomenon of supply exceeding demand exists in most industries but in China it has been severe in certain sectors or activities.

Table 6. Chinese Economic Indicators (1998)

Region	East	Central	West	Total
Population (10 000)	50 793	44 033	28 510	123 336
Area (km ²)	130.1	283.5	538.5	952.1
GDP (100 million Yuan)	48 553.5	23 113.7	11 552.1	8 3219.2
Per capita consumption (Yuan)	4 079.2	2 405	1 967	8 451.2
Gross Industrial output (100 million Yuan)	78 668.7	29 642.8	10 736.7	119 048.1
Import and export (US\$100 million)	2 752.2	218.5	113.0	3 083.7
Fiscal revenue (100 million Yuan)	3 012.1	1 223.2	748.8	4 984.1
PGDP (Yuan)	11 533.3	5 399	4159	21 091.3

Source: China Statistical Yearbook, 1999.

(2) *Natural and (4) Sectoral and geographical distribution of FDI in China*

Sectoral Distribution – So far, the major proportion of FDI is drawn for the manufacturing field, which takes up almost 60 per cent of the total contracted FDI by 1998. Next follows real estate with the share of 24.4 per cent. The portion of the distribution industry including transport, wholesale and retailing is 6.0 per cent. Construction comes next with 3.1 per cent. The primary industry such as agriculture, forestry and fishing takes 1.8 per cent. In the future, service trade, such as finances, telecommunications and wholesale and resale commerce, will take up a larger share as a result of Chinese accession to WTO and further liberalisation. Further investment liberalisation should also take place in traditional industries. Especially, the expansion of FDI in agriculture will depend on the degree of opening up to the market circulation of agricultural products and the industrialised process of production operations.

human resource endowments – cost and productivity of labour

One of the most important factors to attract FDI in China is the advantage in competitive production factors – labour force, land and natural resources. The degree of development of host countries is often considered one of the most important determinants of FDI flows because it is positively related to domestic entrepreneurship, education level, and local infrastructure.

With the world's largest population, China has rich resources of labour, with average salaries of workers remaining at a relatively low level. China has paid great attention to the education of its people such as nine-year universal compulsory education. Therefore, Chinese labourers are of relatively high quality and there are comparatively numerous technical personnel. Some fields, however, are in short supply – skilled managers, engineers and technicians.

It is often argued that the labour cost in determining FDI flows should be the efficiency wage rate, which is adjusted in line with productivity rather than the “absolute wage”, especially if FDI is export-oriented. In terms of the efficiency wage rate, China still has good advantages as confirmed by empirical research.

China is also very rich in energy reserve. Chinese production of oil, its predominant fuel, is among the highest in the world (Saudi Arabia being the main producer) in spite of the fact that China imports it owing to high consumption. China is the largest producer of coal, roughly one third of the world's total production and its coal industry has been troubled by a serious oversupply problem. As with coal, China's electric power supply is also experiencing an oversupply problem. Other major natural resources such as land, iron and other minerals are economically available.

These factor cost advantages have been experiencing some erosion however. With the globalisation of the world economy and the liberalisation of international trade and the giant strides in technological innovation, the advantage of a cheap labour force has become less important for foreign investors. China's disadvantages in terms of technology gaps and lack of labour qualification in some areas will also take some time to improve.

(3) *Physical, financial and technological infrastructure*

It can be presumed that the availability of physical infrastructure affects the decision of selecting the investment place: The more highways, railways and interior transport waterways are adjusted according to the size of host province, the more FDI inflows. Another important variable is the level of telecommunication services. Higher levels of telecommunications services will save time and reduce the costs of communication and information gathering, thus facilitating business activities. Research confirms the assumption supported by other empirical studies that the provinces with more developed infrastructure are likely to succeed in attracting FDI.

The same inference can be made for the technological infrastructure. In recent years, pushed by the market competition, the upgrading speed of China's industrial structure has been accelerated. Especially, the development of high-tech has been greatly speeded up. Currently, China and its provinces have elaborated various five-year plans and the development of high-tech industry has been a top priority. The current level of the technology of China and its provinces functions in order to attract FDI and induce the technology transfer.

(4) *Openness to international trade and access to international markets*

China has adopted the so-called “export promotion development strategy” which was proven to be a remarkable success in the Asian NIEs. Together with export promotion policy, China has implemented economic reforms and open door policies and made efforts to promote trade by concluding several bilateral trade arrangements and adopted unilateral actions. There has been substantial progress in reducing tariff barriers in the 1990s: the average (unweighted) tariff rate on imports declined from 42.9 per cent in 1992 to 23.6 per cent in 1996 and to 17.6 per cent in 1997. China has also formulated and implemented a series of preferential policies to encourage international trade. Duty exemptions for intermediate products used in the production of exports have been particularly important in boosting China's foreign trade.

However, there remain several barriers to free trade including administrative enforcement and non-tariff measures. The local content requirement and the export proportion requirement may inversely act to promote FDI. The import substitution policy may function to promote FDI in the short term but further competition, which can be created from the increase in import, may positively act to promote new additive investment in current investors for introducing high-technology production. Also, Chinese further acceptance of multilateral investment arrangement is necessary to promote FDI into China. For example,

China still does not allow wholly foreign-owned companies to trade in many areas even though it has started to liberalise it. China's entry into the WTO will be conducive to the settlement of the problems. If foreign invested companies are permitted to establish their own retail trade, that would help them to expand the scope of their investment and increase their market portion.

In terms of accessibility to international markets, China has also some merit. Export-oriented FDI aims to use particular and specific resources at a lower real cost in foreign countries and then to export the output produced to the home country or to third countries. Even though the most important location factors for export-oriented FDI are resource endowments, research found that China has a relatively attractive and strategic geographic position in that its territory is huge and offers access to other Asian countries and the Americas.

(5) *Development of the regulatory framework and economic policy coherence*

Regulatory framework – China has endeavoured to introduce a more transparent legal framework and business environment. It has been streamlining its legal system concerning FDI. China has amended a series of laws, regulations and provisions such as Equity Joint-venture Law and Contract Law just to name but a few. Also China has been relaxing some restraints and liberalising further on the area of restricted investment while it still keeps great emphasis on FDI in the encouraged fields and regions. Furthermore, since the mid-nineties, China has launched a programme to restructure and reduce the State-owned sector. It has made known that foreign participation would be welcome in the restructuring process, which will bring advanced managerial skill and enhance internal efficiency and international competitiveness. Given the need to reform Chinese SOEs, but bearing in mind the weaknesses of the domestic capital markets and the lack of managerial capacity, the Chinese policy to allow FDI in the areas of SOEs seems to be on the right track. It remains to be seen, however, how actual participation of foreign investors will be allowed. Besides, as soaring unemployment seems inevitable in the process of the restructuring of SOEs, constructing a social security net is likely to be very onerous.

Even after taking into account all recent Chinese measures, significant work still lies ahead to further improve the legal system for the market economy. The existing legal basis, legislation procedure and operating mechanism have not yet fully shifted to the needs of market economy. Various types of FDI recipients should come out in front. Privately owned enterprises have received a limited share of FDI. Further efforts are expected to bring FDI inflows into these enterprises in line with the efforts of SOEs to further co-operate with potential foreign investors. Employment figures show that foreign direct investments in enterprises in villages and small towns have been considerable. Chinese efforts to comply with the international standards in its preparation for accession to the WTO will certainly expedite the reform policy.

Economic policy coherence – China is most likely to maintain its economic growth policy. In the year 2000, China is expected to record 7.3-8.5 per cent subsequent to 7.1 per cent growth rate in 1999. According to the Chinese government's tenth Five-Year plan (2001-2005), Chinese economic growth will be kept above 7 per cent and China's GDP will be around US\$1 300 billion in 2003 and US\$1 500 billion in 2005.

(6) *Investment protection and promotion*

Investment protection – There have been no cases of expropriation of foreign investment since China opened up to the outside world in 1979. In fact, the Joint Venture Law was amended to forbid nationalisation, except under special circumstances. While most cases have been resolved through

negotiation or mediation, there remain some possibilities that local authorities can be influential sometimes.

The Contract law, which came into effect in 1999, also functions to protect FDI and will have a major impact on how Chinese and foreign companies meet their obligations in the China market. The law's purpose is to protect the legal rights of all parties while allowing them to determine their own remedies for dispute resolution and breach of contract and to promote foreign investment. While the law is viewed as a step in the right direction with regard to transparency and procedure, the real enforcement still has significant shortfalls.

Investment promotion – Deng's tour of China's southern coastal areas and SEZs marked an epoch for Chinese FDI policy. His visit set the scene for China's move away from the uneven regional priority toward nation-wide implementation of open policies for FDI. The Chinese government then adopted and implemented a series of new policies and regulations to encourage FDI inflows. Also the Chinese government has started to introduce various investment promotion policies and expanded thereafter.

The Special Economic Zones of Shenzhen, Shantou, Zhuhai, Xiamen and Hainan, 14 coastal cities, dozens of development zones and designated inland cities all promote investment with unique packages of tax incentives. The Chinese authorities have also established a number of free ports and bonded zones. Sometimes, Foreign investors obtain incentives and benefits after direct negotiation with the relevant government authorities since some of these may not be conferred automatically. The incentives available include significant reductions in national and local income taxes, land fees, import and export duties, and priority treatment in obtaining basic infrastructure services. The Chinese authorities have also established special preferences for projects involving high-tech and export-oriented investments. Priority sectors include transportation, communications, energy, metallurgy, construction materials, machinery, chemicals, pharmaceuticals, medical equipment, environmental protection and electronics.

Tax incentives, which are among the most outstanding investment promotion policies, were also made available for FDI. From 1980 to 1993 China used extensively a wide range of tax incentives, including income tax exemption and reduction, tariff-free for imported equipment and construction materials. Although in 1994 the unified taxation system applying both domestic and FDI firms was introduced, a five-year tax refund scheme was granted for FDI firms, and tariff-free treatment was extended. In addition, preferential treatments were granted in some specific sectors and industries. Currently, the targeted economic sectors and industries in which FDI is encouraged include agriculture, resource exploitation, infrastructure, export-oriented and high-technology industries.

To encourage reinvestment of profits, China has been offering FDI a refund of 40 per cent of taxes paid on its share of income, if the profit is reinvested in China for at least five years. Where profits are reinvested in high-technology or export-oriented enterprises, the foreign investor may receive a full refund. Many foreign companies invested in China have adopted a strategic plan, which requires reinvestment of profits for growth and expansion. While the Chinese government continues the VAT rebate system in an effort to maintain the profit margins of exporters in the midst of the Asian economic slump, State Taxation Administration plans to eventually phase out the rebates to modernise the current two-tier tax system for domestic and foreign enterprises. Discrepancies between central government, provincial and local tax regulations may also hamper foreign investment, particularly in remote and impoverished areas.

The State Taxation Administration has also been working on unification of the two enterprise income tax laws for foreign and domestic enterprises. Administrative procedures such as collecting, assessing and reporting tax have been improved.

It has been argued earlier that preferential FDI policies by eastern regions might be one important factor to bring their overwhelming performance of attracting FDI so far. It appears that favourable FDI policy by

each regional authority or the central government, China, should attract more FDI into the regions of China compared with other regions or countries.

As one of the policies to further attract FDI into China, it is often suggested that China open new investment sectors. With the saturation of traditional industry, new momentum should be made by further opening the priority sectors such as automobile, chemicals, electronics and agriculture, and by allowing FDI in other areas such as finance, and other service sectors which are areas which can create a new wave of FDI in China.

IV. FDI Impacts on China's Economy

Because of its unique nature and its importance, the economic literature and research attributes significant economic effects to FDI. During the past two decades, China has attracted huge amounts of FDI inflows and FDI firms have become an important element of the Chinese economy. What FDI is doing, how FDI firms are behaving, and the impacts of FDI on China's domestic economy have been a growing subject of discussion and analysis by policy makers as well as academic scholars in China and abroad. The following part of the paper summarises the main findings of the research conducted on this subject under the OECD/MOFTEC co-operation programme on this important subject. Some policy implications are presented in the concluding section of the synthesis note.

Part A summarises the analysis of the external effects of FDI. Part B focuses on the domestic aspects.

A. *The impact of FDI on China's international trade*

Since 1980, China's foreign trade has registered an impressive growth. Between 1980 and 1998, its share in world trade trebled, from less than 1 per cent to more than 3 per cent. The openness of China's economy, measured by the ratio of foreign trade to GDP increased from 12 per cent to 34 per cent. The conclusions of the research are convergent: FDI has been at the core of China's foreign trade expansion. Furthermore, it has been a decisive factor in China's involvement in the international segmentation of the production process known as "globalisation". Their conclusions are based on the following empirical evidence.

(1) *China's comparative advantages*

As predicted by economic theory, China's major structural strengths in international trade have been concentrated in a limited number of labour intensive manufacturing products: leather and shoes, apparel, miscellaneous manufactured products (toys, sports goods, ...). Its major structural weaknesses have been located in capital and technology intensive goods: machinery, engines, intermediate textile products, and plastics. Ten sectors in which China had its biggest comparative advantage accounted for the bulk of China's exports (58 per cent), and ten sectors in which it had its biggest comparative disadvantages accounted for the bulk of its imports (42 per cent). This reflect large disparities in factor endowments with China's foreign trading partners (the EU-15, the United States, Japan and the four new industrialised economies (Hong-Kong, Taiwan, South Korea and Singapore) and the existence of major inter-sectoral complementarities. In the same vein, China had positive net exports only in labour intensive products both in its trade with Asia and with the rest of the world.

China's specialisation patterns have nevertheless evolved. Its comparative advantages in some of the more traditional sectors (clothing and knitwear, carpets) levelled off in the nineties, while new comparative advantages emerged and others diminished. In particular, China built up new comparative advantages in computer equipment, consumer electronics, electrical apparatus and household electrical appliances

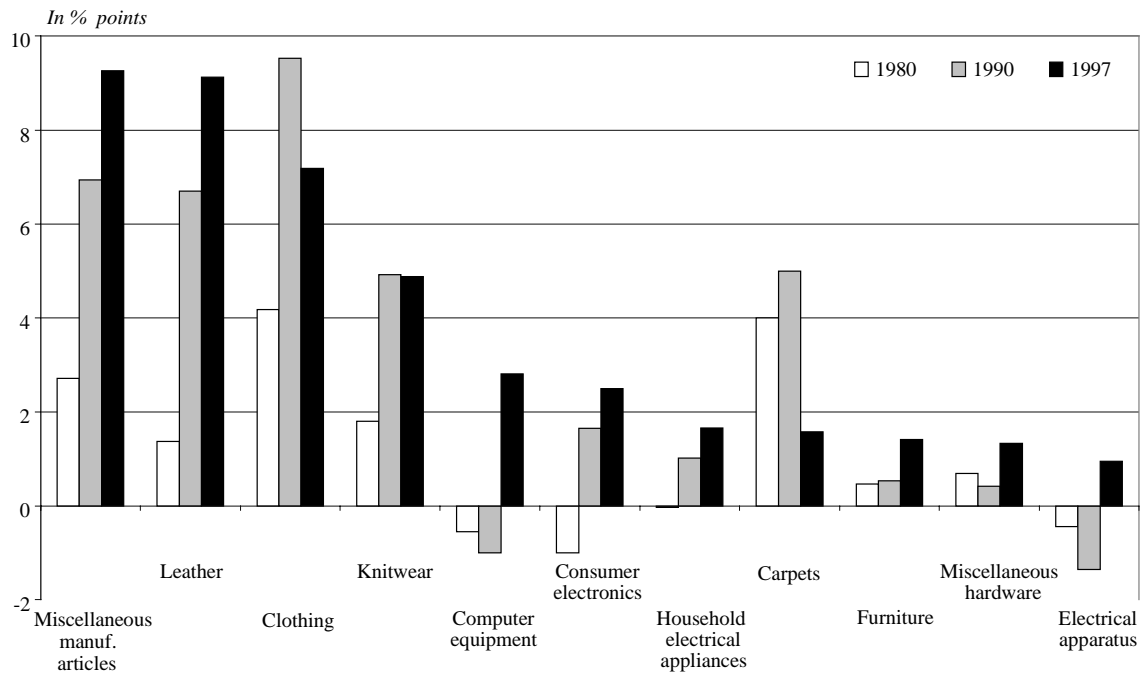
through a very rapid increase in exports. At the same time it gave up its comparative advantage in three sectors, among which crude and refined oil.

These shifts in specialisation also changed China's position in world trade. While in 1997 China still held the largest market shares in traditional industries (between 12.5 per cent and 22 per cent of world exports of leather products, clothing, carpets, miscellaneous manufacturing), it increased its market shares in the most rapidly expanding world markets (telecommunication equipment, computer equipment, electrical apparatus and equipment).

There is little doubt that China has the trade structure of a developing country. However, inter-sectoral trade specialisations seem more deeply entrenched than is the case of most other developing Asian countries. This can be attributed to China's size and large resources of low-cost labour which make it possible to sustain a continuous expansion of labour intensive exports. In other words, China has been able to diversify its exports of labour intensive products and establish competitive positions in rapidly expanding markets, thus succeeding in sustaining a rapid export growth.

The specialisation process is still continuing.

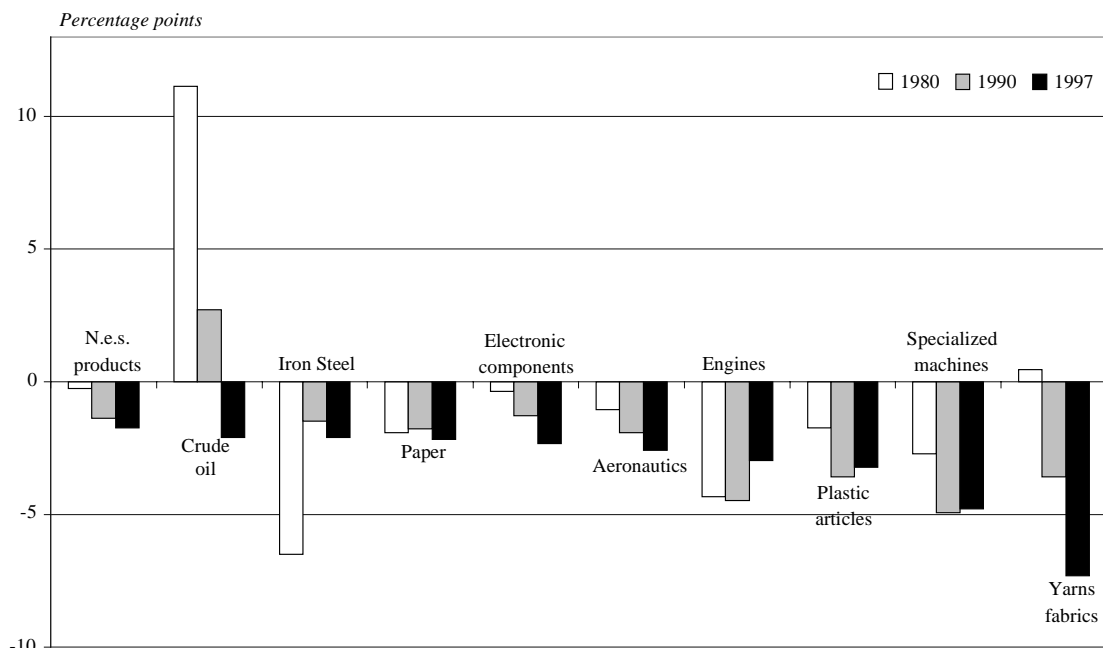
Figure 5 - China: Evolution of Comparative Advantages*, 1980-1990-1997



* Indicator of comparative advantage (or disadvantage): difference between the share (in %) of an industry of total exports and its share in total imports.

Source: CEPII, CHELEM data base. Author's calculation.

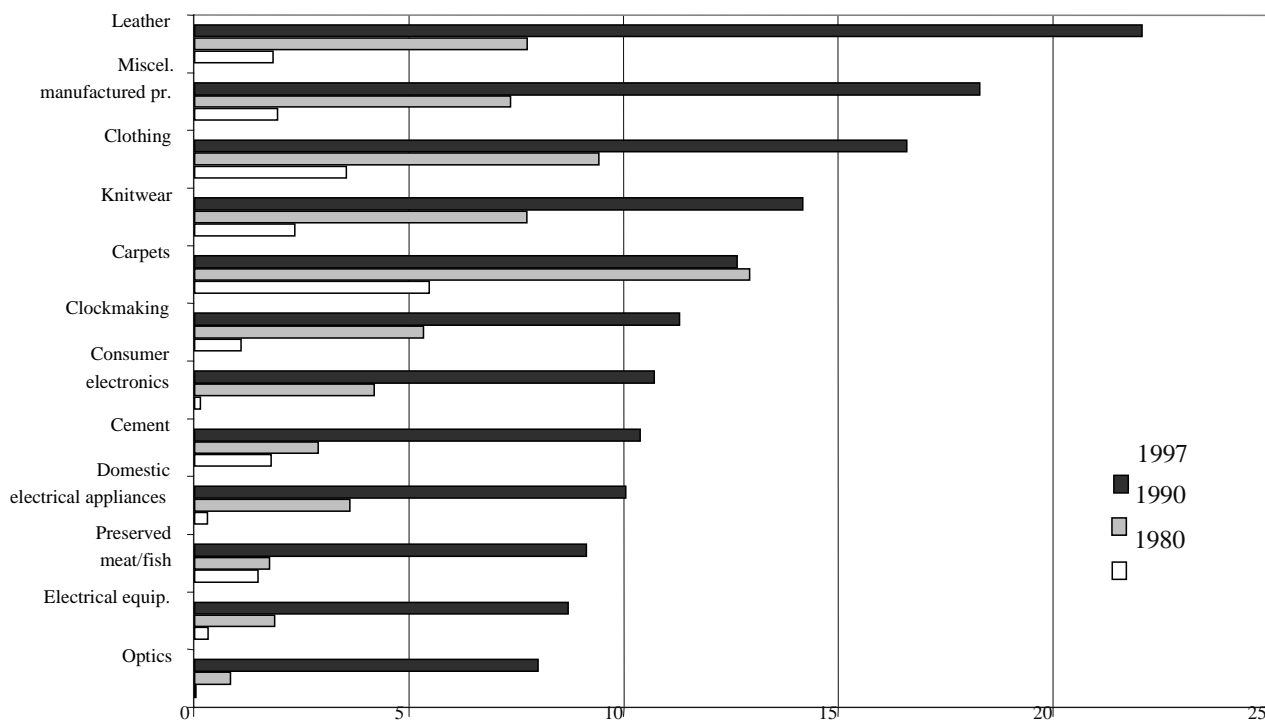
Figure 6 - China: Evolution of Comparative Disadvantages*, 1980-1990-1997



* For the definition of the indicator, see figure 15.

Source: CEPII, Chelem data base. Author's calculation

Figure 7 - China: Evolution of Market Shares in Manufactured products, 1980-1990-1997 (in% of world exports)



Source: CEPII, CHELEM data base. Author's calculation.

(2) *Increased participation in the international segmentation of production*

The study tested the pattern of China's revealed comparative advantage according to stages of production and increased participation in the international segmentation of production.⁹

Looking at exports, it was found that final goods (consumer goods and capital goods) doubled their share between 1980 and 1997 to reach the level of 55 per cent. Exports of consumer goods accounted for 38 per cent of exports or twice the share of capital goods (18 per cent) in 1997. However, while clothing was still the most important export item, exports in consumer electronics, domestic electrical appliances and instruments were the most dynamic consumer goods. Capital goods took the lead in export growth in the nineties. This change was mainly driven by electrical equipment and apparatus, computer equipment, telecommunications equipment. In short, within the final goods category, exports tended to shift from consumer goods to equipment goods, and from one chain of production (textile industry) to another chain of production (electric and electronic industry).

The relative importance of intermediate goods and basic manufactured products in exports did not change much (around 8-10 per cent). By contrast, the dependence of China's exports on primary products dropped

9. According to CEPII's eight stages of production classification: primary products, basic manufactured, intermediate goods, equipment goods, mixed products, consumer goods and others.

sharply, from almost 40 per cent in 1980 to around 7 per cent in 1997. Products responsible for the relative contraction of primary exports were crude oil and non-food agricultural products.

On the import side, productive goods (intermediate goods and basic manufacturing, capital goods) held a dominant share with 60 per cent of total imports in 1997. Intermediate products accounted for the largest part of Chinese imports by stage of production in 1997 (28 per cent). Moreover, they increased slightly faster than overall imports since 1980. Textile products made up more than one third of imports in intermediate goods, but since 1990 electronic components have been the most dynamic export sector and reached more than 10 per cent of intermediate imports in 1997. Capital/equipment goods represented the second most important import category after intermediate goods or almost one fourth of imports in 1997. Machinery was the most important import item in this category while electrical apparatus and equipment, telecommunication equipment and computers were the fastest growing import sectors.

Thus the analysis of the pattern of comparative advantage by stage of production shows that, in 1997, China's weaknesses were heavily concentrated in intermediate products and to a lesser extent in capital goods. China's strengths were concentrated in consumer goods. This pattern of specialisation indicates that China may be involved in the international segmentation of the production process and specialised in the assembly and transformation of imported intermediate goods for export. This specialisation in assembling operations has been well entrenched in the textile industry and has risen rapidly in more technologically advanced industries.

(3) *The impact on China's trade growth*

Over the 1992-1998 period China's foreign trade expanded rapidly: in dollar terms, exports more than doubled and imports increased by 75 per cent.

The distribution of exports by category of firm suggests that foreign invested enterprises (FIEs) have been responsible for almost all the visible improvement in China's export performance. From 1992 to 1998, total Chinese exports rose from 2.3 per cent to 3.4 per cent of world exports. Over the same period, FIEs in China increased their share from 0.5 per cent to 1.5 per cent of such exports. Domestic firms registered some gains in the first half of the nineties but lost ground afterwards and in 1998 they held the same share as in 1992 (1.9 per cent).

On the import side China's share of world trade rose to 2.6 per cent between 1993 and 1996 and then declined slightly to 2.5 per cent in 1998, as a result of a slowing down domestic demand. FIEs led import growth and their share in world imports doubled from 0.7 per cent to 1.4 per cent, overtaking that of domestic firms. Impact studies underline that host country policy has an important policy influence on the links between foreign affiliates and the rest of the economy. Like other Asian economies, China has followed a trade policy which has combined export promotion together with relatively strong import protection measures. With regard to FIEs, China has applied a selective policy which has included preferential treatments (tariff and fiscal exemptions) in export oriented sectors and sectors targeted for import substitution policies, but also applied severe constraints in other sectors (limited access to the domestic market). The result has been the establishment of a dualistic trade regime for domestic and foreign firms.

(4) *The role of FIEs in processing trade*

What is the root of FIEs' outstanding export performance? Research attributes China's outstanding export performance to FIEs' international processing activities. In the nineties, processing trade increased much faster than ordinary trade, as it benefited from tariff exemptions granted to intermediate products used in the production of exports. These concessionary imports amounted to 49 per cent of China's total imports in

1998 (against 39 per cent in 1992) and exports associated with concessionary imports reached 57 per cent of total exports in 1998 (47 per cent in 1992). FIEs took a major part in the rapid growth of processing trade. FIEs were responsible for 70 per cent of China's imports for processing and for 66 per cent of its processed exports. Over the period 1994-1998 FIE processing activities were by far the most dynamic component of China's trade and they represented almost 38 per cent of Chinese total exports and 34 per cent of imports in 1998 (against 25 and 24 per cent respectively in 1994).

The main underlying assumption is that the overwhelming share of processing activities in foreign affiliates' trade reflects their role as a production base for parent companies which have relocated segments of production in China. Foreign firms, motivated by cost considerations, have transferred the downstream, labour intensive stages of production in China. China has thus become integrated in the international segmentation of the production process. Most imported inputs for processing come from Asian countries, suggesting that Asian firms have taken a major part in this transfer of production capacities in order to maintain their competitiveness in world markets.

The data suggests that a dividing line separates imports from Asian countries on the one hand, and United States and the EU's imports on the other. From Asian countries, FIEs located in China imported mainly intermediate goods to be processed and re-exported. A large part of these imports corresponded to the supply of inputs from parent firms to their affiliates and can thus be characterised as intra-firm trade. (These firms include American and European affiliates in China which source their inputs in the region, thus contributing to the rise in imports from Asian countries.) Looking at the commodity composition, it was found that electrical equipment, plastics and textile products form the bulk of processing imports from Asian countries. This suggests that the share of Asian countries in China's imports does not reflect their capacity to enter the domestic market but the fact that China had become a production base relying on supplies of intermediate goods from the region.

In contrast with FIE imports from Asia, however, FIE imports from the United States and the EU-15 concern mostly goods to be used or consumed domestically. This means that the foreign firms concerned follow a strategy aimed at the local market. FIEs' imports of capital goods from Europe have accounted for an overwhelming share of China's imports of machinery, electrical machinery and vehicles. The importance of machinery and equipment in China's imports from the EU (36 per cent) can thus be directly connected with FDI, confirming that European FDI activities in China have been oriented towards relatively capital-intensive projects. FIEs had only a relatively small share of China's imports from the United States, whose commodity composition is more biased towards arms' length trade (aircraft, fertilisers, agricultural products).

FIE exports to major markets were also heavily determined by processing trade. FIE processed exports were geared towards four main destinations: in 1997, the EU-15 received 12 per cent of these exports, Japan 20 per cent, the United States 24 per cent, and Hong Kong 25 per cent, most of which was to be redirected towards the United States and Europe. China's top export sectors to the EU-15, to the United States and to Japan, were thus heavily dependant on FIE processed goods; the only remarkable exception was the clothing industry, as most of its exports remained in the hand of Chinese firms.

FIE processing activities have led to bilateral trade patterns which help illustrate the reorganisation of production which has taken place in Asia (with China becoming an assembly base for finished products for the supply of world markets). For instance, foreign affiliates in China recorded a large surplus from their processing trade with the EU and the United States. They had a relatively balanced processing trade with Japan, an indication that intra-firm trade played an important part in Japan-China two-way trade. However, they had a large processing trade deficit with Taiwan and South Korea. Their processing trade surplus with Hong Kong was also the result of bilateral trade flows passing through the territory. If these flows were attributed to actual partners, the existing bilateral imbalances would be even more accentuated: it would increase China's surplus with the United States and the EU and its deficit with Taiwan and South Korea.

(5) *The comparative trading performance of FIE firms*

The research found similarities as well as differences in FIE firms and China's domestic firms' export dependence. First, both China's domestic firms and FIE firms relatively concentrate their exports in labour intensive manufactured products. This implies that both China's domestic firms and FIE firms are making the most of China's comparative advantage in labour intensive manufactured products in international trade. Second, the exports of some traditional capital intensive products have a relatively important position in the total exports of manufactured products of China's domestic firms, while the exports of some fast growing technology intensive products are playing increasing roles in the total exports of manufactured products of FIE firms.

These differences reflect in fact differences in the industrial structure of FIEs and domestic firms. First, the industrial structure of FIE firms is more biased towards labour intensive industries compared to China's domestic firms. Second, FIE firms are relatively more concentrated in the newly developing and fast growing export-oriented industries than China's domestic firms.

It thus appears that foreign firms have strengthened – and will continue – to raise China's comparative advantage in labour intensive industries and increase China's labour intensive product exports. FIE firms have also improved and will further improve China's export structure from the one which is composed of exports of labour intensive products plus traditional capital intensive products to the one which is characterised by the combination of the exports of labour intensive products and technology intensive products.

Looking at exports in the manufacturing sector, FIE firms do show an apparent tendency to export significantly more than China's domestic firms. On average nearly 39 per cent of the FIE firms' sales were exported, while only less than 10 per cent of the Chinese domestic firms' sales were exported. The difference in the export behaviour between FIE firms and China's domestic firms is even more significant in labour intensive industries and in technology intensive industries. For the FIE firms, the export to sales ratio was 46.21 per cent in labour intensive industries and 45.29 per cent in technology intensive industries, while for the Chinese domestic firms, the export to sales ratio was only 14.5 per cent in labour intensive industries and 7.82 per cent in technology intensive industries. The sharp difference between FIE firms and Chinese domestic firms in export behaviour confirms that FIE firms in China are more export-orientated than China's domestic firms.

FIE firms have dominated most major manufactured exports from China. In 1995, FIE firms accounted for 51.19 per cent of China's total manufactured exports. In terms of the industry groups of factor intensity, FIE firms accounted for 51.4 per cent of China's total labour intensive manufactured exports and for 69.75 per cent of China's total technology intensive manufactured exports. In the industries of leather & fur products, furniture manufacturing, printing & recording, plastic products and instruments & meters the shares of FIE firms' exports ranged from 71.84 per cent to 78.98 per cent of the industries' total exports. The most significant percentage is in the electronics & telecommunication equipment industry, in which the share of FIE firms' exports accounted for 94.45 per cent of the industry's total exports.

Research suggests that the participation of FIE firms in China's manufacturing industries, particularly in the export-oriented industries, has, and will continue to raise productive efficiency and international competitiveness in China's manufacturing industries in general and in the export-oriented industries in particular. But the linkage effects of these export-oriented FIE firms might not be as great as their impressive export shares might suggest. This is because, as already noted in section (3), FIE firms' exports are almost exclusively confined to assembled and processed products using mainly imported materials or components. In 1998 as much as 85.45 per cent of total FIE firms' exports, or 69.18 billion US dollars, were for assembled and processed products. This may imply that the linkage effects, especially the backward linkage effects, that FIE firms may have on indigenous firms, may be quite limited. Another

explanation is that FDI in China's manufacturing industries is still in its very early stages and mainly involved in the activities making use of China's unlimited supply of low cost labour.

(6) *Building Dynamic Specialisation*

The following factors provide a good explanation of how processing trade accentuated China's specialisation in labour intensive stages of production. China's leading export sectors are heavily dependant on FIE processing activities which accounted in 1997 for more than 60 per cent of its exports in electrical machinery, machinery, footwear, instruments; the only remarkable exceptions were the more traditional export sectors (textile, iron & steel, fuels). FIE processing trade had also been the major factor behind the diversification in favour of more technologically advanced products, with rapidly expanding markets (electrical machinery, instruments).

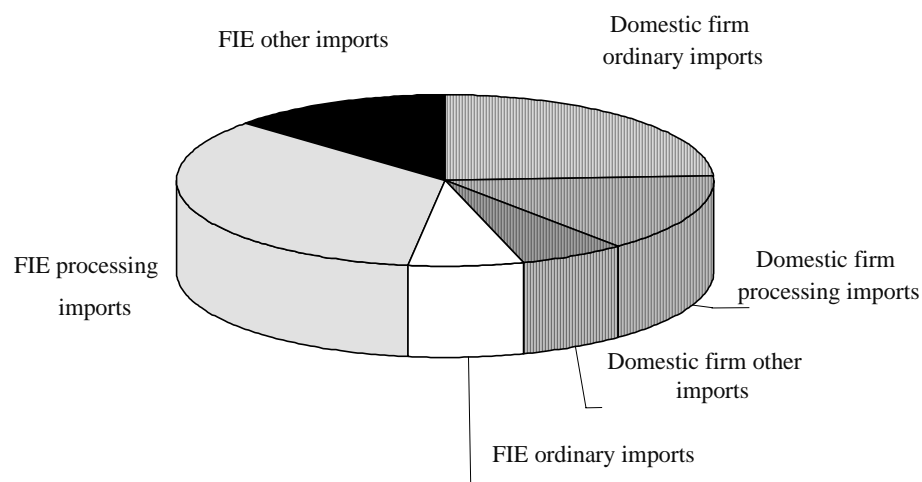
Processing trade has accelerated structural changes in China's trade. Foreign direct investment, driven by cost considerations, has induced China to build up comparative advantages in new manufacturing sectors, based on an in-depth specialisation along the production process. China has specialised in the downstream segments of production (assembly) in which it has a comparative advantage, relying on imports of intermediate goods and components. As far as the imported intermediate products incorporate high technology, they may be a channel for technology transfer into the Chinese manufacturing industry.

(7) *Domestic penetration of FIEs*

FIE firms have contributed significantly to China's manufactured exports, a large portion of FIE firms' sales has actually entered China's domestic markets. In 1995, of the 954.19 billion yuan sales from the FIE firms, 61.37 per cent or 585.54 billion yuan were sold to China's domestic markets. This represents a share of 15.37 per cent of China's markets for domestically produced manufactured products. Domestic sales of FIE firms concentrated in transport equipment (12.68 per cent of FIE firms' total domestic sales), electronics and telecommunication equipment (10.29 per cent), food processing (7.81 per cent), electrical machinery and equipment (6.73 per cent), textiles (6.68 per cent) and chemical materials and products (6 per cent). Together the above six industries accounted for 50.19 per cent of FIE firms' total domestic sales.

In some manufactured product markets, FIE firms have already gained prominent domestic market shares. In 1995, FIE firms' domestic market shares in China reached 40.13 per cent in electronics & telecommunication equipment, 36.12 per cent in clothing & other fibre products, 31.37 per cent in leather & fur products, 29.25 per cent in food manufacturing, 26.19 per cent in instrument & meters, 25.83 per cent in beverage manufacturing and 24.87 per cent in transport equipment industries respectively. The market shares of FIE firms are expected to rise as more and more large MNEs enter into China's markets. Unlike the early arrivals of small and medium-sized and labour intensive firms from Hong Kong and Taiwan, the new entrants of large MNEs, equipped with modern technologies, mainly target China's huge and under-exploited domestic markets. Therefore, the presence of FIE firms has forced and will continue to press China's domestic firms to improve their performance in order to prevent their market shares from shrinking even further. Such impacts of FDI on China's domestic economy may be much more profound and important than just a means of contributing to China's export growth.

Figure 8 - China's Imports by Categories of Firms and by Custom Regimes, 1998 (in %)



Source: China's Customs Statistics

(8) *Rising Local Content*

Since 1994, processing trade has been responsible for a growing part of China's trade surplus. The ratio of exports after processing to import for processing steadily increased. This processing trade surplus can be seen as an indicator of the value added in China. Apart from the appreciation of the yuan, this result may be attributed to the growing integration of the production process in the mainland, which has included more stages of production and related services (packaging, marketing) which used to be made outside the mainland. The declining role of Hong Kong in China's exports, also means that products made in China are now more directly sold in world markets. It would appear, however, that domestic firms' processing trade generates relatively more apparent value added than FIEs. Domestic firms source more naturally inputs in the domestic market. FIEs have generally a higher propensity to import intermediate goods. Foreign firms may tend to concentrate their activities in the most simple manufacturing industries and in the most basic production stages. It is also possible that the practice of intra-firm pricing may lead to an underestimation of local content.

(9) *FIE Export Competitiveness and Exchange Rate Policy*

One interesting finding is that processing trade may have isolated China from exchange rate fluctuation as a large part of exports and imports from such trade are denominated in foreign currency. During the Asian financial crisis, the Chinese currency strongly appreciated, in real terms, against most Asian currencies and this raised the fear that China would have to devalue or would incur a large trade deficit. In fact, while "ordinary" exports declined by 5 per cent in 1998, FIE processing exports continued to rise (+8 per cent). To a large extent therefore the resilience of Chinese exports during this period can be traced back to processing trade and especially to FIEs processing trade.

(10) *Domestic firms have lagged behind*

Since 1992 domestic firm trade has clearly lagged behind foreign firm trade. There is no evidence, however, that domestic firms have suffered from the competition of FIEs which would have displaced their exports. This results from the fact that domestic and foreign firms have followed divergent specialisation trends.

Duties exemptions also seem to have played a role in the difference in export competitiveness to China's duties exemptions in favour of foreign firms. Virtually all imports of machinery by FIEs benefited from duty exemptions in 1997, as they corresponded to initial equity investment or to assembly trade. Imports of machinery by FIEs represented almost 70 per cent of the total amount of machinery and equipment imported by China in 1997. This means that less than one third of imported equipment was directed to domestic (wholly Chinese) firms, which in turn accounted for more than 80 per cent of domestic industrial production. This unequal access to imported equipment has certainly been a contributing factor in domestic firms' performance.

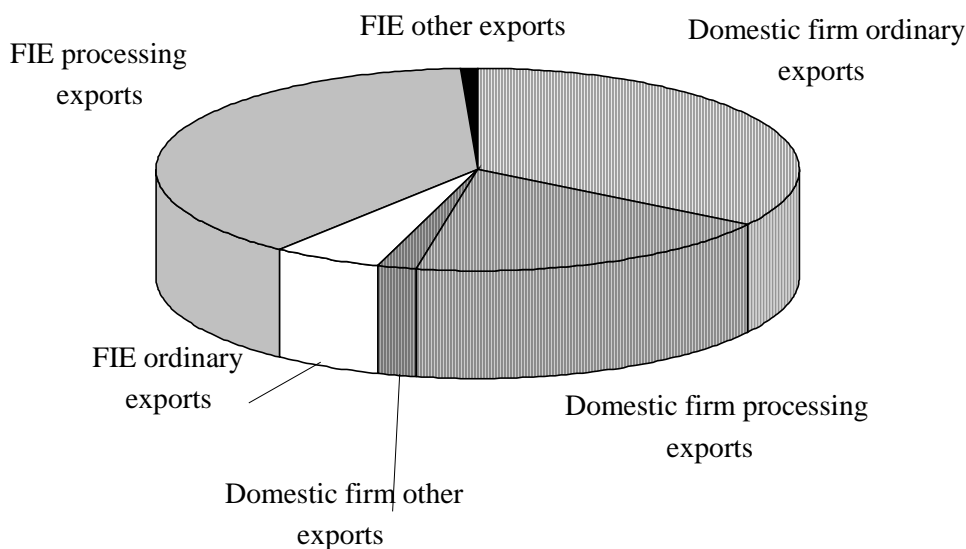
(11) *Regional Disparities have increased*

The research suggests that FDI has strongly influenced the economic openness of the different Chinese regions as the presence of FIEs in provincial economies largely determined their involvement in foreign trade. FDI has been heavily concentrated in the coastal provinces. Foreign trade concentration in these regions has grown even faster. From 1992 to 1997, inland provinces have received less than one fifth of FDI and in 1997 they were responsible for less than 10 per cent of foreign trade (12 per cent in 1992). The rapid expansion of export oriented industries based on imported inputs had accelerated the integration of coastal economies in international trade and production networks but this may have been achieved at the expense of backward and forward linkages with the rest of the economy and especially at the expenses of inland economies.

(12) *The impact on China's balance of payments*

As noted previously, China's FDI policy has enabled FIE enterprises to become the major force in China's foreign trade development. FIE enterprises account for 48 per cent of the aggregate growth of China's exports since 1981. The robust export growth rates of FIE enterprises' exports has resulted in an annual foreign exchange surplus for FIE enterprises in general since 1986. In recent years, FIE enterprises have been able to maintain their foreign exchange balance with a surplus in foreign trade. All these factors have contributed to the improvement of China's balance of payments and the increase of China's foreign exchange reserves. Two factors will be crucial in the future for the maintenance of this situation, namely the trade behaviour of FIE enterprises and the size of FDI inflows. Whether China will be able to maintain a balance of payments surplus will depend on whether enterprises, especially FIE enterprises, continue to expand exports and whether China will continue to absorb large FDI inflows.

Figure 9 - China's Exports by Category of Firms and Custom Regimes, 1998 (in %)



Source: China's Customs Statistics.

B. Domestic effects

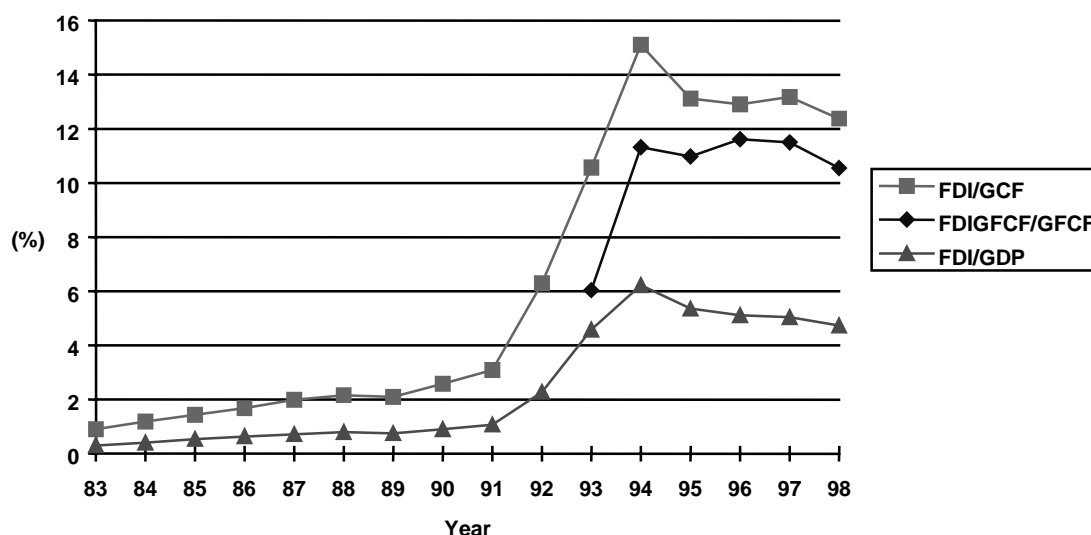
(1) FDI – An increasingly important source of capital

Since the early 80s FDI has made a determinant contribution to domestic capital formation. The ratio of FDI to GDP has increased from 0.31 per cent in 1983, to 1 per cent in 1991, 6.22 per cent in 1994, and staying around 5 per cent in the second half of 1990s.

FDI inflows also rose to 15.1 per cent of domestic gross investment in 1994 and stayed around 13 per cent from 1995 to 1998. FDI inflows have stabilised around 11 per cent of China's domestic gross fixed capital formation in the late 1990s.

While the shares of FDI inflows in China's GDP and gross capital formation have increased rapidly, only around 60 to 70 per cent of FDI inflows have been actually used in fixed capital investment. This may suggest some inefficiency in the use of FDI because it seems unlikely that foreign investors used 30-40 per cent of their total capital in inventory or as working capital.

Figure 10 - FDI Inflows to GDP, GCF and GFCF Ratios in China



(2) *FDI has created jobs*

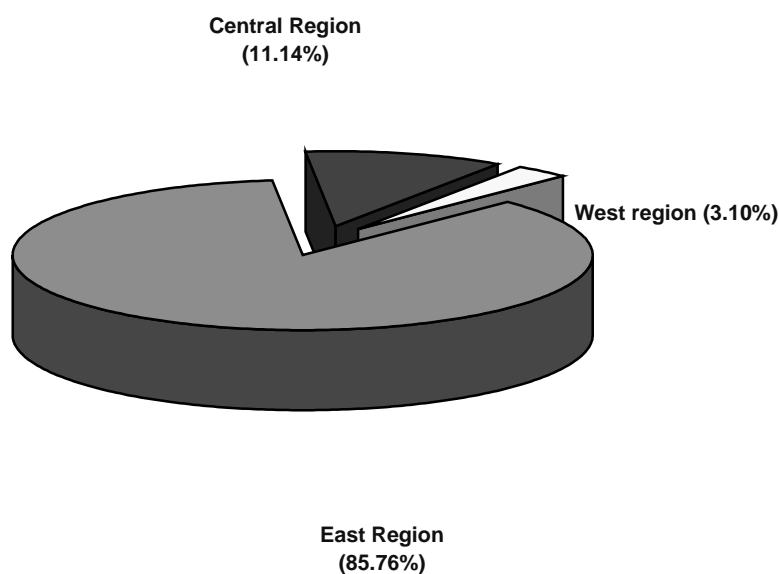
As in the case of other developing countries, where capital is relatively scarce but labour is abundant, the creation of employment opportunities – either directly or indirectly – has been one of the most prominent impacts of FDI on the Chinese economy. Both total employment and urban employment in FDI firms in China have increased significantly. While foreign firms employed 4.80 million and 1.65 million workers in 1991, or 0.74 per cent of China’s total employment and 0.97 per cent of China’s urban employment in that year, they employed four times as much in 1998 (18.39 million and 5.87 million workers respectively) or 2.63 per cent of China’s total employment and 2.84 per cent of China’s urban employment. This means that most employment opportunities created by FDI are located in rural industries (township and village enterprises).

Looking at regions and selected provinces at the end of 1998, FDI firms’ urban employment was overwhelmingly concentrated in the eastern region provinces (85.76 per cent of the total) and more particularly in Guangdong, Fujian, Jiangsu, Shandong, Liaoning and Zhejiang, and the municipalities of Shanghai, Beijing and Tianjin. In contrast, FDI’s urban employment in the central and the western regions was only 11.15 per cent and 3.09 per cent of FDI firms’ total urban employment in China respectively. As a result, the contribution of FDI firms in China’s urban employment has been very uneven. While FDI firms contributed 6.80 per cent of the urban employment in the eastern region, they only contributed 1.14 per cent and 0.63 per cent of the urban employment in the central and western regions respectively. This would suggest that FDI may have contributed to widening the income gap between the eastern and western regions of China.

With regard to sectors, by the end of 1995, FDI firms employed 8.50 million workers in China’s manufacturing industries, or 9.30 per cent of China’s total manufacturing labour force. The contribution was the highest in the labour intensive sectors, such as leather and fur products, clothing and other fibre products, and cultural, education and sports goods. The contribution was also significant in some of the technology intensive sectors, such as electronic and telecommunication equipment, instruments and

metres, and electrical machinery and equipment as their shares were above the average of the manufacturing employment by FDI firms. These figures are also consistent with the sector distribution of FDI in general.

Figure 11 - FDI Firms' Urban Employment in China by Regions at the Year end of 1998



(3) *FDI has upgraded skills*

One first indicator is the percentage share of skilled workers in the total number of workers employed by FDI firms. Based on this criterion, the research found that the skill structure of employment in FDI firms in China is typical of that in observed in other developing countries. Workers and apprentices engaged in direct manufacturing in China accounted in 1995 for 76.66 per cent of the total employment of FDI firms in this sector, while technicians and professionals accounted for 6.23 per cent, managerial staff accounted for 10.83 per cent and clerical and administrative staff accounted for 6.24 per cent. The share of workers and apprentices engaged in direct production was 7.53 per cent higher in FDI firms than that in China's domestic firms. For the technical and professional employees and managerial staff, the shares are marginally higher in FDI firms than those in China's domestic firms. However, for the clerical and administrative staff, the share is 47.03 per cent lower in FDI firms than that in China's domestic firms.

These figures imply that FDI firms are more allocatively and technically efficient in labour utilisation in production because they put more of their total labour force into direct production and less into non-productive administrative activities as compared to China's domestic firms.

The research also found that FDI firms have a higher level of labour quality in their employment composition than domestic firms. FDI firms tend to hire more employees with university and higher

education than domestic firms, particularly in capital intensive and technology intensive industries.¹⁰ They also tend to hire fewer employees with year 9 and lower education than domestic firms.¹¹

Because FDI firms pay higher wages than domestic firms (see below) and employ a higher level of labour than domestic firms, there is a real risk, however, that more and more quality labour will be drawn into foreign firms away from domestic firms. If this is the case, then the spillover effects with regard to the transfer of technology and managerial skills from foreign firms to domestic firms resulting from labour turnover may be quite limited.

(4) *FDI has paid higher wages*

As in other countries, FDI firms in China pay higher rates of employee compensation (wages, salaries, bonuses, and monetary and non-monetary fringe benefits) than domestic firms. This is the case in all sectors except in the industry of petroleum refining and coking.

Apart from differences in the distribution of their activities between (relatively high and low) wage sectors, FDI firms record higher labour productivity and have higher capital intensity than their local competitors. In some cases, these higher levels of productivity reflect a higher capital to labour ratio. FDI firms are also larger than their local competitors and large firms usually pay higher wages than small firms. In some cases, foreign firms may feel the need to “buy” themselves into unfamiliar labour markets or to attract workers away from competing employers.

(5) *FDI has raised factor productivity and increased technology transfer*

For a firm to invest abroad it must possess some kind of ownership advantages – such as a patent, blueprint or trade-mark. It could also be some specific intangible assets or capabilities such as technology and information, managerial, marketing and entrepreneurial skills, organisational systems and access to intermediate or final goods markets – sufficient to outweigh the disadvantages of doing business abroad. There is clear evidence that technology and managerial skills have been transferred to China by FDI firms. Such evidence was found *inter alia* in the size, physical and capital intensities of the FDI firms and their factor intensity.

The size of a firm can be measured by its total assets. On average the size of FDI firms is nearly 100 per cent larger than that of China’s domestic firms. It is 170 per cent larger in labour intensive industries, 124 per cent larger in technology intensive industries and 40 per cent larger in capital intensive industries than that of China’s domestic firms respectively. This implies that FDI firms employ a more technically efficient way in their production and benefit more from economy of scale than China’s domestic firms.

Because of their ownership advantages, FDI firms also have as a general rule a higher capital to labour ratio than domestic firms in the same industry. On average the capital to labour ratio of FDI firms is 141 per cent higher than that of China’s domestic firms. The difference in physical capital intensity is the largest in technology intensive industries, followed by capital intensive industries and labour intensive

10. The share of employees with university and higher education in FDI firms is 29.01 per cent and 36.12 per cent higher than that in domestic firms in capital intensive industries and in technology intensive industries respectively.

11. The share of employees with year 9 and lower education in FDI firms is 5.01 per cent lower in average, 17.67 per cent lower in capital intensive industries and 9.83 per cent lower in technology intensive industries than that in domestic firms respectively.

industries. This implies that FDI firms do possess superior ownership advantages and employ more technologically advanced production methods than domestic firms.

Interestingly the ratio of skilled labour – such as technicians, professionals and managerial personnel – to total labour in the FDI firms was just 1 per cent higher than that of China's domestic firms in 1995. The ratio is almost identical in labour intensive industries but in the technology intensive and capital intensive industries, FDI firms had a higher ratio in human capital intensity than do China's domestic firms (7 per cent and 20 per cent higher). This suggests that FDI firms use higher technology and higher skills in their production in these industries than China's domestic firms. The more moderate performance in labour intensive industries can in turn be attributed to the fact that foreign investors in this sector are mainly operating in the final stage of the production process while keeping R&D activities and the innovative stage of the production processes at home.

Looking at factor productivity, the research found that, on average, the average labour productivity of FDI firms is two and half times that of China's domestic firms and more than four times in the technology intensive industries. But the average capital productivity of FDI firms was only marginally (11 per cent) higher than that of China's domestic firms. Even though this could be attributed to the much higher capital to labour ratio of FDI firms than that of China's domestic firms, however, in the technology intensive industries, where the capital to labour ratio of FDI firms was found to be three times that of the domestic firms, the average capital productivity of FDI firms was still 41 per cent higher than that of China's domestic firms.

When comparing the marginal factor productivity and its changes over time of FDI firms and China's domestic firms, both FDI firms and China's domestic firms demonstrate a certain degree of increasing returns to scale in their production patterns. There is also an apparent convergence trend between the two types of firms. There could be various explanations. The dramatic increase in FDI inflows in a short period of time has led to a rapid decline of marginal productivity of capital in FDI firms. Marginal productivity of labour may also have increased much faster in domestic firms than that in FDI firms as a result of increased competition. A third factor may be related to the spillover effects from FDI resulting from labour turnover from FDI firms to domestic firms and/or learning from the working practices and production methods of FDI firms.

(6) *FDI has modified China's industrial structure*

As noted before, the industry sector has been the largest and the most important recipient of FDI in China (59 per cent). The concentration in industry stood in line with what is observed in developing economies as a whole (industry held 60 per cent of FDI stocks in 1997) but foreign investment in services was relatively low compared to its level in other developing countries, where transport, trade and communication represented 12.5 per cent of FDI stocks (UNCTAD 1999). In China, the existing barriers to entry in services explain the relatively low level of FDI. Hence, there is a huge potential for FDI in these sectors and it is expected that China's accession to WTO, which implies the opening up of service sectors, will give a strong boost to FDI.

Table 7. Distribution of FDI by Sector (in %)

	1993	1994	1995	1996	1997	1998	1993-1998
Agriculture	1.1	1.1	1.5	1.6	2.1	2.3	1.5
Industry	45.9	50.1	69.8	68.9	54.5	59.2	58.4
Construction	3.5	2.7	2.0	2.7	6.1	3.4	3.1
Communication	1.3	2.3	2.0	2.2	5.1	4.4	2.5
Trade	4.1	4.5	3.5	3.2	3.6	2.5	3.6
Real Estate	39.3	27.2	18.5	17.9	12.2	12.8	23.3
Other	4.8	12.1	1.8	3.5	16.4	15.5	7.5
Total	100.0	100.0	100.0	100.0	100.0	100	100.0

Source: China Statistical Yearbook, various issues.

According to the data of the 1995 Third National Industrial Census of China (Office of the Third National Industrial Census, 1997),¹² among the twenty-nine industries covered, the electronics & telecommunication equipment industry and the textile industry have received the largest amount of foreign investments, accounting for 11.29 per cent and 8.59 per cent of the total assets of foreign funded firms respectively. There has also been a relatively large amount of foreign investment in transport equipment (7.62 per cent), non-metallic mineral products (6.55 per cent), electrical machinery & equipment (6.05 per cent), chemical materials & products (5.38 per cent), and clothing & other fibre products (5.01 per cent) industries. Together these industries accounted for 50.49 per cent of the total. The remaining 22 industries each had less than 5 per cent, with some below 1 per cent.

In 1995, foreign funded enterprises accounted for 10.62 per cent of the total number of enterprises, 18.35 per cent of the total output value, 19.61 per cent of the total value-added, 19.09 per cent of the total assets, and 18.07 per cent of the total net value of fixed capital of China's manufacturing sector. In general therefore, foreign ownership in China's manufacturing has reached a significant level. It is important to stress, that within only 16 years, in terms of total assets, FFEs in China have grown from zero to nineteen per cent. This is not insignificant, especially when one takes into account the large aggregate scale and overall fast growth rate of China's manufacturing sector during that period.

The following significant changes in China's industrial output were observed over the 1985-1997 period:

- State-Owned Enterprises (SOEs) lost their dominant position in industry, as their share fell from 65 per cent in 1985 to 25 per cent in 1997. SOEs thus ceased to be the engine of industrial growth in the nineties. Their contribution to growth fell below 10 per cent over the period 1992-1997.
- The major "gains" in industrial structure were registered by "private" firms (their share rose from 2 per cent to 18 per cent) as well as by "other ownership forms" (their share rose from 1 per cent to 18 per cent), in which FIEs played a dominant part, with about 3/4 of this category output in 1997.
- Collectively owned enterprises became the most important category of ownership in industry in 1997 (38 per cent), and accounted for 40 per cent in output growth from 1993 to 1997.

12. This is the most systematic and comprehensive statistical data base on funded enterprises (FFE) in the manufacturing sector of China until the present day. The analysis could clearly benefit from more recent data but the results of the fourth Industrial Census will not be available for two or three years.

Table 8. Contribution of Categories of Ownership to Industrial Output and Growth (in %)

	Industrial output, all firms				
	Structure of Ownership			Contribution to Growth	
	1985	1993	1997	1985-1993	1993-1997
Total	100	100	100	100	100
SOEs	64.9	47.0	25.5	42.5	9.6
Collectively owned	32.1	34.0	38.1	34.5	41.1
Individual	1.8	8.0	17.9	9.5	25.3
Other economic forms	1.2	10.7	18.4	13.1	24.2

Source: China Statistical Yearbook, various issues.

At the level of establishments which are “Independent accounting units” (IAUs),¹³ the contribution of FIEs to output more than doubled, from 9 per cent to 21 per cent between 1993 and 1997. They contributed 36 per cent of the output increase and gained most of the ground lost by SOEs. FIEs’ share in output increased by 10 points, while SOEs’ share dropped by 12 points (Table 9).

Table 9. Contribution of Categories of Ownership to Industrial Output and Growth of Urban Industry (in %)

	Industrial output, independent accounting units		
	Structure of Ownership		Contribution to Growth
	1993	1997	1993-1997
Total	100	100	
SOEs	55.6	40.8	20.1
FIEs	9.1	20.8	37.1
<i>Of which:</i>			
Foreign	4.7	12.0	22.2
HK+Macao+Taiwan	4.4	8.9	14.9
Other firms	35.2	38.4	42.8
<i>Of which:</i>			
Collective enterprises	30.0	28.9	27.5
Shareholding companies	3.6	7.2	12.1
Others	1.6	2.3	3.2

Source: China Statistical Yearbook, various issues.

There has also been an important shift between the different categories of foreign investors during this period: the production of FIEs involving investors from developed countries increased much faster than FIEs involving “Overseas Chinese” from Hong Kong, Macao and Taiwan. In 1997, foreign affiliates from developed countries accounted for the most important part of total FIE output (almost 60 per cent) and were responsible for 12 per cent of China’s industrial output. This means that multinational enterprises (MNEs) have played an important role in the wave of FDI since 1993. This implied structural changes in

13. The IAUs correspond approximately to industrial enterprises at the level of townships and above, i.e. they exclude village enterprises. They cover about 60 per cent of total industrial output.

the nature of FDI inflows as these investors' strategies are different from that of Overseas Chinese. Their investment projects are larger, more oriented towards relatively capital intensive and technology intensive sectors, and more oriented towards the domestic market. This can be expected to have positive effects through capital and technology transfers.

In 1998 and 1999, FIEs further strengthened their position in industry. They recorded growth rates, which were well above average (12.6 per cent against 8.7 per cent), and their share in industrial value-added increased from 17.8 in 1997 to 19.1 in 1998 and 20.6 in 1999.

(7) *Foreign and domestic firms are different*

Looking at the distribution of investment by category of enterprise and type of expenditure, the research led to the following observations:

- FIEs have a relatively high level of capital expenditure per worker as their contribution to total investment in fixed assets (12 per cent in 1997) by far exceeds their share in urban employment (3 per cent).
- Investment by Chinese firms is mostly devoted to the expansion of production capacities, as shown by the importance of "construction and installation works", while FIE investment incorporates much more equipment and technology.
- Hong Kong and Taiwanese investors' behaviour is quite different from that of investors from other countries: FIEs from developed countries have a bigger contribution to total fixed investment and their investment conveys much more expenditure for machinery and equipment. They correspond to more capital intensive projects and are thus more likely to imply technology transfers.

Table 10. Distribution of Investment by Category of Ownership and Type of Expenditure, 1997 (in %)

	All firms	SOE	FIEs	of which:		Others
				Foreign	HK&Macao	
Total fixed investment	100	100	100	100	100	100
Construction, installation	62.6	61.4	50.2	48.2	54.4	68.4
Equipment	24.2	23.8	32.0	35.3	25.1	22.4
Others	13.2	14.9	17.8	16.5	20.5	9.2
Total fixed investment	100.0	52.5	11.6	7.8	3.8	35.9
Construction, installation	100.0	51.5	9.3	6.0	3.3	39.2
Equipment	100.0	51.5	15.3	11.4	3.9	33.2
Others	100.0	59.3	15.7	9.8	5.8	25.0

Source: China Statistical Yearbook, various issues.

Two clear differences in industrial structure between FFEs and DOEs have been observed. First, in terms of the factor intensity of industries, the industrial structure of FFEs is more biased towards labour intensive industries compared to the DOEs. In terms of aggregate capital stocks, half (50.42 per cent) of the FFEs are in labour intensive industries and, in contrast, two-thirds (64.56 per cent) of the DOEs are in capital and technology intensive industries. Second, in the capital and technology intensive industries, FFEs are relatively more concentrated in the newly developing and fast growing industries such as electronics and

telecommunications equipment, transport equipment, and electrical machinery and equipment industries. By contrast, DOEs are more concentrated in the conventional basic capital intensive and large scale industries such as ferrous metal smelting and pressing, chemical materials and products, machine making, and petroleum refining & coking industries.

The differences can be attributed to two main causes. First, the basic industrial structure of domestic firms has been determined by China's industrial development policies of giving priority to the development of heavy industries since the 1950s and especially during the mid-1950s to the 1970s.¹⁴ These policies have not only hindered the development of labour intensive industries, in which China has a comparative advantage, but also put China in the unfavourable position of competing in the international market with this comparative disadvantage. Second, a large share of foreign direct investment originated from developing source countries, particularly the NIEs. The comparative advantages of these firms lie essentially in standardised products. These are also compatible to China's own comparative advantages.

(8) *FDI has increased domestic competition*

A significant part of the research conducted in this area focused on the changes induced by foreign funded enterprises in the competitive structure of China's industry.

It was found that FIEs overtook SOEs as well as collective enterprises as main producers of electronic goods, cultural and sports goods, leather products. In thirteen other sectors, non-state owned domestic firms (collective and private enterprises) were responsible for more than half of industrial production. In these sectors FIEs were less in competition with SOEs, which are nearly out of the market, than with collective and private enterprises. In only 6 sectors (tobacco, timber, petroleum and gas extraction, petroleum processing, coal mining, ferrous metallurgy) SOEs represented more than 55 per cent of output in 1997. All these sectors, except tobacco, are typically "heavy" industries.

There is also a positive relationship between the weight of SOEs in output and SOE rate of pre-tax profit. This suggests that in sectors in which SOEs held large output shares, they succeeded in keeping relatively high profit rates. Where they lost their monopolistic situation, however, the competition from other categories of firms led to lower profits. In most competitive sectors (defined as those in which SOEs account for less than half of output), SOEs displayed a lower profit margin than FIEs and non-state Chinese firms. Stronger competition has thus resulted in state-owned enterprises having much poorer financial performance than others.

Looking at 1997 data on domestic supply and imports for domestic use (excluding imports for processing), it can be observed that Chinese firms still kept dominant positions in China's market. They supplied almost 85 per cent of the apparent domestic demand for industrial goods. Their market share was below 70 per cent in only two sectors (instruments, electric and electronic equipment) and below 80 per cent in two others (transport equipment and machinery).

A second finding is that FIEs have had a much more important part to play than imports in the opening up of the Chinese economy to "foreign" competition. FIEs supplied about 9 per cent of the Chinese domestic demand of industrial goods, whereas imports for domestic use accounted for only 5 per cent of it. FIEs held relatively strong positions in the domestic market in various industries: food (13.3 per cent), metal

14. There have been two large waves of change to China's heavy industry biased industrial structure. The first wave has been driven since the late 1970s, especially after 1984, by the rapid development of rural labour-intensive industries. The second wave has been driven since the mid-1980s, especially since the early 1990s, by the fast growth of FIEs accompanied by the huge amount of FDI inflows into China's labour intensive industries.

products (13.6 per cent), transport equipment (14.1 per cent) and electric and electronic goods (24 per cent).

In several sectors the relatively strong presence of FIEs in the domestic market was associated with a relatively high tariff protection. This was particularly the case with food and transport equipment, which are characterised by high nominal tariff rates and low import penetration. By contrast, import penetration was relatively high in instrument and machinery (respectively 38 and 18 per cent) which can be explained by the preferential regime accorded to foreign enterprises.

China's entry to the WTO will lead to cuts in tariffs on industrial goods, which will drop from the current 21 per cent to 9.44 per cent in 2005, and to the phasing out of all quantitative restrictions on industrial imports. Domestic and foreign firms will face stronger competition from imports. Following a scenario elaborated recently by a team of Chinese experts from the Development Research Centre; it can be expected that capital intensive industries (namely, vehicles, electric and electronic goods, machinery) will be negatively affected by increased import competition.

The actual effect of import liberalisation on the different categories of firms will depend on their sector specialisation. FIEs which are specialised in labour intensive industries will be less affected than SOEs. However they are also strongly involved in some capital-intensive sectors, such as the car industry, and will have to withstand import competition since tariffs of cars will be lowered from 80 per cent to 25 per cent.

(9) *FDI has increased industrial performance*

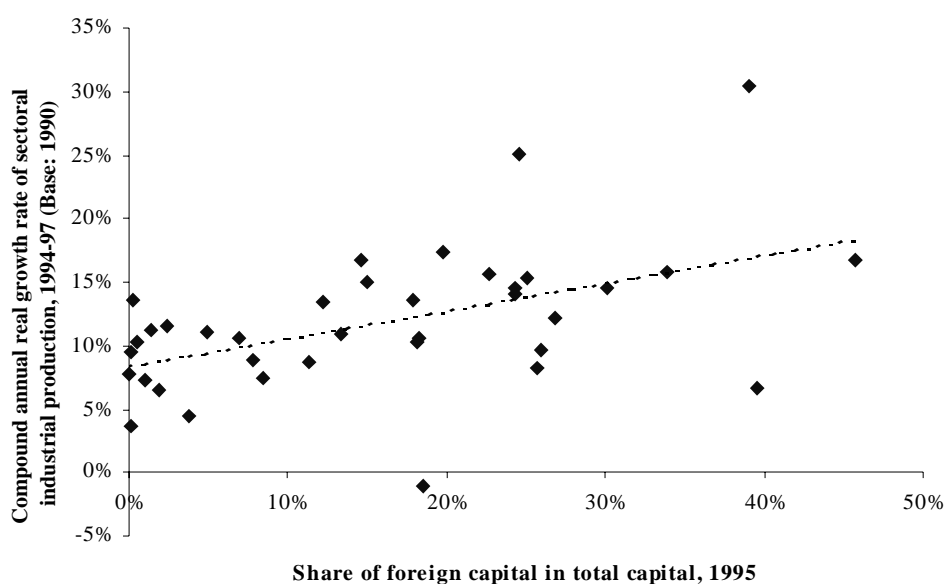
A positive relationship can be observed at the sector level between the share of foreign capital in total capital in 1995 and the annual growth rate of industrial production between 1994 and 1997. This positive relationship indicates that sectors with a better endowment in foreign capital in 1995 grew on average most rapidly during the 1994-97 period although there have been some exceptions.¹⁵

Productivity rates in different industrial sectors and Chinese provinces were also investigated. The tests support the hypothesis of an endogenous growth process in Chinese manufacturing industries in which foreign capital is a main engine.

In addition, the output elasticity with respect to foreign capital is significantly higher in coastal provinces than in inland ones (0.19 versus 0.07), while the output elasticity with respect to domestic capital is, on the other hand, significantly lower (0.47 versus 0.67). This regional difference suggests that production processes at work in coastal provinces are significantly different from those in interior provinces. It particularly shows a higher sensitivity of production to a given variation of foreign capital in coastal provinces.

15. Garments, on the one hand, and electronics and telecommunication equipment on the other, experienced very different industrial output growth (6.7 per cent per year for the former against 30.4 per cent per year for the latter) despite similar shares of foreign capital in total capital in 1995 (around 40 per cent).

Figure 12. Share of foreign capital and industrial growth, per sector (1994-97)



Sources: China Industrial Yearbook (1995 and 1998) and Third National Industrial Census of the PRC in 1995 (sector volume).

The stronger role of foreign capital in coastal provinces was further illustrated by calculating the relative amounts of foreign and domestic capital. On the basis of this criterion, almost one fourth of the industrial capital used in Chinese coastal provinces is of foreign origin while in inland provinces the proportion is less than 10 per cent. This means that coastal areas have been able to put this to productive use through different mechanisms including economies of scale, spill-over effects and so on.

On a sector basis, metal smelting industries are those which received the fewest amounts of foreign capital compared to domestic capital (with an average ratio of 0.1). On the other hand, as already mentioned in previous sections, consumer goods industries (including electronics, food, textile, printing and timber products) received the highest absolute and relative levels of foreign capital. In these light-manufacturing industries, the ratio of foreign to domestic capital goes up to 43 per cent for electronics and electric goods, indicating a relatively well-developed and strong foreign participation in these particular industries. Once again, even in these opened sectors, a huge gap can be observed between coastal and inland provinces, with a very small foreign participation in inland provinces.

Looking at the relative rate of returns for foreign capital; it was found that the returns to foreign capital relative to domestic capital are higher, confirming the hypothesis that the marginal productivity of foreign capital in China has been on average higher than that of domestic capital as demonstrated by other studies.

However, the overall foreign to domestic returns gap does not vary greatly between regional zones and is slightly higher in coastal provinces. This means that while better endowed in foreign capital and thus more likely to experience a lower gap between foreign and domestic capital remuneration, coastal provinces benefited from other gains which contributed to the increase of foreign capital marginal productivity, other things being equal. These gains reinforce the role of returns to scale and technological diffusion, which appear to have been at work much more in coastal provinces than in inland China.

Two other interesting results were observed at the sector level. On the one hand, industries such as foods mainly devoted to serving the domestic market, seem to have less advantage in using foreign rather than domestic capital. On the other hand, industries designed to serve the international market, such as the labour intensive textiles industries, have a relative return of foreign capital greater than one. Second, there could be “delocalisation gains” by shifting certain industries inland. For instance, returns of foreign capital in timber products and printing could be increased by moving the production towards inland provinces. In contrast, FDI directed towards machinery or metal smelting sectors should, at least at first, be located along the coast since these sectors benefit from a higher relative marginal productivity in coastal provinces.

This implies that FDI directed towards capital and technology intensive activities such as metal smelting industries should preferably be located along the coast. For FDI oriented sectors such as textile, electronics and food, differences between coastal and interior provinces seem to be much smaller.

C. Conclusions and preliminary findings

The analysis of the impact of FDI on China’s external trade structure reveals the following findings:

China’s policy aimed at promoting export-oriented FDI has met with remarkable success. It has led to the building of an internationalised manufacturing sector, highly competitive in world markets. The resilience of this export-oriented and import-dependant sector during the Asian crisis was remarkable.

FDI firms can be expected to continue to strengthen China’s comparative advantages by increasing its specialisation in the exports of labour intensive products and technology intensive products.

The positive effect of China’s opening up strategy was not so evident, however, for domestic firms, which recorded a relatively modest export performance. The internationalised sector also developed few backward and forward linkages with the rest of the economy. A reason why domestic firm exports lagged behind can also be found in their limited access to foreign equipment and technology.

China’s entry into the WTO will have far-reaching consequences. It will put an end to the fragmentation of China’s trade regime and allow a more equal access to foreign resources. Chinese firms should take advantage of lower import tariffs to proceed with their technical modernisation and enhance their competitiveness on domestic and world markets. After accession China’s trade is likely to become less dependant on foreign firms as liberalisation will give more room to imports supplying the domestic market. The phasing out of AMF quota will also stimulate the expansion of clothing exports and production and mainly benefit domestic firms which are responsible for more than 75 per cent of these exports.

In a country like China, characterised by a strong inter-sectoral specialisation, trade liberalisation is expected to lead to important reallocations of resources within the domestic economy. As pointed out by several studies, joining the WTO will lead to an accelerated transfer of production factors from agriculture to industry and, within industry, from capital intensive to labour intensive sectors. Trade liberalisation will strengthen China's comparative advantage in labour intensive sectors. It is likely to deepen China’s integration in the international segmentation of production process, as this strategy makes it possible to capitalise on its specialisation in labour intensive stages of production while diversifying its export capacities towards more technologically advanced products.

The analysis of the impact of FDI on China's industry, its performances and its competitiveness reveals the following findings:

- Strong impacts on the industrial structure and competitive environment

Foreign enterprises have become major players in China's industrial modernisation. Their relatively large contribution to domestic investment and to manufacturing output, their higher capital intensity and labour productivity, compared to domestic firms, indicate potentially strong effects on industrial structure and efficiency.

FIEs' specialisation shows a bias in favour of labour intensive industries but nevertheless allows for their strong participation in some capital-intensive industries. Another important finding is that, while still contributing decisively to China's export performance, FDI production is now more domestic than export-oriented.

FDI has allowed new entrants into China's industry and hence accelerated the diversification of ownership pattern, which has been part of the emergence of competitive structures.

FDI production now takes a more important part than imports in the supply of Chinese domestic demand, pointing out that FDI has been a determinant factor in the opening up of China's economy.

China joining the WTO will lead to further trade liberalisation and imply stronger competition in the domestic market. Foreign funded firms located in industries which were protected by relatively high tariff and non-tariff barriers, such as the car industry, will then have to withstand competition from imports.

- Other important features can be observed

The Chinese manufacturing industry seems to be characterised by increasing returns to scale, when taking account of labour and both domestic and foreign capital.

Relative rates of returns however show a generally higher marginal productivity of foreign capital, however, with substantial differences across regional zones and across sectors.

There is a clear gap between coastal and interior provinces in terms of their production process, with a higher technology level in the coastal areas partly attributable to larger amounts of FDI inflows.

- Which have important policy consequences for the future

China could improve the productivity of production capacities in inland provinces by undertaking appropriate measures to attract high-return investments.

Moving FDI towards more capital-intensive activities in coastal provinces and towards interior provinces for labour-intensive activities is likely to generate overall productivity gains for China's industry.

China should undertake economic policy measures that stimulate the development of labour-intensive industries in central and western China. This will lead to a better exploitation of China's comparative advantages in both traditional and new areas of economic activity.