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Yingqi Wei

The Department of Economics
Lancaster University Management School
Lancaster LA1 4YX
UK

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Foreign Direct Investment in China: A Survey

Yingqi Wei

International Business Research Group
Department of Economics
Lancaster University
Lancaster LA1 4YX

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1. Introduction

In response to the open-door policy formulated in 1978, inward foreign direct investment (FDI) in China has grown appreciably. By June 2002, the cumulative contracted and realised values of inward FDI reached US$ 789 and 420 billion respectively (People's Daily, Overseas Edition, 12 July 2002). China is now the largest host to FDI in the developing world. A remarkable development in the contemporary period of globalisation, the opening up of China to FDI has attracted much attention from both the academic and business sectors. A large number of studies have attempted to addressed the following issues. Why is China so successful in attracting FDI? What role has FDI played in the development process of China? Is China's experience with FDI unique? This paper examines the evidence on these and other issues. Section 2 of the paper reviews general trends and characteristics of FDI in China. Section 3 outlines various determinants of FDI at the national and regional levels in China. Section 4 investigates the relationships between FDI on the one hand and technology transfer, spillovers, foreign trade and economic growth on the other. The last section concludes.

2. Characteristics of FDI in China

China opened up the economy to FDI in 1979 for the purposes of acquiring foreign capital, advanced technologies and management skills required for upgrading the industrial structure and stimulating economic growth. Both because of ideological reasons and lack of experience, China has followed a gradualist policy towards FDI. In

the early years since liberalisation in 1978 China could be said to have 'experimented' with FDI; the bulk of it was concentrated in the four special economic zones (SEZs) in Guangdong and Fujian provinces, and foreign enterprise participation was confined to joint ventures (JVs) and export-oriented activities FDI was then gradually allowed into areas other than the SEZs and into a large number of industrial sectors.

The general trends and characteristics of FDI in China have been reviewed extensively. (e.g. Lee, 1997; Hayter and Han, 1998; Sun, 1998a, b; Henley et al. 1999; Wu, 1999; Lemoine, 2000; Huang, 2001a,b; Wei and Liu, 2001; OECD, 2002). It is recognised that the development path of inward FDI in China has never been even. During the early stages of China's economic reforms and opening up to the outside world, FDI inflows were not significant. Its growth increased significantly in the mid-1980s and gained momentum in the early 1990s. Since the mid-1990s, China has become a major host of FDI in the world.

The volume of FDI in China reported by official agencies may be an overestimate, partly because of the overvaluation of capital equipment contributed to joint ventures by foreign investors, and partly because of ‘round-tripping’ investment. Huang (1998) estimates round-tripping capital at 23 per cent of China's FDI inflows. But even after netting out this type of investment, China's FDI inflows are relatively high. With recent improvements in statistical methods and national treatment accorded to foreign investors, the magnitude of the problem should be reduced. However, as noted by Huang (2001a), China defines FDI at the level of at least 25 per cent of a firm's equity which is much

higher than the threshold level set in OECD countries which is 10 per cent. This is likely to cause FDI in China to be understated. For these reasons, it is difficult to identify the direction of bias in the data. Most studies acknowledge the problem and urge caution in interpreting it. This caveat also applies to this study.

Table 1 shows the number of projects contracted, and the contracted and realised FDI values from 1979 to 2000. Four stages in the development path of inward FDI can be discerned: the experimental stage (1979-83), the growth stage (1984-91), the peak stage (1992-94), and the adjustment stage (1995 onwards). During the experimental stage, the legal and institutional basis for FDI inflows into China was set up. FDI was mainly directed to the four special economic zones (SEZs) in Guangdong and Fujian provinces. The total amount of FDI was fairly low during this stage, reflecting the cautious attitudes of both the Chinese government and foreign investors. With the seemingly successful experiment with FDI and the satisfactory economic situation nationwide, China took a number of measures and formulated a series of laws and regulations to improve the business environment and facilitate more FDI inflows during the growth stage. As a consequence, there was a steady and rapid growth of realised FDI inflows at 20 per cent. Between 1992 and 1993, there was a surge of FDI into China. The figures for contracted and realised FDI exceeded the corresponding figures for the previous 13 years. This was closely associated with a number of events, including Deng Xiaoping's tour of the southern provinces, the nationwide implementation of opening up policies for FDI, and the worldwide rise in FDI flows. From 1994 onwards the investment boom in China seemed to cool down. The growth rates of FDI in terms of number of projects and

contracted figure turned negative in 1994. The growth rate of realised FDI figure also fell during 1994 and 1999, though there was a recovery in 2000. Since 1994, the Chinese government has closely monitored FDI inflows.

Despite the overall high FDI inflows, its distribution is unbalanced in terms of its sources, types, and regional and sectoral distribution. In the early years although investors from more than 100 different countries and regions invested in China, the majority of investors were ethnic Chinese. The share of FDI from Hong Kong, Macao and Taiwan reached a peak in 1992, at around 80 per cent (Table 2). In recent years, however, the ethnic share in total FDI has decreased while that of US and EU has increased. In 2000, 45 per cent of FDI was from Hong Kong, Macao and Taiwan and 11 per cent from US and EU, respectively.

It is worth noting here that the Chinese official data on FDI by nationality of source countries may be biased, partly because of the round-tripping problem addressed above, and partly because of the diversity of overseas Chinese investors. Hong Kong, Macao and Taiwan were not the only sources of ethnic Chinese investors. Some FDI from other Asian, European, Australian and North American countries was also undertaken by people of Chinese extraction. In addition, FDI from Hong Kong and Macao not only includes investments from Hong Kong and Macao but also investment flows from Taiwan and Southeast Asian countries. This is in part due to political expediencies which appear to have compelled countries such as Indonesia and Taiwan to rout their investment through Hong Kong.

According to Wei (1995), inflows of FDI, large though they are, fall short of China's potential, especially from US and EU. It is noted that FDI from developed countries is concentrated in capital-intensive and high-tech sectors and that from developing countries is concentrated in labour-intensive and low-tech sectors. The current composition of sources of FDI in China needs to be diversified if China is to gain advanced technologies. There are though several issues associated with this thesis. What sort of advanced technologies does China need? Can they be efficiently absorbed by China or Chinese indigenous firms. These questions will be discussed later in the paper.

The main types of FDI in China are equity joint ventures (EJVs), contractual joint ventures (CJVs) and investments by wholly foreign-owned enterprises (WFOEs). They differ in legal form, the degree of control exercised by foreign firms, and management structure. A WFOE is a limited liability entity solely owned and operated by a foreign investor who receives all profits and bears all costs and risks. An international EJV is defined as a firm where resource commitment, profit distribution, risk sharing, and control and management are based on equity shares of partners rather than by contract, a feature of an international CJV.

Table 3 shows that CJVs were the most important type during the immediate post-1978 years. Since the late 1980s, EJVs and WFOEs have become predominent and recent years have seen a proliferation of WFOEs. EJV has been a popular entry mode for two reasons. First, the Chinese government believes that EJVs best serve the Chinese objective of

absorbing foreign capital, technology, and management expertise. Second, foreign investors hope, that by engaging in joint ventures, the local partners may assist in penetrating the domestic markets and accessing utilities and critical inputs. The steady and incremental growth of WFOEs as an entry mode, however, suggests that foreign investors have not only gained in confidence over the years but also improved their ability to cope with risks and uncertainties of doing business in China (Luo and Neale, 1998). Deng (2001) notes, that many foreign investors in China have chosen WFOEs over EJVs in order to avoid the problems associated with EJVs, mostly caused by uncooperative or incompetent partners, differences in strategic objectives between partners, and the fear of loss of control over proprietary technology and know-how and a loss of long-term competitive advantages.

The regional distribution of FDI in China is very uneven. This is partially due to China's cautious policy towards FDI. In the early years of liberalisation, when FDI was restricted to four SEZs. FDI was then gradually allowed into 14 coastal cities, the traditional industrial or commercial centres, which offered better infrastructure than the inner areas. In recent years, FDI has been encouraged to flow into the inner areas too. Thus regional imbalances wereto be expected given the stage and strategy of China’s development.

Approximately 87 per cent of the cumulative FDI was located in the coastal (or eastern) regions, 10 per cent in the central regions, leaving the western region with a negligible share, during the period of 1985 to 2000 (Table 4). However, the proportion of FDI in the central and western regions has increased slightly since the 1990s. Among the eastern

regions, there have been changes since the mid-1990s. Though Guangdong continued to be the most favourable destination for FDI, its share declined from 46 per cent in 1990 to 28 per cent in 2000, while Jiangsu has benefited from its geographic location near Shanghai, Shandong, and Fujian and attracted up to 16 per cent of FDI in China in the year 2000. This is a big achievement for Jiangsu given that its share was less than 4 per cent in the 1980s. Finally, the degree of FDI penetration or dependency in these provinces, measured by the ratio of FDI stock to GDP, varies. Guangdong, Fujian, Tianjin, Shanghai and Beijing appeared to be much more dependent on FDI than Hebei, Zhejiang and Shandong (Lemoine, 2000).

Sectoral distribution of FDI too is highly uneven (Tables 5 and 6). Much of FDI, between 1979 and 1998, was in manufacturing, especially in such labour-intensive sectors as textiles, clothing and assembly lines of mechanical, electronic and electric products, which were all in line with China's comparative advantage. Foreign firms also participate in capital- and technology-intensive sectors. According to OECD (2002), shares of FDI in terms of value added in labour-intensive, capital- and technology-intensive sectors were 50 per cent, 23 per cent and 27 per cent, respectively, in 1995 and 42 per cent, 25 per cent and 33 per cent, respectively, in 1999. The service sector, especially real estate, was the second leading sector. In the future, especially with China's accession to WTO, and further liberalisation, it is expected that such service sectors as finance, telecommunications will account for increasing volumes of FDI.

FDI has attained increasing importance in the Chinese economy during the last two

decades. The contribution of FDI to capital formation in China was more than 10 per cent though there has been a decreasing trend since 1994 (Table 7). The share of industrial output value of foreign invested enterprises (FIEs) in the national total increased from 2 per cent in 1990 to 28 per cent in 1999. Almost half of China's total foreign trade was recently conducted by FIEs, though the net trade effect of FIEs is ambiguous.

FDI contributes to the creation of employment opportunities both directly and indirectly. The indirect employment effects, e.g. via backward and forward linkages, are difficult to measure. In terms of the direct effects, FIEs employed 6.1 million workers, accounting for 2.9 per cent of China's urban employment in 1999. FDI also affects returns to labour. Wu (2000) and Zhao (2001) both argue that FDI can raise relative wages of skilled labour to unskilled labour in China which is characterised by segmented labour markets and high labour mobility costs, regardless of whether or not they transfer in skill-biased technology. Zhao (2001) also shows that skilled labour earns significantly higher wages in FIEs than in the state owned enterprises (SOEs), while the reverse is true for unskilled labour. The mere entry of FDI brings in competition for skilled labour, which in turn raises returns to skills.

In summary, FDI in China has undergone systematic structural changes (Luo and Neale, 1998). Foreign investors have incrementally increased their commitments to the Chinese market. Many large multinationals such as Motorola, Coca-Cola, Lucent Technologies, General Motor, Ford and Unilever have become "dominant local players" in China. Many more have shown an increasing interest in China. In addition, a large number of foreign

firms have entered into capital- and technology-intensive sectors and located in relatively less-developed inland provinces.

3. Determinants of FDI in China

The impressive growth of FDI inflows into China has generated a number of empirical studies on the major determinants of FDI in China. They can be broadly categorised into two groups: studies at the national level (why foreign firms invest in China) and those at the regional level (why a foreign firm chooses a specific region within China). Most of these studies are based on the OLI framework, the eclectic paradigm, proposed by John Dunning. In summary, Dunning argues that firms invest abroad because of O (ownership), L (locational) and I (internalisation) advantages. Ownership advantage refers to the multinational's ability to compete with their rivals. Locational advantage relate to the multinational's willingness to invest in one host country rather than in others. Finally, internalisation advantage refers to the ability of the multinationals to internalise the O and L advantages.

3.1 National Determinants

Wang and Swain (1995), Wei (1995, 2000), Liu et al. (1997), Dees (1998), Zhang (2000), Hong and Chen (2001), Wei and Liu (2001) investigate the determinants of FDI at the national level. Most of these studies rely on relatively short period time series data, including Wang and Swain (1995), Hong and Chen (2001) and Zhang (2000), and consequently suffer from the problem of too few degrees of freedom. Our discussion will

focus on the results by Wei (1995, 2000), Liu et al. (1997), Dees (1998), and Wei and Liu (2001) in which panel data are used.

The empirical results from all these studies indicate that market size, measured by GDP, GDP per capita, GNP, or GNP per capita, has a significant and positive effect on inward FDI. Rapid economic growth may create large domestic markets and business opportunities for foreign investment and hence bolster investors' confidence to invest in China. The positive relationship between market size and inward FDI is also confirmed by Zhang (2000) who finds that both US and Hong Kong FDI are induced by China's large markets. This reflects the market-seeking motive of US firms and the objective of Hong Kong firms to shift from mainly export-oriented investments towards both the Chinese and international markets.

Liu et al. (1997), Dees (1998) and Wei and Liu (2001) provide evidence to show that China's low labour costs and relatively large volumes of exports play an important role in foreign firms' FDI decisions. Multinationals relocate certain types of manufacturing operations away from their home bases or set up a new business in a host country to exploit international differences in factor prices. Since labour costs are an important part of total costs, especially in labour intensive manufacturing, the lower the labour costs in a host country, the more attractive the host country is. Zhang (2000) finds that labour cost play a much more significant role in attracting FDI from Hong Kong than that from the US.

Exports may influence FDI in a number of ways. They can integrate home and host countries markets. This may enable home country firms to obtain information on investment opportunities in the host market. They may encourage increased FDI into the host country. In addition, it could be argued, that multinationals have an incentive to invest where internalisation provides access to specific sources of comparative advantage in the host country. Comparative advantage can be revealed by trade performance, and FDI could be expected to be positively related to bilateral trade.

Liu et al. (1997), Dees (1998) and Wei and Liu (2001) also investigate the relationship between the exchange rate and FDI inflows. A real depreciation of the host country's currency favours the foreign firms' purchase of the host country's assets and allows foreign investors to take advantage of the relatively cheap labour in the host country. Therefore, depreciation is expected to be positively associated with FDI inflows. Liu et al. (1997) and Wei and Liu (2001) obtain a positive coefficient on the exchange rate variable in the regression equations designed to test the determinants of FDI in China.

The impact of geographical distance on FDI flows is discussed by Wei (1995, 2000), Liu et al. (1997) and Wei and Liu (2001). Geographic proximity of the host to the home country of investors reduces informational and managerial uncertainty, lowers monitoring and transportation costs and reduces the exposure of multinationals to risk. The coefficient of the distance variable is found to be significant in studies on determinants by Wei (1995, 2000) but insignificant in Liu et al. (1997) and Wei and Liu (2001). These contradictory results may be due to differing data samples used in these studies. In Wei

(1995, 2000), China is just one of the host countries under investigation, while in Liu et al. (1997) and Wei and Liu (2001) China is the only host country.

It is also found that FDI inflows are positively and significantly influenced by adult literacy rates, a crude measure of average human capital (Wei, 1995), the change in patent registration by the foreign firms (Dees, 1998), linguistic ties (Wei, 2000) and borrowing costs and imports (Wei and Liu, 2001). FDI inflows are discouraged by corruption and regulatory burden (Wei, 2000), and country risk and cultural differences (Wei and Liu, 2001).

3.2 Regional Determinants

Quite a number of studies have investigated the regional distribution of FDI in China, including Gong (1995), Chen (1996), Head and Ries (1996), Chen (1997), Wei et al. (1999), Berthelemy and Demurger (2000), Cheng and Kwan (2000), Zhao and Zhu (2000), Wei and Liu (2001) and Zhang (2001a). The common factors investigated include market size, agglomeration effects, infrastructure, human capital, labour costs and productivity, and investment incentives.

The existing studies seem to agree that regional market size is the principal determinant. In Wei et al. (1999) and Wei and Liu (2001), a consistent finding is that the growth of regional markets proxied by GDP growth is statistically significant for contracted FDI inflows. Zhao and Zhu (2000) find that market size of a city significantly induces

investment from Hong Kong, Macao, Taiwan, Singapore and other Asian countries, but it does not seem to be important for Japanese, South Korean, US and European firms. Sun et al. (2002) divide the full sample into two sub-samples, 1986-91 and 1992-98 and find that provincial GDP has no significant impact on FDI before 1991, though there is a positive relationship since then. They suggest that this may reflect the shift in the motives of FDI from export-oriented to market-seeking from 1991.

Though different measures are adopted, Gong (1995), Head and Ries (1996), Chen (1997), Wei et al. (1999), Berthelemy and Demurger (2000), Cheng and Kwan (2000), and Kevin Zhang (2001a) provide support to the argument that agglomeration has significant and positive impact on inward FDI. The agglomeration effect is often associated with externalities. Foreign firms can benefit from the concentration of production and urbanisation. This is because it helps them to enhance their levels of technology and reap economies of scale and scope due to knowledge spillovers, the availability of human capital and the use of joint networks of suppliers and distributors. Foreign firms may also benefit from the presence of their fellow investors who are either their competitors or suppliers since this may enable them to obtain valuable information. Firms may also enjoy other positive externalities from agglomeration such as complementarity between industries and experienced local administration.

Infrastructure and human capital (or labour quality) are also important determinants of FDI. Other things being equal, regions with developed infrastructure and high-quality labour tend to be more attractive for foreign investors since they promote profitability in

the international production. All the above studies except Coughlin and Segev (2000) confirm the positive and significant impact of infrastructure, in one form or another, on inward FDI. Coughlin and Segev (2000) find a positive though insignificant relationship. Empirical support for the importance of human capital (or labour quality) in FDI location decisions is provided by all the studies with the exception of Cheng and Kwan (2000) in which a positive but statistically insignificant relationship has been found. Zhao and Zhu (2000) also find that sound infrastructure and high quality of labour are significant determinants of FDI irrespective of its country-of-origin.

A dummy variable which differentiates the coastal regions from the non-coastal regions has been introduced in most of the studies analysing determinants of FDI. A consistent finding of these studies is that foreign firms have a significant preference for investing in the coastal provinces. This is not surprising, as the coastal regions are the low information cost areas and they enjoyed preferential treatment during China's early experimentation with FDI.

The studies on the impact of labour costs on FDI, however, produce a mixed bag of results. Cheap factor inputs are obviously a major attraction to foreign investors. Thus, there should be a negative relationship between labour costs and inward FDI. However, a positive relationship between the two is also thought to be possible in the literature as wage rates could be treated as a proxy for labour quality. Higher wage rates may signify higher skills that foreign investors seek..

It is though inaccurate to say that FDI is attracted mainly by cheap labour. It is efficiency wage which counts. After controlling for productivity, Coughlin and Chen (1997), Segev (2000), Wei et al. (1999) and Wei and Liu (2001) find that wage rates negatively influence FDI inflows. No significant relationship between FDI and wage costs is found in Head and Ries (1996) and a positive and significant relationship is found in Zhao and Zhu (2000). Sun, Tong and Yu (2002) provide the evidence to show that wage is positively related to FDI before 1991 but negatively related with FDI since then.

Finally, most studies find a significant relationship between FDI inflows and the ratio of FDI to domestic investment, electricity consumption, rental costs, trade, the ratios of import (or export or trade) to GDP, country risk and foreign portfolio investment. Tung and Cho (2000) indicate that concessionary tax rates and incentives are an effective way of attracting FDI into the designated locations inside China.

In sum, FDI in China has been motivated by several factors. First, market size appears to be one major determinant. China, with the world's largest population of 1.2 billion and a vast and growing middle class, is often regarded as an enormous market that is under-served by multinationals. The Chinese government's efforts to promote economic growth should help increase the effective market size and thus attract more FDI. Second, foreign trade, which measures the degree of integration of China into the rest of the world, is important in boosting FDI inflows. China has become one of the top ten trading nations in the world since 1997. China's accession to the WTO can be expected to further expand China's foreign trade, which, in turn, may increase the volume of FDI inflows. Third,

China has enjoyed an advantage from its endowments of labour in attracting large volumes of FDI. China has abundant supplies of labour, both skilled and unskilled. At the national level, compared with other countries, the low effective wage rate in China is one of her major locational advantages. At the regional level, regions with a low average wage rate, given the productivity level, are in an advantageous position to attract FDI. Research also shows that high labour quality or human capital is essential at the regional level. However, the low-labour-cost advantage of China may not be sustainable as China now faces competition from its neighbouring countries such as Vietnam, Laos, and India which are also endowed with a cheap labour force and have adopted various policies to attract FDI.

As corruption, regulatory burden, and country risk at the national level are found to have a negative impact on FDI inflows, China should have a more transparent framework governing FDI and a better business environment. From the late 1970s, China has addressed investors' concerns about political risk by offering protection from (?) for FDI. China has also reduced various types of regulatory barriers applicable to FDI. Policies have been designed to shift away from targeting foreign investors towards specific locations and specific sectors to facilitate nationwide and broad-based sector participation. China has also granted various fiscal and financial concessions or incentives to FDI, though the extent of these measures was reduced after 1995 when China made a commitment to national treatment of FDI. China, in recent years, has committed itself to addressing one major concern of large investors – protection of intellectual property rights. After entry into the WTO, China needs to further improve its

trade and FDI policy regimes. The findings on infrastructure and agglomeration effects at the regional level suggest that China and her regions need to upgrade the industrial structure and physical, financial and technological infrastructures.

The foregoing empirical studies on the host country and region-specific determinants of overall FDI inflows using aggregate data are a valuable exercise. They provide insights into the types of structural characteristics and macroeconomic policies that may encourage FDI inflows.. However, they only capture broad and long-term trends. FDI from different sources may be attracted by different sets of determinants. Tuan and Ng (1995) argue that the heavy investment from Hong Kong has been driven by an international division of labour on the part of MNEs. Departments in Hong Kong handle R&D, marketing and management while subsidiaries in China engage in assembly and fabrication processes. Lu and Zhu (1995), based on a survey of 95 Singapore firms in China from 1990 to 1993, claim that Singapore FDI has been determined mainly by firms' specific competitive advantages, though business networking and confidence built on ethnic ties and friendly relationship between two nations have also been important. Hou (2002) notes that the Taiwanese investment boom in China is the result of an interaction between China's comparative advantages plus cultural and linguistic affinity across the Taiwan Strait and Taiwanese push force created by the structural changes in the Taiwanese economy. Rong (1999) provides support for the proposition that the unique patterns of Japanese FDI in China can be explained by taking into account the impact of two countries' historical experience and their love--hate political relationship.

Even FDI from the same home country can be sector- and project-specific, and may be induced by different factors. Lack of disaggregated data on sector and project specific, however, hampers research into these issues. In addition, the possible endogeneity between FDI and GDP growth and between FDI and exports has not been treated adequately in the empirical literature. As will be discussed in the next section, FDI also contributes to economic growth and exports. A rigorous investigation of the determinants and impact of FDI requires this aspect to be taken into account in empirical analyses.

While a fast growing market and a large pool of labour are regarded as the major determinants of FDI in China by mainstream analysts, Huang (2001a, b) argues that this conventional wisdom is wrong. Huang suggests that FDI in China can be better explained by an institutional foundation argument. His main proposition is that the absorption of large volumes of FDI by China is not a sign of the strengths of its economy but its fundamental weaknesses. This view has two components. Firstly, Chinese private export-oriented firms were at a disadvantage when borrowing from banks so that they could do nothing but sell their claims on future cash flows mainly to ethnic Chinese investors from Hong Kong and Taiwan. This accounts for a large volume of export-oriented FDI from these countries. Secondly, SOEs had built up a potentially valuable asset base during the reform era, which was financed by a generous infusion of subsidized credit from the banking system. Even so, SOEs have generated a thin or close to negative cash flow, rendering them potential targets for acquisition by foreign firms. It is thus that a large volume of domestically oriented FDI has been attracted to China.

No doubt Huang's research is important. He identifies a research area which deserves in-depth investigation. However, further evidence is required to validate this non-conventional view. First, were the Chinese export-oriented firms, as a general rule, private firms with severe liquidity constraints? The traditional view on the rapid growth of labour-intensive products in China is that FDI from Hong Kong and Taiwan was directed to labour-intensive export-oriented projects in the coastal provinces in order to effectively utilise China's large labour force. With the help of capital, simple technology and international marketing skills from ethnic Chinese investors, China's natural comparative advantage of cheap labour was exploited and translated into international competitiveness in the international markets (World Bank, 1994). The importation of simple machinery by the Chinese part to produce and export or the sub-contracting by the ethnic Chinese to Chinese private firms would not be preferred over FDI based on transaction cost economics. Undoubtedly the difficulty in obtaining finance by Chinese private firms may explain some cases of inward FDI, but could this be generalised to cover much of export-oriented FDI in China?

Second, it is not proven that much of FDI in China takes the form of mergers and acquisitions (M&A) rather than green-field investments. The fact is that "M&As played a relatively small role in FDI inflows into China - at the most for $2 billion out of a total FDI of $40 billion in 1999" (United Nations Conference on Trade and Development, World Investment Report 2000, p. 122). This statistic does not also support Huang's argument.

4. The Role of FDI in China's Economic Development

The role of FDI in economic development of the host countries has been debated extensively in the literature. Traditionally inward FDI is believed to promote economic development by increasing capital stock and augmenting employment, whereas recent literature points to other effects. Balasubramanyam et al. (1996, 1999) and de Mello (1997, 1999) argue that many of the growth-promoting factors identified by endogenous growth theory can be initiated and nurtured to promote growth through FDI. In most cases, what FDI transfers are not only capital and managerial skills, but also embodied and tacit technologies.

FDI may raise productivity levels among locally-owned firms in the industries which they enter by improving the allocation of resources in those industries. Multinationals may develop new products and technologies earlier than local firms, and may exert competitive pressure on them and force them to imitate or innovate. The threat of competition may also spur firms which might otherwise have been laggards to adopt best practice technology. As a result, the presence of multinationals may speed the process or lower the cost of technology transfer. Multinationals always try to preserve their proprietary rights over knowledge and technology, but spillovers through ‘learning by doing’ or ‘learning by watching’ may induce domestic firms to attain higher levels of technical or X-efficiency. Another route for the diffusion of new ideas is the movement of labour from foreign subsidiaries to locally owned firms.

FDI is believed to promote exports, which in turn will promote economic development and growth in the host country. If there are substantial differences in factor endowments between the host and home countries, the capital-abundant country tends to export capital-intensive services (e.g. R&D and marketing) and intermediate inputs to their subsidiaries in the labour-abundant country in exchange for finished varieties of differentiated goods and homogeneous goods. Thus, FDI generates complementary trade flows. For all these reasons, FDI is recognised as a major source of growth, especially in developing countries (de Mello, 1997; Borensztein et al., 1998).

The unprecedented growth of FDI has been accompanied by China's outstanding progress in foreign trade and economic development. During the period 1978-2000, China achieved an average GDP growth rate of around 8 per cent. Foreign trade also expanded dramatically. In the world league tables for international trade, China ranked 32nd in 1978, however, she dramatically moved up to become the 9th largest trading country in 1999.

4.1 Technology Transfer and Spllivers from FDI

Although FDI is regarded by the Chinese government as a prominent means of technology transfer, there is very little research on the issue. Chen et al. (1995) indicate that technology transfer from FDI is relatively low. The majority of FDI projects in the industrial sector are relatively unsophisticated, entailing, at best, the transfer of low and intermediate technologies. However, inward FDI has transferred important "software"

managerial and export marketing technology so crucial for the development of a market economy. Chen et al. argue that FDI's less than satisfactory contribution to high technology transfer to China is partially explained by the fact that China relied on Hong Kong and Taiwan as its principal sources of FDI.

Based on a case study of FDI in the coastal city of Dalian, Young and Lan (1997) also suggest that the extent of technology transfer is fairly limited but at the level to be expected given China is a developing country and her low technological capabilities. More specifically, the problems associated with technology transfer to China through FDI include: (1) many investors are not genuine sources of technology; (2) local partners have distorted motives and restricted absorptive capabilities; (3) moderate technology gap, an incomplete technology package and the dominant inflow of hardware hamper advanced technology transfer; and (4) most direct technology transfer is conducted in EJVs but there was only a small difference between the technology gap and technology transferability in many JVs.

Huang (2001a, b) is quite sceptical about technology transfer given that the dominant source of inward FDI is ethnic Chinese FDI from Hong Kong and Taiwan. He argues that the evidence on "hard technology transfer" associated with FDI. is thin. In addition, it is implausible to argue that the organisational know-how is present in all the FDI projects. Bennett et al. (2001) investigate 20 EU industrial firms operating in China and Zhang and Taylor (2001) examine the process of technology transfer in the context of learning by doing in the Chinese automotive industry. They conclude that there are transfers of low

and intermediate technologies to Chinese indigenous firms via various means. Based on a case study of 84 Hong Kong garment firms in China, Thompson (2002) finds that there is technology transfer and inter- and intra-industry spillovers from Hong Kong to China. Hong Kong FDI's plants in China are of a similar level of technological advancement as their Hong Kong plants. More specifically, the findings from Thompson (2002) support the proposition that FDI within geographical industry clusters transfer technology and facilitate knowledge spillovers more than FDI that is geographically dispersed. Li and Yeung (1999) conduct two company case studies in Shanghai: Shanghai Volkswagen Automotive Company Ltd (SVW) and Shanghai Bell Telephone Equipment Manufacturing Co Ltd. They report that in both cases, there are inter-firm technology transfer and knowledge spillovers. Tan (2002) finds that, in the case of a specific product – stored programme controlled switch, because of technology transfer and spillover effects of FDI, China has successfully transited from the status of an importer to one where foreign and domestic manufacturers of the product account for accounted for 57 per cent and 43 per cent of total sales respectively, in the year 2000.

The existing studies of technology transfer through FDI are mainly case-study based. As stated earlier, there is only evidence on low and intermediate technology transfers, mainly from investors from Hong Kong and Taiwan. Of course, it is arguable that technology consists of many things. What is appropriate depends on the stage of development of the host country. If the prime objective is employment HK technology is ideal. If more advanced technologies are to be transferred and absorbed, Chinese government policy needs to be refined and technical capabilities of Chinese indigenous firms need to be

enhanced.

Along with the research on technology transfer, there are also econometric studies on productivity spillovers in China. Fan and Warr (2000) find that FDI only promotes TFP growth in low and medium technology industries. They argue that productivity spillovers from FDI depends on the technology gap between domestic and foreign firms. Spillover effects increase with the gap up to a certain critical level. Beyond this threshold level, local firms will generally have little ability to absorb advanced technology.

Liu et al. (2001) and Wei and Liu (2001) examine the impact of FDI on labour productivity in the Chinese electronics industry. Both studies show that foreign presence is associated with higher labour productivity in the industry. Li et al (2001) estimate a system of three equations for foreign-invested firms (FIEs), state-owned enterprises (SOEs) and other locally-owned enterprises (OLOEs) respectively. Their results indicate that the extent to which spillovers occur varies with different types of ownership. While productivity gains of SOEs largely come from competition with FIEs, OLOEs benefit from demonstration and contagion effects from foreign presence. Productivities of local and foreign firms are jointly determined.

4.2 Impact of FDI on Foreign Trade

As both inward FDI and foreign trade have increased dramatically since the late 1970s, several empirical studies have recently examined the relationship between this means of

international integration. Chen (1999), Zhang and Song (2000), and Sun (2001) investigate the issue using panel data at the provincial level. Chen (1999) and Zhang and Song (2000) conclude that FDI has a positive and significant impact on provincial export performance. Sun (2001) confirms that increased levels of FDI has a positive impact on exports in the coastal and central regions of China. However, its impact on the western region was positive and significant during the period of 1984-96, but negative and insignificant during the period of 1984-97.

Using monthly time series data for the years 1986 to 1999 and cointegration/error correction modelling techniques Zhang and Felmingham (2001) find bi-directional causal links between inward FDI and exports for China as a whole. They also adopt a panel data approach to the examination of the FDI-trade relationship at the provincial level and conclude that bi-directional causality applies in both the coastal and western areas, and that exports Granger cause FDI in the case of medium level FDI recipients in central China. Liu et al. (2001) focus on the country of origin of the inward FDI and the destination of exports from China. They examine the causal relationship between FDI and trade based on a panel of bilateral data for China and 19 home countries/regions over the period 1984-98. They show a virtuous procedure of development for China: the growth of China's imports causes the growth in inward FDI from a home country/region, which, in turn, causes the growth of exports from China to the home country/region. The growth of exports causes the growth of imports.

It seems that the national and provincial data largely support a bilateral positive

relationship between inward FDI and China's export or foreign trade. The evidence provided in the discussion of FDI determinants early is confirmed here. However, as the FDI-trade relationship can be industry- or even firm-specific, the use of firm-level data may be more appropriate.

4.3 FDI and Economic Growth

There are a number of studies examining the relationship between inward FDI and economic development or growth in China. Some are largely descriptive supported by simple statistical or enterprise survey data, while others are based on econometric analyses. This subsection begins with a brief review of two descriptive studies, followed by an assessment of econometric evidence. This subsection focuses on the direct relationship between FDI and economic growth. Among the descriptive studies, the preliminary discussion of Huang (1995) suggests that FDI has induced China's economic growth and introduced advanced operation and management experiences, especially advanced and applied technologies, as well as speeded up the renovation of old enterprises.

Based on the Porter-Dunning diamond model of international competitiveness (Porter 1990; Dunning 1990, 1993), Liu and Song (1997) argue that FDI promotes China's economic growth via its influence on the demand and supply conditions, business strategy and competition. The economic reform and open-door policy has enabled China to translate its natural comparative advantage into economic growth and international

competitiveness in a wide range of labour-intensive commodities. In this process, the industrial restructuring of Asian newly industrialising economies (NIEs) and their FDI in China has played a very important role. China needs to link its economy more closely not only to the Asian NIEs but also to other economies, especially those of the triad (Japan, EU, and North America) and develop higher order competitiveness ahead of the current factor endowments.

One interesting development relating to studies of the impact of FDI on growth in China is that it has spurred econometric analysis of the phenomenon. Several recent studies seem to have arrived at a consensus that FDI, together with other explanatory variables, helps promote regional or industrial economic growth.

Wei (1994) is probably the first attempt on the subject using econometrics techniques. However, one problem with Wei's (1994) study is that he treas FDI as an exogenous variable in the regression equations. (Sung 1994; Page 1994). In fact, this is a common problem in most studies for China, including Chen, Chang and Zhang (1995), Chen and Fleisher (1996), Mody and Wang (1997), Sun (1998b), Dayal-Gulati and Husain (2000), Sun and Parikh (2001), Kevin Zhang (2001b), Wei Zhang (2001) and Zhang and Felmingham (2002). As discussed in the previous section, China's fast economic growth may have induced large volumes of FDI into China as it has rendered China attractive to foreign investors. Empirically, Zhang (1999) and Shan, Tian and Sun (1999) find a bi-directional causation between FDI and economic growth. Failure to consider the endogeneity issue may lead to ambiguous results.

Taking explicitly into account the two-way relationship between FDI and growth, Berthelemy and Demurger (2000) estimate a simultaneous equation model. They confirm that FDI has played a fundamental role in China's economic growth, though the magnitude of FDI is rather small. One special feature of Wei et al. (2001) and Wei and Liu (2001) is that they have carried out unit root tests and confirm the existence of a long-run positive relationship between FDI and economic growth.

One merit with Dayal-Gulati and Husain (2000) and Kevin Zhang (2001b) is that they attempt to identify possible structural variations over time through conducting panel and/or cross-sectional studies for three sub-periods. In Dayal-Gulati and Husain (2000), it seems that FDI had a much more positive and significant impact on on China's economic growth during 1993-97 period than during 1983-87, but had no significant effects during 1988-92. In Kevin Zhang (2001b), over the periods of 1984-88, 1989-93 and 1994-98, the impact of FDI on growth appeared to increase, with growth in FDI..

Mody and Wang (1997), Berthelemy and Demurger (2000) and Kevin Zhang (2001b) all report complementarity between human capital and FDI, i.e. sectors or provinces with a higher level of human capital seem to have benefited more from FDI than others. This is because availability of human capital is essential for absorbing technologies, managerial techniques and other spillover effects of FDI. Mody and Wang (1997) establish that industrial sectors can benefit from FDI only if secondary school enrolment rate in the region in which they locate exceeds a threshold level of 16 per cent.

Wu (2000) takes a different approach, the stochastic frontier method, to the investigation of how efficiently FDI was utilised in China's 10 coastal regions over the period of 1983-95. He shows that the utilisation of FDI by all regions experienced a learning process, i.e. FDI's productive efficiency initially declined and after a period of time it increased..

Despite differing approaches and methodologies adopted by the various studies, the central message from the above discussions is clear. FDI has significantly benefited the Chinese economy as a whole, although the coastal regions seem to have gained more than the rest of the country. However, one important limitation of the aforementioned empirical studies is that the utilization of aggregate data can only capture the net effects of FDI. Some negative effects cannot be identified by using aggregate data sets. Moreover, there is a lack of precision in identifying the mechanisms through which FDI promotes knowledge spillovers, exports and economic growth.

It is established in the literature that FDI from developed countries are mostly concentrated in the high-tech and capital-intensive sectors with vertically differentiated goods, while that from developing countries, particularly NIEs, is mostly in the low-tech and labour-intensive sectors with horizontally differentiated or homogenous goods. It is also argued that the local economy benefits more from EJVs than from WFOEs. However, in the context of China, there is no solid evidence on how FDI from different source countries or through different entry modes impact on economic development.

5. Conclusions

China initiated economic reform in 1979, with the introduction of FDI as one of the key development strategies. Despite the substantial literature on the determinants and impact of FDI in China, there is no systematic review of the existing studies. This survey attempts such a survey. . This survey suggests, despite the various problems associated with data, methodology and interpretation in these studies, they do provide an insight into the role of FDI in China.

A number of factors are recognised to be critical in firms' foreign investment location decisions. At the national level, FDI inflows are positively influenced by China's relative market size and economic integration through exports and imports, and negatively determined by China's effective real wage rates, corruption, red tapes, country risk, and cultural differences. At the regional level also the positive and significant determinants of FDI include market size and economic integration, as well as human capital, infrastructure, and the availability of information and investment incentives. Effective wage rates are negatively associated with FDI inflows into the Chinese regions. These empirical studies indicate that sustained efforts to promote political, economic and social development have contributed to the success of China in attracting a substantial volume of FDI. It is important to note that China is unique in attracting FDI in so far as much of FDI has been contributed by ethnic Chinese.

There is also evidence in support of the proposition that FDI leads to transfers of low and

intermediate technologies, imparts positive productivity and knowledge spillovers to Chinese indigenous firms, promotes foreign trade, and exerts a positive impact on economic growth in China. FDI, foreign trade and economic growth are closely inter-related. Thus, China seems to follow a virtuous process of development: the policy of economic reform and opening to the outside world accelerates economic development, foreign trade and FDI inflows, which in turn speeds up economic growth in China.

China's experience of FDI is unique in the sense that it has mainly been contributed by Chinese Diaspora. However, Diaspora investments can be explained by conventional wisdom. Most critiques of FDI in China ignore its contribution to China's growth and their arguments belittling such investments do not stand up to scrutiny. The introduction of low and intermediate technologies by FDI is associated with the limited technical knowledge possessed by most foreign investors in China, and with the limited capabilities of technology absorption of Chinese indigenous firms. FDI has contributed to growth in China though it has had some adverse consequences for development.

Given China's goal of modernising industry, agriculture, national defence and science technology, the introduction of only low and intermediate technologies from FDI is necessary though not sufficient. FDI from sources other than the Asian NIEs should be encouraged. In the meantime, domestic economic reforms, R&D expenditure and human capital accumulation are important for enhancing technological capabilities of indigenous firms so that advanced technologies and knowledge spillovers via FDI can be absorbed.

While the existing studies help us in understanding the determinants and impact of FDI in China, several issues need to be taken into consideration in future research. Few theoretical models designed especially for the Chinese case have been constructed although a number of empirical studies with sound methodology have been undertaken. Another problem that has often been ignored or not properly dealt with in the empirical literature is the arbitrary choice of explanatory variables. Existing data limitations necessitate caution in analysing the results based on empirical estimations and studies at the disaggregated industry and sector level are yet to be undertaken.

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Table 1. FDI Inflows into China, 1979-2000

Year	No. of Projects	Contracted FDI (US$ billion)	Realised FDI (US$ billion)
1979-82	920	5.0	1.8
1983	638	1.9	0.9
1984	2166	2.9	1.4
1985	3073	6.3	2.0
1986	1498	3.3	2.2
1987	2233	3.7	2.3
1988	5945	5.3	3.2
1989	5779	5.6	3.4
1990	7273	6.6	3.5
1991	12978	12.0	4.4
1992	48764	58.1	11.0
1993	83437	111.4	27.5
1994	47549	82.7	33.8
1995	37011	91.3	37.5
1996	24556	73.3	41.7
1997	21001	51.0	45.3
1998	19799	52.1	45.5
1999	17101	41.5	40.4
2000	22532	62.7	40.8
Total	364253	676.7	348.5

Source: State Statistical Bureau, China Statistical Yearbook, 2001.

Table 2. Share of Major Source Countries of Realised FDI in China, 1986-2000

Unit: %

Year	Hong Kong/Macao	Taiwan	Japan	US	EU
1986	59.22	-	11.74	14.54	7.96
1987	69.08	-	9.50	11.36	2.28
1988	65.60	-	16.11	7.39	4.92
1989	61.24	4.56	10.50	8.38	5.53
1990	54.87	6.38	14.44	13.08	4.23
1991	56.96	10.68	12.20	7.40	5.63
1992	70.03	9.54	6.45	4.64	2.21
1993	64.91	11.41	4.81	7.50	2.44
1994	59.75	10.04	6.15	7.38	4.55
1995	54.64	8.43	8.28	8.22	5.68
1996	50.95	8.33	8.82	8.25	6.56
1997	46.46	7.27	9.56	7.16	9.22
1998	41.64	6.41	7.48	8.58	8.75
1999	41.35	6.45	7.37	10.46	11.11
2000	38.92	5.64	7.16	10.77	11.00

Source: http://www.chinafdi.org.cn/english

Table 3. FDI by type of investment, 1979-99

Unit: %

Year	EJV	CJV	WFOE	Others
1979-84	14	40	3	43
1992	56	19	23	2
1993	56	19	24	1
1994	53	21	24	2
1995	51	20	28	1
1996	50	19	30	1
1997	43	20	36	1
1998	40	21	36	2
1999	39	20	39	2
1979-1999	47	21	30	2

Source: State Statistical Bureau, China Foreign Economic Statistical Yearbook, various issues and http://www.chinafdi.org.cn/english

Table 4. Regional Distribution of Realised FDI in China, 1985-2000

Unit: %

Year	1985-89	1990	1995	1997	1998	1999	2000
Eastern Regions	**87.9**	**93.1**	**87.7**	**85.9**	**87.2**	**87.8**	**87.8**
Beijing	9.9	8.1	2.9	3.5	4.8	4.9	4.2
Tianjin	3.6	1.1	4.1	5.6	4.7	4.4	2.9
Hebei	1.5	1.3	1.5	2.5	3.2	2.6	1.7
Liaoning	3.6	7.5	3.8	4.9	4.8	2.7	5.1
Shanghai	9.5	5.1	7.8	9.4	8.0	7.1	7.8
Jiangsu	3.7	3.9	13.9	12.1	14.6	15.2	15.9
Zhejiang	1.6	1.2	3.4	3.3	2.9	3.1	4.0
Fujian	6.9	9.3	10.9	9.3	9.3	10.1	8.5
Shandong	3.5	5.4	7.2	5.6	4.9	5.7	7.4
Guangdong	40.7	46.1	27.6	26.1	26.5	29.2	28.0
Hainan	1.8	3.0	2.9	1.6	1.6	1.2	1.1
Guangxi	1.7	1.0	1.8	2.0	2.0	1.6	1.3
Central Regions	**6.9**	**4.0**	**9.2**	**10.7**	**9.8**	**9.4**	**9.2**
Western Regions	**5.1**	**2.8**	**3.1**	**3.5**	**3.0**	**2.8**	**3.0**
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 5. Sectoral Distribution of Realised FDI in China, 1979-98

Unit: US$ billion

Sector	1979-86	1987-91	1992-94	1995-98	1979-98
	FDI (%)	FDI (%)	FDI (%)	FDI (%)	FDI (%)
Agriculture, forestry, animal husbandry & fishing	0.57 (2.98)	0.80 (2.41)	2.84 (1.13)	5.15 (1.92)	9.355 (1.63)
Manufacturing	7.60 (39.59)	25.66 (77.33)	127.87 (50.70)	177.07 (66.09)	338.20 (59.08)
Construction	0.31 (1.63)	0.56 (1.68)	8.11 (3.22)	8.78 (3.28)	17.76 (3.10)
Transport, warehousing, post & telecommunications	0.28 (1.48)	0.29 (0.87)	5.06 (2.01)	8.23 (3.07)	13.86 (2.42)
Wholesale & retailing, catering	1.42 (7.40)	0.44 (1.33)	9.97 (3.95)	8.93 (3.33)	20.76 (3.63)
Real estate	5.99 (31.21)	4.48 (13.51)	85.71 (33.98)	46.57 (17.38)	142.75 (24.93)
Health care, sports & social welfare	0.07 (0.34)	0.15 (0.46)	2.85 (1.13)	1.48 (0.55)	4.55 (0.79)
Education, culture, arts, broadcasting, film & TV	0.08 (0.42)	0.13 (0.39)	1.16 (0.46)	0.60 (0.22)	1.97 (0.34)
Scientific research & technical services	0.01 (0.05)	0.06 (0.18)	0.92 (0.37)	0.75 (0.28)	1.74 (0.30)
Others	2.86 (14.89)	0.61 (1.85)	7.72 (2.86)	10.37 (3.87)	21.56 (3.77)
Total	19.18 (100)	33.18 (100)	252.21 (100)	267.93 (100)	572.50 (100)

Source: Wei and Liu (2001)

Table 6. Share of Foreign Invested Firms in Industries, 1999

Unit: %

	Number of Enterprises	Value Added	Total Capital	Fixed Assets	Sales Revenue
Food Processing	4.0	3.7	2.9	3.1	4.3
Food Manufacturing	3.1	2.6	3.6	2.7	2.5
Beverage Manufacturing	1.6	3.2	4.3	3.4	2.4
Tobacco Processing	0.0	0.1	0.1	0.1	0.1
Textile Industry	7.6	4.8	5.7	5.1	4.9
Garments and Other Fiber Products	10.7	5.1	3.3	3.2	5.1
Leather, Furs, Down and Related Products	4.8	3.2	1.8	2.1	3.6

Table 6 Continued.

Timber Processing, Bamboo, Cane, Palm Fiber and Straw Products	1.9	0.8	1.0	1.0	0.9
Furniture Manufacturing	1.5	0.7	0.6	0.6	0.7
Papermaking and Paper Products	2.4	2.0	2.9	2.7	1.9
Printing and Record Medium Reproduction	1.6	1.2	1.2	1.1	0.9
Cultural, Educational and Sports Goods	3.1	1.7	1.4	1.3	1.8
Petroleum Processing and Coking	0.3	0.6	0.5	0.7	0.8
Raw Chemical Materials and Chemical Products	5.2	4.7	5.9	5.5	4.8
Medical and Pharmaceutical Products	2.0	2.5	2.0	2.1	1.7
Chemical Fiber	0.7	2.1	2.3	2.2	1.7
Rubber Products	1.2	1.3	1.6	1.7	1.3
Plastic Products	6.6	3.4	4.1	3.5	3.6
Nonmetal Mineral Products	5.1	3.1	6.2	5.2	2.7
Smelting and Pressing of Ferrous Metals	0.7	1.0	1.6	1.7	1.4
Smelting and Pressing of Nonferrous Metals	1.0	0.9	1.4	1.3	1.3
Metal Products	5.6	3.5	4.2	3.9	4.0
Ordinary Machinery	3.6	3.2	4.4	3.7	2.8
Special Purpose Equipment	2.3	1.4	1.6	1.6	1.4
Transport Equipment	3.0	7.5	7.1	7.8	7.4
Electric Equipment and Machinery	5.9	6.1	6.6	6.1	6.6
Electronic and Telecommunications Equipment	7.2	18.9	10.9	14.9	21.6
Instruments, Meters, Cultural and Office Machinery	1.8	1.9	1.4	1.4	2.2
Production and Supply of Electric Power, Steam and Hot Water	0.9	6.6	7.7	8.4	3.4
Others	0.6	0.4	0.5	0.5	0.4
Total	100	100	100	100	100

Source: State Statistical Bureau, China Statistical Yearbook, 2000.

Table 7. Importance of FDI and FIEs in China, 1982-2000

Unit: %

Year	Share of realised FDI in fixed asset investment	Share of FIEs in total industrial output value	Share of FIEs in total trade	Share of FIEs in import	Share of FIEs in export
1982	0.68		0.79	1.43	0.24
1983	0.88		1.42	1.35	1.49
1984	1.76		0.87	1.46	0.26
1985	1.92		3.39	4.89	1.09
1986	2.14		4.04	5.60	1.88
1987	2.37		5.55	7.81	3.07
1988	2.64		8.12	10.64	5.18
1989	3.19		12.28	14.87	9.35
1990	3.66	2.28	17.43	23.06	12.58
1991	4.15	5.29	21.34	26.51	16.75
1992	7.51	7.09	26.43	32.74	20.44
1993	12.13	9.15	34.27	40.24	27.51
1994	17.08	11.26	37.04	45.78	28.69
1995	15.65	14.31	39.10	47.66	31.51
1996	15.10	15.14	47.29	54.45	40.71
1997	14.79	18.57	46.95	54.59	41.00
1998	13.23	24.00	48.68	54.73	44.06
1999	11.17	27.75	50.78	51.83	45.47
2000	10.30		49.91	52.10	47.93

Source: Wei and Liu (2001) and http://www.chinafdi.org.cn/english