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Ownership biases and FDI in China: Evidence from two provinces[1]

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Abstract

Jiangsu and Zhejiang are of two of China most prosperous and dynamic provinces. This paper first presents a factual account of two empirical phenomena: 1) FDI has played a more substantial role in the economic development of Jiangsu than in Zhejiang, and 2) ownership biases against domestic private firms in Jiangsu were more substantial than in Zhejiang. The paper hypothesizes that there is a connection between these two empirical phenomena. Specifically, ownership biases against domestic private firms increase preferences for FDI because FDI provides a measure of relative property rights security. Thus a biased domestic private firm has an incentive to move its assets and/or future growth opportunities to the foreign sector. The paper uses two private-sector surveys—one conducted in 1993 and the other in 2002—to provide an empirical test of this hypothesis. Our analysis shows, controlling for a variety of firm-level attributes and industry and regional characteristics, those private firms which perceive ownership biases to be more severe are more likely to form joint ventures with foreign firms.

[1] This paper draws from materials gathered for a book-length project on these two provinces. The sources of data include field trips to the two provinces, survey data, and more standard firm-level and economy-wide data.

Ownership biases and FDI in China: Evidence from two provinces

"All our indicators are better than those of Ningbo [of Zhejiang province], except per capita income." Wang Mang, the mayor of Suzhou of Jiangsu province, 2004.

One of the favorite indicators government officials, such as Mayor Wang Mang of Suzhou, and researchers on China like to cite to showcase economic achievements is the amount of foreign direct investment (FDI) one is able to attract. By this criterion, Jiangsu province has been a huge success story. In absolute terms, Jiangsu ranks as the second largest provincial recipient of FDI (after Guangdong province). In 2002, Jiangsu received $10.2 billion in FDI, which accounted for nearly one-fifth of total FDI inflows into China. In contrast, the FDI inflows into Zhejiang only amounted to $3.1 billion in the same year. The less than stellar FDI inflows into Zhejiang prompted several research organizations—including the World Bank—to give a low score to the cities in Zhejiang on international integration.

However, as the above quote from Mayor Wang suggests, Jiangsu has consistently been outperformed by Zhejiang on those dimensions that actually matter—per capita income and economic growth. While both are prosperous, Jiangsu and Zhejiang got where they are via fundamentally different processes. Zhejiang is rich largely through a catch-up process; Jiangsu is rich today but it has always been rich. In 1980, Jiangsu already had the second largest GDP in the country (after Sichuan) and it produced almost twice as much as Zhejiang did. In per capita income terms, Jiangsu had occupied exactly the same spot in 1980 as it did in 2003—number three in the country (not including Beijing, Shanghai, and Tianjin, which do not have an agricultural sector). In contrast, Zhejiang ranked seventh in the country in 1980 but it ranked first by 2003 (again not counting Beijing, Shanghai, and Tianjin).[2]

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[2] Measured in GDP terms, Jiangsu had the second largest economy in China in 2003, at 1,245.2 billion yuan (about $150 billion), after Guangdong province. Zhejiang ranked fourth, after Guangdong, Jiangsu, and Shandong, at 920 billion yuan ($110 billion). In per capita income terms, however, Zhejiang ranked higher than Jiangsu. Excluding the three provincial-level cities—Beijing, Tianjin, and Shanghai—which have higher per capita income in part because they do not have an agricultural sector, Zhejiang was the richest province in China with a per

Elsewhere I document in great detail a host of performance differences between these two provinces—including the fact that Jiangsu was more indebted, had a much higher investment/GDP ratios, and a higher non-performing loan ratio. In this paper, I focus on one difference between Jiangsu and Zhejiang: FDI has played a far greater role in the economy of Jiangsu than in the economy of Zhejiang since the early 1990s. This difference in the role of FDI is all the more remarkable given how similar these two provinces are. Both are coastal; in fact they are located next to each other and each is within striking distance from Shanghai. (On a Chinese map, Jiangsu is north of Shanghai and Zhejiang is to the south.) In the 1980s, before the large-scale FDI liberalization in 1992, the two provinces had almost identical FDI/GDP and trade/GDP ratios. There is also little difference in the FDI policies between them. In the 1990s, both equally embraced FDI.

Another set of differences is that Zhejiang has a large and a far more vibrant domestic private sector than Jiangsu.[3] Among the top 100 largest private firms in China, half of them came from Zhejiang province, twice as many as the number from Jiangsu province.[4] Again, the two provinces are quite comparable in private-sector development from a historical perspective. In

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capita GDP of 19,730 yuan ($2,377) in 2003. Jiangsu, with a per capita GDP at 16,796 yuan ($2,024), ranked third after Guangdong.

[3] By domestic private sector, I mean firms owned and controlled by private entrepreneurs who are citizens of the People's Republic of China. This definition would exclude foreign-invested enterprises, collective firms (such as TVEs), and listed state-owned enterprises. In the Chinese economic literature, the broad term, non-state sector, encompasses domestic private firms, TVEs, FIEs, and partially private SOEs. The concept of a non-state sector is imprecise and it often motivates researchers to consider Zhejiang and Jiangsu as a single analytical category. A key insight of this paper is that Zhejiang and Jiangsu are in fact quite different in that Zhejiang discriminated less against the domestic private sector whereas Jiangsu discriminated more—in favor of firms such as TVEs.

[4] There are other differences between Zhejiang and Jiangsu aside from the number of the largest private firms. There is no "missing middle" phenomenon in Zhejiang as in Jiangsu, i.e., there are far more large private firms in the middle tier in Zhejiang than in Jiangsu. Private firms in Jiangsu are either very big or very small; also in terms of industry distribution the largest private firms in Jiangsu tend to congregate in capital-intensive and government-controlled sectors (such as steel). In Zhejiang some of the largest private firms are found in the most competitive industries, such as garments and shoes.

1952, private firms accounted for 57 percent of the sales value in the retail sector in Jiangsu and 60 percent in Zhejiang.[5] (Data on other economic activities for this period are unavailable.) At the beginning of the reforms, the size of the industrial non-state sector was quite similar in the two provinces. (More data on this will be presented later in the paper.) Historically speaking, these two provinces were among the most entrepreneurial and culturally developed in China. Both supplied many industrialists/entrepreneurs to Shanghai in the first half of the twentieth century and throughout Chinese history the two provinces produced some of the most prominent literary and political giants.[6]

The most important reason why the domestic private sector developed faster in Zhejiang than in Jiangsu has to do with policy differences. For complex reasons dealt with elsewhere, Zhejiang imposed less onerous ownership biases against domestic private firms while Jiangsu imposed more.[7] Jiangsu actively favored, in the1980s and up till the late 1990s, collective firms such as township and village enterprises (TVEs), whereas Zhejiang created a relatively more neutral business environment for both TVEs and domestic private firms. The result is that more efficient firms, i.e., private firms, in Zhejiang won the race, whereas in Jiangsu the failure of inefficient firms—and the success of efficient firms—was delayed by policies.

The hypothesis advanced in this paper is that there is a connection between ownership biases against domestic private firms on the one hand and FDI patterns on the other. And the causal direction runs from private sector development to FDI patterns, not the other way around. The argument is that ownership biases against domestic private firms can contribute to a greater dependency on FDI through several mechanisms. First, foreign firms can enjoy *relative* property rights security under a policy regime that treats domestic firms very poorly (even if foreign firms are not granted the same level of property rights protection as the one enjoyed in their home

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[5] Data are from (State Statistical Bureau 1990).

[6] Some of these industrialists were household names in China. Rong Yiren, who ran the largest textile operation in China in the 1930s and 1940s, came from Suzhou. An Wang, who later founded Wang Computer in Massachusetts, came from Kunshan, a county in the vicinity of Suzhou. In politics, maybe as a sign of things to come, Zhou Enlai, Communist China's premier between 1949 and 1976, was born in Jiangsu. His nemesis, Generalissimo Chiang Kai-shek, the leader of the Nationalist government on the mainland and then on Taiwan, was born near Ningbo in Zhejiang.

[7] Ownership biases against domestic private firms are well documented in economic research. See (Park and Shen 2000) and (Brandt and Li 2002).

countries). In this scenario, a biased domestic firm has an incentive to move its assets and/or potential gains from its future growth to the foreign sector to access the relatively superior legal protection and regulatory treatment accorded to foreign firms.[8] FDI preferences thus should correlate positively with the extent of ownership biases against domestic private firms (all else being equal).

The second mechanism operates on the capabilities of private firms.[9] Whatever their incentive to form joint ventures with foreign firms, biased private firms, even though run by talented entrepreneurs, are constrained from investing in quality controls and from developing other business capabilities. Less capable firms are less likely to become contractual suppliers to foreign firms on the one hand; on the other hand, a foreign firm would think twice to sign up a legally-disadvantaged and ownership-insecure domestic firm as a long-term supplier. The solution is a foreign takeover of local production, which confers financing and relative property rights security. FDI would rise on this account. It is easiest to illustrate this argument in a labor-intensive and technologically-simple industry where contract production, not FDI, is in fact a standard business practice in cross-border transactions. [10]

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[8] This incentive is not limited to establishing FIEs. The lack of legal protection created the widespread phenomenon of so-called "red-hat" firms—private firms that were registered as collective or even state-owned firms in order to access the greater political protection accorded to these firms. But this was not a costless arrangement. Private entrepreneurs had to cede substantial equity shares to the government, sometimes leading to acrimonious conflicts about the true ownership of these firms.

[9] I have examined these two mechanisms empirically in my previous work but not as directly as in this paper. I have shown that in the garment industry more credit- and legally-constrained private firms cede more equity and operational controls to foreign firms when forming joint ventures as compared with the better-financed TVEs (Huang 2003). In a recent paper, (Huang and Wen 2003) show that this equity-ceding effect is greater in Jiangsu than in Zhejiang. The difficulty with the previous work is that we only look at firms that are already foreign-owned, rather than those facing a choice between staying domestic or becoming foreign-owned. The private sector surveys provide a way to test the ownership bias hypothesis more directly.

[10] In a widely-used textbook on FDI, Richard (Caves 1996) writes, "MNEs [multinational enterprises] are logically incompatible with the purely competitive organization of an industry." Many scholars in international business explain the incidence of FDI in sectors devoid of

In developing this argument, I rule out two alternative hypotheses, one about the causal direction and the other about identifying the right causal link. The first alternative hypothesis—based on a version of the crowding-out idea in the FDI literature--may argue that FDI inflows in Jiangsu crowded out indigenous firms while the relative paucity of FDI in Zhejiang fostered them. Both the timing of the private-sector development and FDI opening would cast doubt on this hypothesis. One of the benefits of studying these two provinces is that we have well-documented evidence about their policy differences, many of which can be traced to the early 1980s, long before the FDI liberalization in the early 1990s. The other piece of evidence is that the domestic private sector in Jiangsu developed very rapidly since the late 1990s even though its economy was far more open to FDI than it was in the early 1990s. The reason is that Jiangsu began to converge with a version of a Zhejiang model in the late 1990s, not because it began to restrict FDI. There is ample evidence that the domestic private sector can be crowded out by ownership biases and there is little evidence that it is crowded out by FDI.

Another hypothesis is that FDI policies differed between the two provinces. Again, we have a wealth of evidence to show that FDI policies did not differ between them, as will be shown later in this paper. It is important to establish this fact both for substantive and methodological reasons. Substantively, controlling for the effect of FDI policies enables us to

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commonly-postulated firm-specific assets—such as patents and organizational know-how—by pointing to the requirements of quality controls in labor-intensive industries. See (Lecraw 1977) and (Aggarwal and Weekly 1982). This hypothesis rests on a weak empirical foundation about labor-intensive cross-border transactions. In labor-intensive industries, quality controls and controls of firms do not necessarily overlap with the legal boundaries of firms. Foreign buyers routinely send and station their own quality inspectors at supplier sites. These inspectors often dictate the raw materials and equipment used in the production and organization of production processes. Suppliers comply not because they are bureaucratic subordinates of the foreign buyers but because they value long-term relationships with the foreign buyers. Scholarship based on field research documents this phenomenon thoroughly. See (Hsing 1993). The other idea often offered is that internalization of production is needed to avoid dependence on an inefficient court system. See (Wells Jr. 1993). This assumes a legalistic contracting approach for a world full of nothing but relational contracting. (Woodruff 1998) documents the substantial relational contracting phenomenon in Mexico while (Hsing 1993) does so for Taiwan. In my own field research on garment industry, among hundreds of production contracts I have seen, I have yet to see one that spells out legal consequences for poor quality and late deliveries.

identify other drivers of FDI patterns. Methodologically, if property rights security does not vary between the two provinces in the foreign sector, then all the variations in the *relative* property rights security of foreign firms come from the variations in the ownership biases against the domestic private firms.

The rest of this paper is organized as follows. The first section provides more factual details about FDI patterns in Jiangsu and Zhejiang. The second section documents different levels of ownership biases in the two provinces. The third section connects these two factual accounts and offers a number of hypotheses about why ownership biases against domestic private firms can contribute to higher FDI preferences. The fourth section explains two unique private sector surveys and uses the data from these two surveys to demonstrate the connections between ownership biases and FDI preferences. The final section concludes the paper.

A tale of two provinces: The FDI story

The following paragraphs show that in Jiangsu FDI was a more important source of financing, was distributed more widely in manufacturing industries and generated more export production than FDI did in Zhejiang.

FDI dependency

In the 1990s, there were some substantial differences in the FDI patterns between the two provinces. For one thing, Jiangsu depended far more heavily on FDI financing than Zhejiang, despite the fact that their initial FDI dependency was quite similar. On average, in the second half of the 1980s, both provinces drew very little FDI, as measured by the proportion of FDI to the total fixed asset investments. In Jiangsu, the ratio was only 0.63 percent, about the same as the ratio in Zhejiang (0.65 percent). In the first half of the 1990s, as China became more open to FDI, this ratio rose in both provinces, but much faster in Jiangsu. On average, FDI accounted for 13.6 percent of fixed asset investments in Jiangsu, which was more than twice the level in Zhejiang during the same period (5.7 percent). These contrasts are shown in Table 1.

Table 1 about here.

Another measure of FDI dependency is a comparison of FDI with other forms of foreign capital inflows. FDI is a form of equity capital, which enables a foreign firm to establish an ownership claim on assets located in China, but theoretically speaking, a domestic firm can also borrow abroad to fund its production. Foreign debt capital provides the money but not foreign management controls. Here, Jiangsu and Zhejiang exhibit another set of differences. Jiangsu is more reliant on equity foreign capital and Zhejiang is more reliant on debt foreign capital.

Table 1 presents two measures of the composition of capital inflows. One is the percentage ratio of all foreign loans relative to FDI; the other is the percentage ratio of foreign loans incurred by the provincial entities to FDI. The difference between the two is that the second measure excludes the foreign loan obligations of the central government entities located in Jiangsu and Zhejiang, whereas the first measure includes such obligations. The second measure is more indicative of the business and economic dynamics being examined here, but directionally both measures indicate the same thing. Both measures show that the ratio of foreign loans to FDI is substantially higher in Zhejiang than in Jiangsu. Specifically, the foreign loan obligations on the part of local entities in Zhejiang amounted to 39 percent of the FDI inflows on average during the 1990-1995 period; in Jiangsu, the figure was 21.9 percent.

The greater financing role of FDI in Jiangsu would naturally imply a greater economic role of firms funded by FDI—known as foreign-invested enterprises or FIEs—in that province. In 1995 and 2001, industrial FIEs contributed a higher share of sales and profits in Jiangsu compared with Zhejiang and the gap between the two provinces appeared to have grown over time. (Data availability for non-industrial FIEs—those in agriculture and services—is poor. It should be noted that industrial FDI accounted for a large portion of the total FDI inflows in the 1990s.) For example, in terms of profits, FIEs accounted for 37.8 percent of all industrial profits in Jiangsu, an increase from 31 percent in 1995. In contrast, the profits of FIEs in Zhejiang declined during the same period, from 21.7 percent in 1995 to 19.8 percent in 2001.

The larger profit share on the part of FIEs in Jiangsu did not arise from their superior profitability. In fact, in 2001, FIEs in Jiangsu were less profitable than FIEs in Zhejiang. As measured by gross profit margins, FIEs in Jiangsu realized 5 yuan on every 100 yuan of sales, compared to 6.3 yuan on every 100 yuan of sales in Zhejiang. The superior profitability performance of FIEs in Zhejiang, in conjunction with the fact that they accounted for a smaller share of profits in Zhejiang, suggests that domestic firms in Zhejiang are more profitable and healthier than domestic firms in Jiangsu, an issue I will return to later. Another piece of corroborating evidence is that FIEs in Jiangsu accounted for a far larger share of profits than they did for sales. In 2001, they generated 37.8 percent of profits but only 28.3 percent of sales. In contrast, FIEs in Zhejiang generated about the same proportion of sales (18.6 percent) and profits (19.8 percent). Thus not only did FIEs in Zhejiang outperform FIEs in Jiangsu, domestic firms in Zhejiang appear to have outperformed domestic firms in Jiangsu.

Export roles of foreign firms

Both Jiangsu and Zhejiang are China's export powerhouses and they are open to foreign trade to a similar degree. In 1995, the foreign trade/GDP ratio was identical in the two provinces, around 27 percent. This was a substantial increase from 1981 when foreign trade accounted for 5.8 percent of Jiangsu's GDP and 4 percent of Zhejiang's GDP. There are, however, two significant differences between Jiangsu and Zhejiang. One is that the increase of Jiangsu's foreign trade/GDP ratio was driven by fast growth on both the export and import sides. In the case of Zhejiang, export growth was the main driver. The annual average export growth was 28 percent in the case of Zhejiang, but only 9.3 percent in the case of Jiangsu. Exports accounted for 20 percent of GDP in Zhejiang in 1995, but only 8.1 percent in Jiangsu. These data are presented in Table 2.

Table 2 about here.

The second difference is that FDI-funded export production accounted for a far larger share of Jiangsu's exports than of Zhejiang's exports. In 1995, foreign production of exports was 30 percent in Jiangsu and 14 percent in Zhejiang. (Table 1). By 2002, this ratio doubled in both provinces. In Jiangsu, it was 63 percent and in Zhejiang it was 31.3 percent. (On the import side, foreign firms' share in total imports in Jiangsu is roughly twice their share in Zhejiang: 80.5 percent vis-à-vis 43 percent in 2002.) A related contrast between the two provinces, as in so many other aspects of their economies, is that domestic private firms account for a far larger share of exports in Zhejiang than they do in Jiangsu (in 2002 12.7 percent vis-à-vis 2.6 percent).

One way to describe the contrast in the role of foreign firms in export production between Jiangsu and Zhejiang is simply to document that foreign firms, for whatever reasons, have played a more important role in Jiangsu's export production than in Zhejiang's. A more interesting way to approach the above contrast is to ask why intra-firm export production prevails in Jiangsu, but why inter-firm export production prevails in Zhejiang. FDI-funded export production is essentially of an intra-firm kind whereby export transactions take place within the affiliates of foreign firms. Inter-firm exports take place between a Chinese firm and a foreign firm at the border and are contractual in nature. Thus an analytical question asks why contract export production appears to dominate in Zhejiang and why ownership production appears to dominate in Jiangsu.

One explanation can be that the export composition differs between Jiangsu and Zhejiang. All else being equal, one might expect technologically sophisticated exports to be conducted within the affiliates of foreign firms. Foreign firms may possess special or specialized production and technological know-how. At least as of the mid-1990s, this was not a dominant

explanation. In the mid-1990s, both provinces had a similar export composition. In both, the leading export items were cotton fabrics, silk, wool yarn, shoes, garments, toys, etc., according to (Ministry of Foreign Trade and Economic Relations 1996).

To illustrate the contrast in contract vis-à-vis ownership production between the two provinces, let us look at labor-intensive exports only. Sophisticated technology and organizational know-how are not important inputs in the production of labor-intensive exports. While there is a widespread view that quality control requires foreign control of production, actual business practices suggest otherwise.[11] Nor does the view that foreign ownership is a substitute for

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[11] The reason is that foreign buyers can impose direct quality controls and supervision via a contractual mechanism. In fact, foreign buying firms and domestic contractors coordinate closely in a range of operating areas, including quality controls, selection of suppliers, the use of equipment, designs and specifications, etc. Field research has uncovered such practices widely among developing countries, as did my own field research in Zhejiang and Guangdong in China. In Taiwan, shoe manufacturers need to obtain inspectors' signature before sending the product to the foreign buyer. The foreign buying firms routinely stationed quality inspectors in the factories, some staying there permanently. The following paragraph describes the practice in the shoe industry in Mexico (Woodruff 1998):

> Most important, both manufacturers and retailers recognized the right of retailers to inspect delivered merchandize for adherence to the order and for defective workmanship. Without this right, a manufacturer's incentives to produce products of quality workmanship would have been significantly reduced.

Not only is internalization unnecessary for quality supervision, it may not be even sufficient. This is a surprising and an extremely interesting observation, and it is from a detailed study of Taiwan's footwear industry. In this study, You-tien Hsing shows that trading firms in fact avoided taking an equity position in the manufacturing facilities *in order to enhance* quality controls. One of the manufacturers in his study became less cooperative regarding suggestions for quality improvement after a trading firm acquired a stake in it. Internalization can be in fact detrimental to quality controls. Hsing (1993) remarks:

> This is because quality inspection requires a certain distance and independence between those who inspect and those who are being inspected, and a trading firm's financial involvement in partner manufacturing firms will inevitably diminish the former's objectivity in performing quality inspections.

contractual imperfections apply here, a view, again, that is widespread in the FDI literature. There is no evidence that contractual enforcement in the *foreign* sector is systematically worse in Jiangsu than in Zhejiang. (Also this reasoning ignores the fact that contract production flourished in South Korea and Taiwan in the 1960s and 1970s when contractual imperfections abounded in those two societies.) Both provinces, as will be shown later, actively courted and promoted FDI.

As of 1995, foreign firms in Jiangsu produced 31.9 percent of light-industrial exports, compared with 28.7 percent in Zhejiang. Table 1 lists four labor-intensive industries— garments and shoes, leather and fur products, wood/bamboo/straw products, and furniture. In three out of these four industries, foreign shares of exports in Jiangsu exceeded their shares in Zhejiang and in one industry, wood/bamboo/straw products, by a substantial margin (53.7 percent vis-à-vis 7 percent).

Another piece of data concerns the ownership shares of foreign firms in the production facilities of these four labor-intensive industries. Again, foreign firms command greater equity controls in Jiangsu than in Zhejiang. In all four industries and at the industry level, foreign ownership ratios in Jiangsu exceed those in Zhejiang by a range of 5 to 27 percent. The above data all refer to 1995; more recent data are unavailable but based on interviews and media reports, it is possible that domestic private firms in Zhejiang have now commanded a dominant export position in labor-intensive industries. For example, for a number of products, such as lighters and certain categories of socks, domestic firms in Zhejiang now account for 70 to 80 percent of market shares in Europe.

Industry distribution of FDI

A greater aggregate role of FDI aside, there is also evidence that FDI is present in more industries in Jiangsu than in Zhejiang. The data here refer to the percentage distribution of fixed asset investments by FIEs and of foreign equity across 29 manufacturing industries in the two provinces, respectively. (The 29 manufacturing industries are given by the 2-digit Chinese standard industry classification.) Whether the presence of FDI is measured by the industry share of fixed asset investments by FIEs or by the industry share of equity held by foreign firms in FIEs, all the indicators point in the same direction—the presence of FDI is spread in more industries in Jiangsu than in Zhejiang. In other words, some industries in Zhejiang received a lot of FDI, but others received relatively little, whereas in Jiangsu, relatively speaking, FDI flowed to all industries more evenly.

Table 3 about here.

Table 3 presents a number of measures of the *spread* of the presence of FDI across manufacturing industries in Jiangsu and Zhejiang. The most straightforward indicator is the share of the top three industries with the largest FDI presence. In Zhejiang province, the top three industries with the largest fixed asset investments are, respectively, papermaking and paper products (18.5%), smelting and pressing of ferrous metals (9.7%), and textiles (8.9%). These three industries combined accounted for 37.1% of fixed asset investments by FIEs in 1997. In Jiangsu province, the top three industries with the largest fixed asset investments are, respectively, transportation equipment (11%), papermaking and paper products (9.6%), and special purpose equipment (9.3%). These three industries combined accounted for 29.9 percent of all fixed asset investments made by FIEs in 1997. In addition, both the standard deviation and coefficient of variation values for the industry distribution of fixed asset investments by FIEs in 1997 are larger for Zhejiang than for Jiangsu.

Two issues can be raised about the fixed asset investment measure. One is that the data refer to one year only, 1997, and the data may simply reflect patterns for that particular year. To correct this potential bias, we use a stock measure—distribution of foreign equity across the same 29 manufacturing industries—and the results are identical. The top three industries in Zhejiang accounted for 33.9% of all foreign equity and they accounted for 29.2% in Jiangsu. Also Zhejiang has higher standard deviation and coefficient of variation values than Jiangsu.

The second potential bias is that the above results may reflect different compositions of FDI inflows into these two provinces. For example, if Jiangsu received more FDI from the three ethnically Chinese economies—Hong Kong, Taiwan, and Macao—than Zhejiang, one may find a wider distribution of FDI in Jiangsu than in Zhejiang. It is possible that ethnically Chinese foreign firms may be more familiar with local cultures and customs than non-ethnically Chinese foreign firms and thus they may be more active in more industries.

Leaving aside its theoretical imprecision,[12] there is no empirical support for this notion. In 1997, the top three industries with the largest fixed asset investments by ethnically Chinese

[12] The postulate that ethnically Chinese foreign firms invest actively in China because of their cultural advantages is often asserted but little analyzed. The reasoning is in fact quite imprecise and even flawed. Foreign firms, when investing in China, compete primarily with locally-owned firms based in China, and less with other foreign firms investing in China. In labor-intensive industries, ethnically Chinese foreign firms do not compete with firms based in Japan, Europe, or the United States at all because Japanese and Western firms do not invest in those industries. Thus how active a foreign firm is would depend on its relative advantages over

foreign firms accounted for 73.2% of total fixed asset investments in Zhejiang, compared with only 47% in the case of Jiangsu. Both the standard deviation and coefficient of variation values of the same measure are larger for Zhejiang than for Jiangsu.

A tale of two provinces: Ownership biases

Western academics have tended to consider Jiangsu and Zhejiang together as examples of the most successful development of the non-state sector in China. The assumption is that the ownership biases in these two provinces have been more modest compared with the rest of China. This paper questions this assumption and shows that there are substantial differences in the degree of ownership biases between these two provinces. Specifically, the ownership biases against the domestic private sector—and in favor of the state-sponsored collective sector—are far more substantial in Jiangsu than in Zhejiang. At least as of the early 1990s, the ownership biases in Jiangsu against domestic private sector were not substantially different from the rest of the country.[13]

In this section, I will first offer documentary evidence on the differences in the ownership biases between the two provinces. This is followed by more systematic quantitative measures of these differences.

Documentary evidence

In 1980, the size of the domestic private sector—the non-state sector minus the collective firms, such as TVEs and FIEs—in the two provinces was virtually identical. In Jiangsu, domestic private firms accounted for 0.53 percent of total industrial output value, compared with Zhejiang's 0.57 percent.

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locally-based firms. (This is the standard reasoning in the industrial organization literature on FDI.) By this criterion, ethnically Chinese foreign firms possess zero cultural advantages: A firm based in Hong Kong is familiar with Chinese culture but it would be a stretch to argue that such a firm is more familiar with Chinese culture than a firm based in Guangdong. I explore this issue in greater detail in Huang (2003).

[13] Elsewhere, I show that Jiangsu was quite similar to the rest of the country on a number of dimensions. It relied heavily on FDI and fixed asset investment for GDP growth. It had a large stock of bank debt relative to GDP. It invested heavily in the state sector and pursued an industrial policy supporting large—and mostly state-owned—firms. The government intervened heavily in the management of enterprises.

In the 1980s and 1990s, the domestic private sector grew much faster in Zhejiang. In 1995, domestic private firms generated 38.7 percent of Zhejiang's industrial output value, compared with 10.5 percent in Jiangsu.[14] After 1995, the two provinces began to converge somewhat. By 2001 domestic private firms generated 69.3 percent of gross industrial output value in Zhejiang, compared with 44.7 percent in Jiangsu. (In Jiangsu, the private sector has developed faster since 1995 essentially because Jiangsu decided to converge with the Zhejiang model, by large-scale privatization of TVEs and by selectve support of private firms.)

Until the mid- to late 1990s, Jiangsu and Zhejiang represented two contrasting development models in China, a phenomenon first noted by Professor Fei Xiaotong, China's most prominent sociologist, in 1986. In Jiangsu, the "Sunan model" prevailed whereby the government played a heavy sponsorship and operating role in enterprise management and supported collectively-owned TVEs rather than, or even to the detriment of, genuinely private firms. The Sunan model was widespread in much of southern Jiangsu, but three cities, Wuxi, Suzhou, and Changzhou, are considered to be the progenitors of this model. The other is the Wenzhou model which is characterized by a heavy reliance on private initiatives, a non-interventionist style by the government in the management of firms, and a supportive credit policy stance toward private firms. Wenzhou, a city in southern Zhejiang province, is the best-known example of this model (hence the name of the model).[15]

In the 1980s, after Professor Fei had formulated these two models, Chinese economists debated their respective merits. By now, this debate has been settled in favor of the Wenzhou model, in an overwhelming fashion. Many TVEs in Jiangsu experienced massive financial losses

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[14] The private sector is defined here as the residual of the industrial output value of all firms minus that of the SOEs, collective firms, and FIEs. By this definition, some of the firms tangentially owned privately are also counted as private firms, e.g., shareholding firms. A stricter definition of private firms, i.e., firms that are solidly controlled by private entrepreneurs, would yield a higher differential between Zhejiang and Jiangsu. The output value of privately-operated (*siying*) and individually-operated (*geti*) firms accounted for 34.4 percent of total industrial output value in Zhejiang but only 6.2 percent in Jiangsu.

[15] This paper takes the difference between these two models as given rather than exploring their origins. (Jin and Qian 1998) have found evidence that stronger ties with the central government tend to be associated with higher collective to private output ratios. This explanation fits with the Jiangsu/Zhejiang story. Historically, the central government retained stronger ties with Jiangsu than it did with Zhejiang.

during the more competitive economic environment of the 1990s, while firms in Wenzhou prospered. The TVEs in Jiangsu have been privatized on a large scale since the mid-1990s.[16] This should not be a surprising outcome. Even those economists who have a positive view of TVEs have noted the incentive alignment problems among TVEs and their lower efficiency compared with private firms.[17]

The Sunan and Wenzhou models differ on several dimensions. First, government control of firms was far tighter in Jiangsu. In 1985, the Wuxi government adopted the following measures: (1) penalties for skilled workers who left collective TVEs for other jobs, including barring their family members from jobs in TVEs; (2) thorough status checks on the enterprise registration documents and procedures; and (3) limits on managers' pay at three times of the average payroll (Luo 1990, p. 150). Wenzhou favored a far more laissez-faire policy stance and did not exercise this kind of micro-management.

Second, until the mid-1990s, Jiangsu actively suppressed the development of private firms. The first two policy measures were designed explicitly to constrain private firms. The tight labor regulations reduced the availability of quality human capital to the private sector and the strict registration procedures prevented private entrepreneurs from falsely registering their firms as collective firms, a popular mechanism to evade the prohibitions on private firms and to acquire some rudimentary property rights security associated with a closer relationship with the state. Jiangsu wanted to conserve raw materials and energy and to protect TVEs as much as possible from competition for human and financial resources. Private enterprises "are tolerated, but their development has been constrained by limits on loans, restricted access to inputs, and environmental and other regulations" (Svejnar and Woo 1990, p. 80). As a result of this bias, the dominance of the more government-controlled TVEs was overwhelming in Wuxi. In 1985, collective TVEs constituted 36 percent of the total number of industrial non-state firms and contributed 96 percent of the gross value of industrial output. The private sector in the industrial arena was simply inconsequential (Svejnar and Woo 1990, pp. 67-69). Two World Bank economists thus commented (Byrd and Lin 1990, p. 25):

> [In Wuxi,] the TVCEs [collective TVEs] are relatively large, many of them use relatively advanced technology, and they compete effectively with state industry. Private

[16] For more details, see (Oi 1999) and (Park and Shen 2000).

[17] (Jin and Qian 1998), in a paper explaining the success of the TVEs, nevertheless conclude that TVEs are less efficient than private firms.

> enterprises are severely hampered by administrative restrictions, and sizable ones have not emerged.

Wenzhou of Zhejiang presents a sharp contrast to Wuxi in many aspects. Wenzhou was a vibrant trading port up through the Republican era (so were, incidentally, Suzhou and Wuxi of Jiangsu), but in the first thirty years of the PRC period, its economy stagnated. It was considered high-risk by the central government because of its proximity to Taiwan. In addition, it is difficult to travel to and not near any other major Chinese cities. It is flanked by mountains on one side and the East China Sea on the other; a 500 km ferry ride from Shanghai was the primary way to get to Wenzhou until a small airport was built there with private funds in 1990. In 1998 a railway was opened from Wenzhou to Jinhua City in Zhejiang province. Because its proportion of arable land was so low (only 0.42 mu per capita vs. 0.65 for the province as a whole and 1.4 countrywide), it was never a major agricultural center for China, nor was it known for advanced industrial development. Much of the rural labor force was unemployed or underemployed at the beginning of the reforms. Nevertheless, a private economy of petty commodity producers, retail vendors, and wholesale traders emerged early on in Wenzhou. At the formal commencement of the rural reform in 1979 there were already an estimated 1844 micro-entrepreneurs in the area; three years later the number had increased elevenfold to 20,363.

By the early 1990s, Wenzhou had become well-known as a hub of private entrepreneurial activities. (Byrd and Lin 1990, p. 34), in the same World Bank study that includes Wuxi, characterize the Wenzhou model as follows:

> The famous ‘Wenzhou’ model is characterized by free development of private enterprises (mostly household undertakings), a thriving financial market based to a large extent on private financial institutions, and extensive commercial relationships with distant parts of China.

The centerpiece of the Wenzhou model was an active informal credit market servicing private enterprises, much of which was not sanctioned by the central government. Despite the dynamism of the private sector, “the state banking system was neither willing or jurisdictionally able to meet the credit needs of the new generation of individual entrepreneurs” (Tsai 2002, pp. 122-3). In the 1980s, the informal financing mechanisms thrived and they included rotating credit associations (*hui*), money houses, and credit cooperatives. The Wenzhou government, rather than curtailing the informal credit facilities, tried to incorporate them into the formal financial sector. Its reasoning is particularly illuminating of the economic liberalism of Wenzhou—informal finance should be made official to enhance regulatory supervision and to better meet the rising credit demand from the private sector (Tsai 2002, pp. 157-158).

There are, however, differences in the formal financial sector as well. Banks in Zhejiang lent more to the private sector than banks in Jiangsu, although in both provinces the bulk of lending has always gone to the state sector. In Jiangsu province, the private sector received a smaller share of credit resources compared with that in Zhejiang. In the 1990-1995 period, on average, the loans directly allocated to the private sector amounted to 4.3 percent of total loans in Jiangsu; the same figure for Zhejiang was 8 percent.[18] What is impressive about Zhejiang is that the direct credit allocation to the private sector was already substantial in the 1980s. On average between 1985 and 1989, 6.9 percent of the loans went to the private sector, as compared with 1.7 percent in Jiangsu.

Quantitative evidence

Our quantitative evidence comes from an FDI survey conducted in 1999.[19] This survey asked the same local officials in the two cities in Jiangsu and Zhejiang to rank the economic

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[18] Loans allocated to the private sector are defined as the sum of the loans that go to individually-owned businesses and a category called "other loans." Other loans, according to (Lardy 1998), represent credit from banks to non-bank financial institutions. Non-bank financial institutions typically lend to private or non-state entities. The category of individually-owned businesses does not include the other type of private businesses, which are known as privately-run businesses, defined as those with hired labor of eight or more employees. Also the figure does not include the loans that are directly allocated to SOEs, which then on-lend to the private firms. Data on this type of loans is simply unavailable. It is possible that the exclusion of this type of lending activities may produce a bias in our estimate. Because the political legitimacy of private businesses is higher in Zhejiang, it is likely that more of the credit allocation to the private sector is over the table, while more of the credit allocation in Jiangsu is under-the-table. But because of our underlying interest in analyzing the differences in political preferences between these two provinces, rather than arriving at an exact figure of loan allocation to the private sector, the direct credit allocation is in fact a better measure. The source of the data is (State Statistical Bureau 1996).

[19] The survey was commissioned for the book project, Selling China. I designed the survey and the Research Center for Contemporary China at Peking University implemented it. For each city, 200 officials were selected. The sample included 1,444 local government officials in eight cities. Most of the officials (85.9 percent) represented in the survey are middle-level officials, i.e., at the division level of the city governments. The survey was implemented between

contributions of SOEs, collective firms, and domestic private firms on the same 0-10 scale they used to rank FIEs. The score 0 represents no contributions and the score 10 represents the most contributions. Table 4 reports the percentage share of responses at or above 8 in each category of firms—SOEs, collective firms, and private firms.

Table 4 about here.

The most striking finding is that in both provinces SOEs were ranked the highest, i.e., with the largest share of responses between 8 and 10, as compared with the two other categories of firms. In both provinces, private firms were ranked the lowest. This result is all the more remarkable considering the economic reality on the ground. In each province, measured in terms of gross industrial output value, SOEs made the smallest contributions. In Jiangsu, SOEs accounted for 20 percent of the gross industrial value of output (GIVO) but 81 percent of the surveyed officials in Jiangsu believed that SOEs' contributions to the economy were high. In Zhejiang, SOEs made up only 10 percent of the GIVO, but 60.2 percent of the surveyed officials in Zhejiang ranked SOEs' economic contributions very highly.[20]

Equally interesting as this divergence between the political and economic rankings of firms in the Chinese economy is the divergence of views between officials in Jiangsu and Zhejiang. A far higher proportion of officials in Jiangsu ranked SOEs very highly—defined here as giving SOEs a score of 8 on a 0-10 scale—than officials in Zhejiang. In contrast, more officials in Zhejiang ranked private firms highly than they did in Jiangsu, 44.2 percent vis-à-vis 27 percent. Thus, although ownership biases existed in both provinces, the extent of the biases were milder in Zhejiang than they were in Jiangsu.

Ownership biases and FDI: Some hypotheses

How can we explain the observed contrast in FDI patterns between Jiangsu and Zhejiang? And are there connections between the differences in the roles of FDI in the two economies and their levels of ownership biases? In this section, I offer a number of hypotheses to suggest that the ownership biases against domestic private firms could increase the FDI preferences of the biased firms. The central idea is that Chinese private entrepreneurs, just as

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January and July 1999. The response rate was 90 percent. To ensure honesty, accuracy, and a high response rate, researchers from the Research Center for Contemporary China closely supervised the entire survey process.

[20] In my previous work, I call this phenomenon the political pecking order of firms (Huang 2003b).

entrepreneurs elsewhere, valued deeply the security of their property rights. In a system where property rights are insecure, FDI became a mechanism to attain that security. But first let me rule out a number of alternative hypotheses that might have also been compatible with the phenomenon documented here.

Alternative hypotheses

To simplify the analytical task at hand, we can rule out a number of "easy" explanations for why FDI seemed to have played a greater role in Jiangsu's economy than it did in Zhejiang. We already ruled out one: the larger role of FDI in Jiangsu is not because Jiangsu had better-performing FIEs. In fact, its FIEs were considerably less profitable. The second explanation that we can rule out fairly easily is geography: Both are coastal and located next to each other.

We can also rule out history as an explanation. Both provinces have a long tradition of international trade and commerce. If history is any guide, one would have expected Zhejiang to be more integrated, not less, than Jiangsu. The city of Ningbo[21] was ceded to the British under the first Treaty of Nanking in 1842. The British had seized the port city as their point of entry into China. Because of this long association with the West, today Ningbo has a sizeable and rich diaspora community overseas that would have facilitated ethnic FDI inflows into Zhejiang. In more recent times, the two provinces started out in the 1980s almost identical in terms of their FDI dependency and in terms of their orientation toward the external economy. If economic performance is a predictor of FDI, one would have expected Zhejiang to rely on FDI more than Jiangsu. As shown in Table 2, Zhejiang grew faster than Jiangsu during the 1978-1995 period and it overtook Jiangsu in per capita income terms in the 1990s. The two provinces are highly comparable in other dimensions that are thought to bear upon FDI inflows: Primary school enrollment was nearly identical as of 1978 and the ratio of doctors to population was similar. (Jiangsu seemed to have more hospital beds in the late 1970s, which resulted from its greater urbanization.)

Another explanation we can rule out is the FDI policy regime. The two provinces were, again, remarkably similar: they were both open to and both actively promoted FDI. This can be demonstrated on two dimensions. First, both opened to FDI and foreign trade very early on. They were among the second wave of provinces—after Guangdong and Fujian—to be granted enhanced authority for FDI approval and export policies. In 1984, the central government designated fourteen coastal cities as "open" cities. Among these fourteen cities, four were in these

[21] Under the old Wade-Giles Romanization system, Ningbo is spelled Ningpo.

two provinces, Lianyungang and Nantong of Jiangsu and Wenzhou and Ningbo of Zhejiang. In 1988, the central government initiated another round of economic openings and designated a large geographic area of Jiangsu and Zhejiang as an "Economic Open Zone." In both provinces, Economic Open Zones covered a large area of land and a high proportion of the population and economy, as indicated in Table 2.

We also have survey evidence on the FDI policy stances of these two provinces (drawing from the same FDI survey cited before). Table 2 reports the survey responses of 400 local officials from two cities—Zhangjiagang of Jiangsu and Wenzhou of Zhejiang—on their policy stances on FDI. This survey asked 200 officials in each of these two cities to rank FIEs on an 11-point scale (0-10) in terms of their contributions to China's economic development. The survey question is: Please rank the FIEs' contributions to China's economic development on a 0-10 scale (0 indicates no contributions and 10 indicates the most important contribution). The responses in the survey suggest no significant attitudinal differences between Jiangsu and Zhejiang. About 28 percent of officials in Zhangjiagang of Jiangsu gave FIEs a score of 8 or above, compared with 27.6 percent of the officials in Wenzhou of Zhejiang. Responses to two other questions in the survey indicate a similarly liberal view of FDI. One asked the respondents whether they would agree that FIEs were an integral component of the Chinese economy. In Jiangsu, 88 percent of officials answered in the affirmative; in Zhejiang, 89 percent did. Another question asked respondents if they wished to preserve policy incentives for FIEs. To this question, a higher proportion of officials in Jiangsu answered affirmatively than in Zhejiang (56 percent vis-à-vis 47 percent), but the magnitude of this difference is not substantial.

Foreign ownership as property rights security

In a recent paper, (Hausmann, Pritchett and Rodrik 2004) put forward the argument that initial triggers of growth can often be "humble" in nature. They amount to nothing more than some relaxation of specific constraints on the private sector. No fundamental institutional reforms—those aiming at property rights protection, for example—are needed. One of the examples cited in this paper is China's growth spurt after Deng Xiaoping introduced modest reforms in 1978.

This interpretation of Deng Xiaoping's reforms is accurate as far as the specific components of his reforms are concerned. But it should be stressed that the ascendancy of Deng Xiaoping in 1978 represented a substantial ideological shift and this ideological shift did entail important implications for security of property rights going beyond the specifics of his reforms. During the Cultural Revolution, the private sector was systematically and brutally eliminated.

Entrepreneurs faced certain prospects of prison sentences or even execution if they engaged in private and commercial activities. *Relative to the baseline of the Cultural Revolution*, the policy changes Deng Xiaoping introduced in 1978—permitting some private-sector activities, especially in the countryside—had an enormous effect on incentives. In 1978, nationwide the private sector employed just 140,000 employees; by 1984 this number had shot up to 13 million. The incentive differential between getting arrested and not getting arrested should not be underestimated.

What Deng introduced in the late 1970s was security of persons, not security of private property. (Even today, one can debate whether private entrepreneurs enjoy full security of property rights.) For complex reasons, this security of persons was distributed very unevenly in the early 1980s. Some regions had it; other regions did not. Today the region with the largest and the most vigorous private sector in China is Wenzhou City in Zhejiang province. In interviews, many officials and entrepreneurs recounted two episodes in the early 1980s that established the security of persons for the private sector in that city.

In one episode, around the 1983-1984 period, the Wenzhou municipal government invited the largest private entrepreneurs in the city to attend a conference. The purpose of the conference was to exchange information and to publicize their success. According to interviews, many entrepreneurs refused to come, fearing that it was a trap the government had set up to arrest them *en masse* right at the conference site. Of those who showed up, quite a few brought with them their toothbrushes, having mentally prepared to face jail. The conference went as advertised. In the other episode, in 1984, the Wenzhou government released a number of entrepreneurs whom it had arrested in 1982. Not only that, the Wenzhou government published the decisions in local newspapers explaining why it was wrong to have arrested these entrepreneurs in 1982. It was unprecedented—and it is still unprecedented today—for a branch of the Chinese government to openly and so publicly acknowledge its mistakes.[22] Twenty years later, many entrepreneurs cited these two episodes as having convinced them of their personal security.

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[22] These entrepreneurs were among what was known in the early 1980s as the "eight big kings" (*badawang*) in Wenzhou. These were extremely successful entrepreneurs with personal wealth in excess of 100,000 yuan, a huge amount in the early 1980s. Some of these entrepreneurs had created very successful and competitive businesses producing electric transformers. But in 1982 the Ministry of Machinery Industry issued a ban prohibiting private firms from entering transformer business. In the same year, the central government launched a campaign to crack down on "economic crimes." Zhejiang province initiated an investigation into "eight big kings."

Although Deng Xiaoping introduced a measure of security of persons, it is well-established that security of private property rights was largely absent in China. Here FDI enters into the picture. It is a little known and even less analyzed fact that the Chinese state granted far greater property rights security to foreign firms investing in China than to domestic *private* firms. (SOEs enjoyed the highest level of protection compared with both foreign firms and domestic private firms.) Six years after the Cultural Revolution, in 1982, China's Constitution already committed itself to the protection of property rights of foreign firms investing in China. More importantly, there was a Constitutional commitment not to expropriate foreign-owned assets located in China. In contrast, the Chinese Constitution made a similar commitment to the domestic private businesses only in 2004.

In the 1980s and 1990s, the Chinese government created a dualist legal regime under which FIEs—firms funded by FDI—and domestic firms are subjected to entirely different bodies of legislation and laws. In general, the legal regime created for FIEs is far more codified and detailed than the one for domestic private firms. There is also ample evidence that the legal and regulatory treatment of FIEs is superior to that of domestic private firms. In 2002, a vice chairman of the National People's Congress—China's legislature—wrote that of eighty or so economic sectors, domestic private firms were permitted entry into forty of them whereas foreign firms were allowed to enter sixty of them.[23]

Thus the characterization that China did not enact institutional reforms in the 1980s and 1990s is only partially correct. China did not do so for the domestic private sector but the institutional reforms were quite substantial in the foreign sector. Herein lies the linkage between the ownership biases against domestic private firms and FDI. The most straightforward hypothesis is that a biased domestic private firm has ample incentives to move its assets (and/or its future growth opportunities) to the foreign sector in order to access the superior legal treatment granted to foreign firms. The stronger the ownership biases are, the stronger such preferences for alliances with foreign firms.[24]

Some of them were summarily arrested; others were heavily fined; and still others fled Wenzhou altogether. This is the background of the 1984 decision to release the entrepreneurs.

[23] These issues are treated at great length elsewhere. See (Huang 2003).

[24] This idea does not require showing that the Constitutional commitment to foreign property rights was rigidly followed. (It was not in many cases.) All it requires is that the variations in the commitment to foreign property rights are less compared with the variations in

Our hypothesis is entirely consistent with the FDI patterns we observe in Jiangsu and Zhejiang. The FDI/capital formation ratio is high in Jiangsu because domestic private firms are not able to get financing and legal protection and thus do not invest as much as domestic private firms in Zhejiang. This dynamic would suggest that the value of the denominator in the FDI/capital formation ratio would increase more slowly for Jiangsu than for Zhejiang, given the same business opportunities, which would lead to a higher FDI dependency ratio as a result.

Our hypothesis would also be consistent with the fact that FDI is present in more industries in Jiangsu than in Zhejiang and that foreign firms are more dominant in export-oriented labor-intensive industries in Jiangsu than in Zhejiang. For a legally and credit-constrained private firm in Jiangsu, the single greatest advantage of a foreign firm is that it is foreign. Thus domestic private firms value alliances with foreign firms for legal, as opposed to business, reasons. Since legal advantages are not industry-specific, foreign firms then command across-the-board advantages vis-à-vis domestic private firms in Jiangsu, not just in those industries where foreign firms enjoy firm-specific advantages—those advantages FDI economists often postulate as drivers of FDI. In Zhejiang, foreign firms hold only firm-specific advantages and thus they gravitate toward those industries where they are strong. Contract production is also difficult in Jiangsu because a foreign buyer would be reluctant to contract with a domestic firm whose legal status is not secure. In Zhejiang, contract production is more feasible because domestic private firms have a higher level of property rights security. Thus the feasibility of contract production does not depend on the legal treatment of foreign firms but on the legal treatment of those domestic firms that are potential contractees. (This logic explains why contract production was feasible in Taiwan and Korea in the 1960s and 1970s even though rule of law was inadequate. The reason is that the domestic private firms themselves were legally secure.)

Ownership biases and FDI preferences: An empirical test

The 1993 and 2002 surveys

This paper utilizes two private-sector surveys—one conducted in 1993 and the other conducted in 2002. Both of these surveys were a part of a regular series of surveys on the private

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the commitment to domestic private property rights across regions and firms. This difference will create incentives to arbitrate between the two legal regimes.

sector. The 1993 survey was the first and the 2002 survey is the latest to date.[25] Both are nationwide surveys, covering all the provinces in China and they enable a detailed comparison between Jiangsu and Zhejiang. Other surveys between 1993 and 2002 only cover a select number of provinces and Jiangsu is not included. Both surveys were organized by the Department of the United Front—the branch of the Communist Party in charge of managing relations with the non-Communist components of Chinese society and economy—and the All-China Federation of Industry and Commerce, the organization that represents the private sector. The surveys were designed with heavy inputs from researchers and academics from the Chinese Academy of Social Sciences, Beijing Academy of Social Sciences, and Renmin University.

Our empirical findings are mainly based on the 2002 private survey but the findings from the 1993 survey are entirely consistent with those from the 2002 survey. However, the 2002 survey is more reliable. The 2002 survey has far more firms. The maximum number of observations for the 1993 survey covering Jiangsu and Zhejiang is 192; in contrast, the maximum number of observations for the 2002 survey for these two provinces is 733. (In the whole sample, the 1993 survey has 1,440 firms and the 2002 survey has 3,258 firms.) The geographic coverage of the 2002 survey is much broader. The 1993 survey covered three cities—all relatively affluent—in the two provinces (one in Jiangsu and two in Zhejiang). In comparison, the 2002 survey includes firms located in 17 cities (11 in Jiangsu and 6 in Zhejiang), ranging from well-developed to less-developed regions and providing substantial variation in economic and institutional development levels. An additional reason is that the quality of the ownership bias measure based on the 2002 survey is better.

The main questions of the two surveys cover (1) firm size, status of development, organization, and operation; (2) management system and decision-making style; (3) social-economic background of enterprise owners; (4) social mobility and network of owners; (5) source and composition of employees and employee-employer relations; (6) self-assessment by entrepreneurs on a range of issues related to government-business relations, business environment, financing, and (7) income, expenditures and assets of entrepreneurs. Critical for our purposes, both the 1993 and 2002 surveys include questions about intentions or plans to form

[25] There was another private sector survey in 1991 but that one was limited to what is termed as "individual businesses," i.e., small single proprietorships with a few employees. The 1993 and the private-sector surveys thereafter began to focus on larger private firms that have multiple shareholders and a large number of employees.

joint ventures with foreign firms. Responses to these questions will be the basis for the dependent variable in this paper.

All the surveyed firms were selected from the registration lists maintained by the local bureaus of industry and commerce.[26] This means that these firms already operated in the formal sector at the time of the survey. The potential bias here is that those private firms most severely discriminated against—and therefore having chosen to go underground— are not included in the survey. This bias is not too debilitating for this paper for three reasons. The first reason is that we are not trying to provide an accurate estimate of the output value of the private sector, in which case such an omission would be a problem. Another reason is that, at least by 2002, it is possible that the treatment of private firms had improved sufficiently that firms no longer chose to go underground for the reason of ownership bias (although they might still have done so to evade taxes). A related reason is that the two provinces chosen for analysis in this paper have a relatively modest ownership bias compared with the rest of the country—although the degree of ownership bias differs between them—and therefore this source of bias is probably small in these two provinces.

The third reason is that this paper is about acquiring foreign ownership as a way to overcome ownership bias rather than about why a private firm chose this particular method to overcome ownership bias but not other methods. Two other potential mechanisms are available to a severely biased private firm. One is to go underground; the other is to register itself as a SOE or collective firm. (This is called a "red-hat" firm.) All of our firms have chosen not to go underground and some of our firms have chosen not to register themselves as SOEs or collective firms. Why they did not choose these two methods is a fascinating question but it is not a concern of this particular paper.

Within each province, the 2002 survey focused on six types of regions for focus, three on political criteria and three on economic criteria. The political criteria were: 1) the provincial capital, 2) a prefecture-level city, and 2) a county-level city. On economic criteria, the survey sampled firms located in the advanced, medium advanced, and least advanced areas. By these political and economic criteria, the 2002 survey covered eleven regions in Jiangsu province and six cities in Zhejiang. The difference in the number of cities covered in these two provinces

[26] I will mainly focus on the 2002 survey to explain the survey methodology. There is more information available about the 2002 survey but it is reasonable to make the conjecture that the 1993 survey was based on the same methodology.

apparently stems from the fact that a larger number of cities fall under the administrative jurisdiction of prefecture-level cities in Jiangsu.

Within each region, the firms were randomly selected. The total number of surveyed firms in each region amounted to around 0.16 percent of the total number of registered private firms in that region in the 2002 survey and about 1 percent in the 1993 survey. By default, the survey would have sampled regions with a larger number of private firms more heavily. We will use regional dummy variables to control for this sampling bias.

Variable construction

The definitions and summary statistics of the major variables are listed in Table 5. There are two alternative measures of FDI preferences—the dependent variables in this paper. They are based on Question 22 in the 2002 survey and Question d4 in the 1993 survey, which asks a respondent firm about its status or plans to form a joint venture with a foreign firm. The question lists the following menu of choices: 1) it has formed a joint venture (JV) with a foreign firm; 2) it is in the process of forming a joint venture with a foreign firm; 3) it is planning to form a joint venture with a foreign firm within three to five years; 4) it does not have a plan to form a joint venture with a foreign firm, and 5) it has not thought about this JV option.

Table 5 about here.

I use the answer to this question to formulate two dependent variables. The first dependent variable takes 5 discrete values, ranging from 1 to 5. The FDI question in the two surveys can be construed as a ranking of the strength of FDI preferences. The firms that have already formed joint ventures can be said to have the strongest FDI preferences and those firms that are forming or contemplating to form joint ventures have the next strongest FDI preferences. The firms that have not planned or have not thought about setting up joint ventures have the weakest FDI preferences. Our first dependent variable, FDIPREF1, takes the value of 1 for firms that have not contemplated forming joint ventures, 2 for firms that are not planning to form joint ventures, 3 for firms that are planning to form joint ventures within 3 to 5 years, 4 for firms that are in the process of negotiating joint ventures, and 5 for firms that have already formed joint ventures. The second is a dummy variable (FDIPREF2), which takes the value of 1 if a firm has chosen 1), 2), or 3) in its answer to this question and takes on a value of 0 if it has chosen 4) or

5).[27] In the 2002 survey, out of 706 valid observations, half of the firms have formed or are in the process of forming joint ventures with foreign firms. In the 1993 survey, the proportion is higher.

The main independent variables consist of a number of firm-level variables that either directly measure ownership biases or can be construed as measures of ownership biases. In the 2002 survey, our ownership bias variable is formulated on the basis of responses to Question 20a3. Question 20a3 asks the respondents to choose one principal reason for difficulties in obtaining bank loans. The choices are: 1) ownership discrimination, 2) collateral and guarantee conditions being too difficult, 3) financial disclosure requirements being too stringent, 4) credit ratings requirements being too strict, 5) high interest rates, 6) maturity terms being too short, 7) insufficient credit amount, and 8) other reasons.

The variable—BANK_BIAS--is coded 1 if firms blamed difficulties in obtaining bank loans on ownership bias and 0 otherwise. This is our primary ownership bias measure (BANK_BIAS). In the two-province subsample, 64 out of 614 firms with valid observations viewed bank discrimination as rooted in ownership considerations rather than in more technical considerations (such as collateral requirements).[28]

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[27] In the empirical implementation, in order to capture more precisely the idea of FDI preferences, we also exclude those firms that have already formed joint ventures with foreign firms in some of the regression runs and the dependent variable is a choice between planning to form a joint venture and not planning to form a joint venture. This is designed to eliminate any potential for an endogeneity problem—that the ownership bias refers to the bias against private firms with foreign-owned assets. *Ex ante*, however, as will be explained later, this should not be a problem.

[28] This will be the primary ownership bias measure for this paper because it is the most straightforward and it has the largest coverage of firms. Question 18 in the 2002 survey would also be relevant as an ownership bias measure. This question asks the respondents to check off the methods by which firms resolve disputes with their supervisory government agencies. Question 18 asks respondents to mark either yes or no to each of the following dispute resolution methods in the case of a dispute with a supervisory agency: (a) acquiescing in silence, (b) trying to negotiate a solution, (c) requesting resolution by local government or supervisory agency, (d) appealing to an arbitration agency or filing a lawsuit in court, (e) seeking help from a representative of the National People's Congress and/or the Political Consultative Conference, (f) appealing to government through the All-China Federation of Industry and Commerce and the Association of Privately-Operated Enterprises, (g) seeking support from Party and government

The questions in the 1993 survey that can be construed as bearing on the ownership bias issue have to do with government-business relations. Questions D114 through D125 ask the respondents to rank support from twelve branches of government. The twelve government agencies are : 1) local government, 2) public security, 3) environmental agency, 4) quality inspection, 5) taxation department, 6) price inspection, 7) public health, 8) customs, 9) press, 10) personnel department, 11) bureau of industry and commerce (BIC), and 2) bureau of technical standards. The score ranges from 1 (=support) to 2 (=neutral) and 3 (=no support). As constructed, these variables measure the extent of bureaucratic constraints on private firms, with higher values denoting more constraints imposed on private firms.

The main problem is that there are many missing values in the responses to these questions, which suggests that the respondents viewed the issue of government-business relations as sensitive. For the question on customs, out of 189 firms, 149 are missing. Two solutions are possible. One is to use the original values of these variables but to exclude those firms which recorded missing values. The other solution is to assume that those firms which recorded missing values in fact held a negative view of the government. To avoid arbitrarily assigning 2 or 3 to observations with 0 values, we created a dummy variable, which takes on the value 1 if the response is a missing value, 2 (=neutral) or 3 (=no support) and takes on the value of 0 if the response is 1 (=support from government).

A better measure of ownership bias in the 1993 survey is based on a question asking whether or not a respondent belonged to the Association of Privately-Operated Enterprises. By legal and regulatory origins, there are two types of private firms in China. One is known as "individual businesses" (*getihu*); the other is known as "privately-operated enterprises" (*siying qiye*). The difference between the two is the number of hired employees. Those private firms with seven or less employees are classified as individual businesses; those with more than seven employees are classified as privately-operated enterprises.

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officials through personal friendship, (h) reaching a solution through personal connections, (i) striving for a solution through spontaneous cooperation with others, and (j) seeking help from newspapers and the media. The response rate to Question 18 is not good. For option (a), acquiescing in silence, for example, only 124 out of 733 firms in the two-province subsample gave a yes or no response. There are 609 missing observations. Similarly, for option (c), requesting resolution from local government or supervisory agency, there are 519 missing observations. The most likely explanation is that the respondent firms considered this question highly sensitive.

Both are private firms as their control and revenue rights belong to private entrepreneurs. The distinction is purely ideological. A private capital owner who hires workers is perceived to engage in labor exploitation in accordance with the Marxist theory of labor surplus extraction. (In Das Kapital Karl Marx in fact used a hypothetical example of a private firm employing eight workers to illustrate his labor surplus theory.) Thus, a privately-operated firm is viewed more suspiciously. The Chinese Constitution explicitly recognized individual businesses in 1982 but the Constitutional recognition of privately-operated firms did not come until 1988. In the 1980s, among policy makers there were intense debates about privately-operated firms, but not about individual businesses. (In the aftermath of Tiananmen crackdown in 1989, four years before the 1993 survey, the number of privately-owned enterprises actually shrank.) In our story, there are *ex ante* grounds to believe that the members of the Association of Privately-Operated Enterprises were more ownership-constrained as of the early 1990s compared with other types of private firms.

All the regression runs include controls of a number of firm, industry, and region-level attributes. Because much of the FDI literature focuses on why foreign firms invest abroad, rather than why domestic firms seek foreign capital, there is not much theoretical guidance about what are the relevant firm-level independent variables. Technology features prominently in FDI discussions so we conjecture here that a more technologically-intensive domestic firm may desire forming an alliance with a foreign firm as a way to access technology. The 2002 survey asks respondents whether or not they hold patents and we created a technology variable coded as 1 for firms with patents and 0 for firms without patents. In the 1993 survey, no information on patents is available but there is a question about whether or not a firm does R&D. So we created a R&D dummy for the 1993 survey. We also include alternate measures of firm size in all the regressions. One measure is the employment size; the other measure is the sales value of the firms.

We also add a number of other controls. One set of controls refers to three locational variables. One is a dummy variable for development zones. Many regions in China have created development zones with the specific purpose of attracting FDI. The second is a countryside dummy variable whether or not a firm is located in the countryside. The third is a regional dummy variable to differentiate regions within as well as between the two provinces.

In all the regression runs, we include a dummy for manufacturing industries or all the industry dummies. Both surveys break down firms by fifteen industries—1) agriculture and fishery, 2) mining, 3) manufacturing, 4) electricity and gas, 5) construction, 6) geology, 7) transport, 8) commerce, 9) finance, 10) real estate, 11) social services, 12) health and sports, 13)

science and technology, and 15) others. The classification has the unfortunate effect of being too broad in some cases and too narrow in others. Majority of the firms are in the manufacturing sector. For example for the 2002 survey, they account for 397 out of 733 observations for the two-province subsample and some sectors have no firms at all (such as finance). However, there is no further disaggregation of manufacturing firms, which makes it difficult to control for a number of potentially relevant industry characteristics. Fortunately, due to the entry restrictions imposed on private firms in the 1990s, it is safe to assume that most private firms might have operated in relatively labor-intensive industries. Therefore, after the variables measuring patent holdings and firm size, the hope is that industry characteristics among the manufacturing private firms are not substantially different. Our default strategy is to include a manufacturing industry dummy, although we also experimented with regressions that include all fifteen industry dummies (minus the benchmarked one).

In addition, in some of the regressions based on the 2002 survey data we also add a number of additional firm-level controls and for the 1993 survey, we also control for whether or not a firm exported. China undertook significant FDI liberalization in 1992. For the 1993 survey, we created a dummy variable denoting those firms created in the 1980s. For the 2002 survey, we created a period dummy demarcating those firms founded before 1992 and those founded since 1992.

Findings

Several interesting patterns emerge from an inspection of the data in Table 5. First, FDI preferences, as measured in this paper, declined from 1993 to 2002. The average value for FDIPREF1 in the 1993 survey was 2.89, but it declined to 2.4 in 2002. This finding is particularly interesting considering the fact that China's FDI policies in 2001 were far more liberal than they were in 1993. What had happened between 1993 and 2001 is that the policies toward the domestic private sector became more liberal as well, which could have reduced the component of FDI that was motivated by legal considerations.[29] Despite the huge increase in the absolute level of FDI since China became a WTO member, the relative importance of FDI—measured by

[29] A number policy developments have occurred since the late 1990s. The loan quotas were removed in 1999, which enabled the four big state-owned banks to—theoretically at least—lend to more profitable private firms. Export restrictions on private firms were lifted in 1999 and a number of investment and licensing restrictions were removed in 2000-2001. The Constitution was amended in 1999 to give more prominent recognition to the private sector.

FDI/GDP and FDI/fixed asset investment ratios—in fact declined sharply in the last two years (a prediction I made in my book, Selling China).

The other finding is that the private sector became unambiguously stronger. The average employment size in 2001 was 159 employees, compared with 45 in 1992. Very few firms engaged in R&D activities in 1992 but in 2001 a sizable number of firms held patents. Also data from the 1993 and 2002 surveys provide further evidence that ownership biases differed between Jiangsu and Zhejiang. For the ownership measure from the 2002 survey, BANK_BIAS, 13.5 percent of firms in Jiangsu believed that credit discrimination was motivated on ownership grounds; in Zhejiang, this statistic is 3.3 percent. In the 1993 survey, 23.7 percent of the firms in Jiangsu ranked the support from Bureau of Industry and Commerce—the government agency in charge of licensing private firms—as neutral; in Zhejiang, only 10.9 percent of the firms did so.

Table 6 and Table 7 present regression findings from the 2002 survey and Table 8 presents findings from the 1993 survey. Table 6 reports the ordered probit regression results on the likelihood of forming joint ventures (JVs) with foreign firms, our measure of FDI preferences in this paper. The dependent variable, FDIPREF1, ranges from 1 (=having not thought about forming a JV) to 5 (=already formed a JV). The five specifications in the table vary with the sample selection and types of other controls included in the regressions. Specifications 1, 2, 4, and 5 are based on the Jiangsu/Zhejiang subsample from the 2002 survey. Specification 3 is based on the entire national sample. Specifications 1, 2, and 4 include the 16 regional dummies (with Wuxi being the omitted category). Specification 5 includes only a Zhejiang dummy (=1 and Jiangsu=0). Specification 3 uses the whole national sample with 30 provincial dummies. (Zhejiang is the omitted province.) Specifications 1, 2, 3 and 5 include one dummy for the manufacturing industry, whereas specification 4 includes 14 industry dummies (out of a total of 15 industries). All the regressions include a period dummy denoting those firms created since 1991, a size variable (log employment), a technological variable (a dummy for those firms holding patents), and two locational variables (whether located in a development zone or in the countryside with the omitted category being the city variable).

Table 6 about here.

The control variables in the regressions conform with our theoretical or intuitive postulations. Larger firms—as measured by employment—have stronger FDI preferences, as do technologically sophisticated firms. These two findings are entirely consistent with well-established findings in the FDI literature (although the conventional literature approaches the question from the perspective of investing foreign firms). The locational variables are consistent with what one might have expected. Firms located in development zones—which are set up

specifically to attract FDI—have stronger FDI preferences than firms located outside development zones. Firms located in the rural areas, which may not enjoy the same level of contacts with foreign firms as those located in cities, have weaker FDI preferences.

The variable of interest is the ownership bias measure, i.e., bank bias (BANK_BIAS), which is a dummy variable denoting those firms that viewed credit difficulties as grounded in ownership bias. In all five specifications, BANK_BIAS is consistently positive and consistently statistically significant. In the two-province subsample, the coefficient of BANK_BIAS ranges from 0.36 to 0.44, with the statistical significance levels between 1 and 5 percent. This means, all else being equal, that those domestic private firms that viewed bank discrimination as rooted in ownership considerations were more likely to form JVs with foreign firms than those firms that viewed bank discrimination as rooted in technical considerations (such as high collateral requirements). This finding is true for both the two-province subsample as well as for the national sample as a whole (specification 3) and it is robust to a variety of province, city, and industry controls.[30]

Before we conclude that ownership bias seems to positively correlate with FDI preferences, let us consider a number of complications. One is the possibility that BANK_BIAS is endogenous of foreign ownership rather than the other way around, as postulated in this paper. Economists and social scientists in general often assume that governments discriminate against foreign firms and protect domestic firms. This is known as the "national preference" view of the

[30] Specification 5 utilizes the entire national sample of firms in the 2002 survey. For this regression, 30 provincial dummies are included, with Zhejiang being the omitted category. It should be pointed out that for the entire national sample, the size of the coefficient is considerably smaller and the level of statistical significance is also smaller (at 10%). This should be investigated further. One possibility is that Jiangsu and Zhejiang differed most sharply in terms of bank policies but not on other dimensions of policies toward the private sector by the time the 2002 survey was carried out. For example, in the national sample, entrepreneurs with the largest financial assets desired FDI more strongly than those entrepreneurs with smaller financial assets but there is no difference for the Jiangsu/Zhejiang subsample. One reason could be that the fear of outright seizure of private property is present in other parts of China, but not in Jiangsu or Zhejiang.

world.[31] Per the national preference view, for example, one may argue that Chinese banks discriminate against those private firms with partially foreign-owned assets in favor of those private firms without such assets.

On *ex ante* grounds, this scenario is unlikely. As early as 1986, the State Council decreed that the banks would treat FIEs as favorably as SOEs, a level of treatment the domestic private firms did not receive until probably 2002 or 2003. Nevertheless, this endogeneity concern can be addressed empirically. Specification 2 excludes those private firms which already have formed JVs with foreign firms. The dependent variable then denotes pure FDI preferences, ranking firms in the process or with the plan of forming JVs vis-à-vis firms with no intention of forming JVs. BANK_BIAS remains positive and statistically significant. In fact, one can go a step further, by dropping those firms in the process of forming JVs as well. The remaining firms are those with plans to form JVs within 3 to 5 years, those without such a plan, and those that have not considered this option at all. This procedure produces a BANK_BIAS coefficient of 0.415 at 5 percent of the significance level. (This result is not reported in the table.)

The second concern is that there may be an interaction effect between BANK_BIAS and the firm-level attributes. For example, it is reasonable to conjecture that only firms that enjoy ownership security can grow to be large and can have the resources to invest in R&D. Thus the reported BANK_BIAS results may simply reflect this effect. To investigate this possibility, specifications 1, 2, and 3 in Table 7 experimented with alternative measures of firm controls or omitted the firm-level attributes altogether.

Under specification 1, the size of firms is measured by the sales value, rather than the size of employment. Under specification 2, the technological sophistication of a firm is measured by the ratio of technicians to total employment. Specification 3 omitted all the firm-level controls. BANK_BIAS remains positive and statistically significant throughout. Specifications 5 and 6 provide additional checks on our findings. The dependent variable is now a binary measure, with those firms planning to form, in the process of forming, or having already formed JVs being coded 1 or 0 otherwise (FDIPREF2). Specification 6 omitted those firms that have already formed JVs in order to denote more sharply the idea of "preference." BANK_BIAS is positive and is statistically significant at 1 percent in both specifications.

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[31] In FDI research, there is a long and venerable view that host governments discriminate against foreign firms in order to protect domestic firms. The phrase, "national preference," belongs to (Caves 1996).

Specification 4 adds two additional firm-level controls—the amount of fixed asset investments made in 2001 and the estimated capital requirements to further expand production.[32] BANK_BIAS remains positive and statistically significant at 1 percent. This procedure can address another potential concern. Because our ownership bias measure here is a measure of bank policies, there is a question about how to interpret BANK_BIAS. For example, one can argue that BANK_BIAS reflects the difficulties of obtaining bank loans and thus the FDI preferences can correlate with a desire to obtain capital from foreign firms. Although this interpretation does not invalidate the general argument that policy bias against private firms increases FDI preferences, it points to financial, as opposed to property rights, motivations.

To address this concern, it is important to emphasize that those domestic private firms on the 1/0 values of the BANK_BIAS do not necessarily differ in the degree of credit constraints. The question is about how to interpret difficulties in obtaining credit, not whether or not there are credit constraints. Both types of firms believe that obtaining bank loans is difficult, but those private firms which seem to have stronger FDI preferences interpret the difficulties in ownership terms. This is a cleaner test of the effect of ownership bias on FDI preferences as it allows us to separate the purely financial motivations of obtaining capital from foreign firms via FDI and the legal motivations of obtaining a *foreign status* from foreign firms via FDI. Empirically, as shown in specification 4, including variables that denote some explicit measures of financial motivations—such as estimated capital requirements for production expansion—do not make the effect of BANK_BIAS disappear.

One last concern relates to that of an omitted variable. The 2002 survey did not ask respondents whether or not they export. This may bias our finding in the following way. It is often postulated that exporting firms desire FDI because FDI can provide overseas marketing channels. But this positive correlation between exports and FDI can affect ownership bias. A number of economists have postulated that the Chinese government discriminates against private firms because it does not have the administrative and technical capabilities of monitoring private

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[32] We also include additional firm-level controls such as company debt, whether or not the firm was privatized from an SOE, and a measure of insider controls. (The insider control dummy is derived from Question 17d, which asked the respondent to agree or disagree with the statement: “For the sake of the stable development of your firm, I or my relatives must manage the firm.” Those who agree with this statement are coded 1; those who disagree are coded 0.) BANK_BIAS is not affected.

firms (in comparison with the SOEs).[33] Exporting private firms are most difficult to monitor because they can place their revenues abroad. Bank discrimination arises via this mechanism.

Fortunately, the 1993 survey did ask respondents whether they exported. Table 8 presents results drawing on the 1993 survey. The specifications are similar to those in the previous tables but all include a dummy term denoting whether or not the firm exported. This export dummy has no effect on our ownership bias measures in the regressions. In fact, none of the export dummy variables in the six specifications is statistically significant.

Table 8 about here.

Table 8 reports the regression results based on the 1993 survey. To test the ownership bias effect, we entered the twelve bureaucratic constraint variables separately in twenty-four regression runs, once excluding all the missing values for these variables and another time including them as a measure of no support from government. In addition, the membership dummy for the Association of Privately-Operated Enterprises (APE) is included as an alternative measure of ownership bias under specification 4. Of these twenty-five regression runs, five coefficients for bureaucratic constraint variables attained statistical significance and they are presented in Table 8.

The results are mixed. Out of five ownership bias measures, one is in fact negative—the environmental bias or ENV_BIAS—and four are positive. So the support for the hypothesized ownership bias/FDI preference linkage is not as strong as the evidence from the 2002 survey. But the balance of the evidence still supports the hypothesis, not only because there are more positive than negative coefficients but because some of the ownership bias measures with positive coefficients are more reliable. For example, BIC_BIAS is probably a better measure of the policy treatment of private firms than ENV_BIAS because the bureau of industry and commerce (BIC) is officially charged with licensing and supervising the private sector. Documentary accounts from the 1980s in Chinese sources describe the stance of the BIC as a critical determinant of private sector development. The membership dummy of the Association of Privately-Operated Enterprises (APE) is positive and statistically significant at 10 percent. This finding is more trustworthy than the findings on bureaucratic support. The question is factual and in all likelihood the question elicited more honest responses than the questions about support from the bureaucracy. In addition, there is well-documented evidence that in the 1980s privately-operated enterprises were more severely constrained.

[33] See (Bai, Li, Qian and Wang 1999).

Conclusion

In this paper, we show that ownership biases against domestic private firms can lead to higher FDI preferences. Although not demonstrated directly in this paper, it is plausible to argue that higher FDI preferences can translate into a greater economic role of FDI. For example, a biased domestic private firm can agree to give up more control when forming JVs with foreign firms, thus enticing more FDI inflows. This postulation would be consistent with the empirical patterns of FDI in Jiangsu and Zhejiang.

It is possible to have both a positive and a negative spin on our findings. On the positive side, FDI can be viewed as a mechanism to provide relative property rights security and is a sanctuary for entrepreneurship in a poor system. On the negative side, one can argue that FDI inflows reflect extant inefficiencies in the system and foreign firms have capitalized on more business opportunities than they would otherwise have given these inefficiencies. Leaving aside how one judges the role of FDI, the analytical implication is that property rights security matters to Chinese entrepreneurs.

Table 1 Various Measures of FDI Developments (%)

	Jiangsu	Zhejiang
FDI/fixed asset investment ratios		
--1985-89 annual average		
1) Of all firms	0.63	0.65
2) Of non-state sector firms[a]	1.27	1.25
3) Of domestic private firms[b]	2.16	2.19
--1990-95 annual average		
1) Of all firms	13.6	5.7
2) Of non-state sector firms[a]	21.4	10.5
3) Of domestic private firms[b]	93.9	31.8
--1996-03 annual average		
1) Of all firms		
2) Of non-state sector firms[a]		
3) Of domestic private firms[b]		
Roles of FIEs		
--Industrial FIE shares of sales of all industrial firms		
1995	18.9	17.0
2001	28.3	18.6
--Industrial FIE shares of profits of all industrial firms		
1995	31.0	21.7
2001	37.8	19.8
--Gross profit margins of industrial FIEs[c]		
1995	4.4	3.9
2001	5.0	6.3
--Average foreign equity stake in 27 manufacturing industries, 1995	19.1	14.6
Measures of contractual arrangements:		
--Percentage foreign loan/FDI ratios (1990-95 annual average)		
1) All foreign loans	55.0	69.1
2) Foreign loan obligations of provinces only	21.9	39.0
--Shares of FIEs in total exports, 1995:		
1) Of all exports	30.0	14.0
2) Of four labor-intensive industries:		
a) Garments and footwear	51.0	47.0
b) Leather and fur products	67.0	33.0
c) Wood, bamboo, and straw products	53.7	7.0
d) Furniture manufacturing	48.5	60.0
--Average foreign equity stakes in four labor-intensive industries (1995)		
1) Garment and shoe industry:	27.1	22.4
2) Leather and fur and related products:	31.0	18.3
3) Wood, bamboo and straw products:	38.9	21.1
4) Furniture and furnishings:	37.2	10.9

Notes: [a]: Non-state sector firms refer to collective firms, FIEs and domestic private firms. [b:] The denominator does not include fixed asset investments made by FIEs. [c:] Gross profit margins refer to profits divided by sales revenue.

Table 2 Jiangsu and Zhejiang: A Snapshot

	Jiangsu	**Zhejiang**
Basic Statistics		
--Size of area	100.3 (1,000 km^2)	100.2 (1,000 km^2)
--Length of coastline	1,000 km	2,200 km
--Population, 2001	73.6 million	46.1 million
--# of main seaports, 1987	5	3
--Loading capacity of the main seaports, 1987	163 million tons	30.2 million tons
--Turnover freight traffic per kilometer, 1978	28.4 billion tons	16.4 billion tons
--Primary school enrollment, 1978	97.0%	98.0%
--Doctors per 1,000 persons, 1978	0.97	0.87
--Hospital beds per 1,000 persons, 1978	1.89	1.00
Economic Structure		
--Industry as % of GDP		
1978	47.0	38.0
1995	47.9	46.3
--Urban as % of total employment		
1978	21.0	17.5
1995	27.2	20.1
--Foreign trade as % of GDP		
1981	5.8	4.0
1995	27.2	27.3
--Export as % of GDP		
1981	5.3	3.7
1995	8.1	20.0
--Domestic private firms as % of industrial output value of domestic firms[a]		
1980	0.53	0.57
2001	44.7	69.3
Economic Performance		
--Nominal GDP (yuan)		
1978	24.9 billion	12.4 billion
2001	951 billion	674.8 billion
--Nominal GDP per capita (yuan)		
1978	430	331
2001	12,922	14,655
--Real GDP growth (annual average 1978-95)	12.9%	14.0%
--Nominal export growth (annual average 1978-95)	9.3%	27.9%
FDI policy openness:		
--Shares of Economic Open Zone in the province, 1988		
1) Land	56.7	43.9
2) Population	65.0	63.0
3) GDP	79.0	80.8
--Attitudinal stance on FDI and FIEs, 1999[b]		
1) % of officials ranking FIEs' economic contribution above 8 on a 0-10 scale	28.0	27.6
2) % of officials agreeing with equal status of FIEs as domestic firms	88.0	89.0
3) % of officials wishing to preserve policy incentives for FIEs	56.0	47.0

[a]: The output value of domestic private firms is derived by the total output value minus the sum of that of SOEs, collective firms and foreign subsidiaries. The output value of foreign subsidiaries is netted out from the denominator as well.

[b]: The survey results reported here cover only officials from Lianyungang of Jiangsu and Wenzhou of Zhejiang. The question for the ranking of economic contributions from FIEs is: Please rank the FIEs' contributions to China's economic development on a 0-10 scale (0 indicates no contributions and 10 indicates the most important contributions).The survey also asked respondents to rank SOEs, collective firms, and private firms as well. The question for the equal status of FIEs is: Do you agree with the statement that FIEs are equal constituent components of national economy as SOEs and collective firms? The respondents were given the choice of 1) Agree, 2) Disagree, 3) Do not know, or 4) No response. The question on policy incentives for FIEs is: "Do you think that the government should preserve policy incentives for FIEs?" The choices of answers are the same as those for the last question.

Sources: Basic economic statistics are mainly from (State Statistical Bureau 1989). Economic and social data are based on (State Statistical Bureau 1996) and (National Bureau of Statistics of China 2002).

Table 3 Distribution of Foreign Equity and Fixed Asset Investments by FIEs Across Manufacturing Industries, Various Measures (%)

	All foreign firms		Ethnically Chinese foreign firms only		All foreign firms	
Manufacturing industries (2-digit Chinese standard industry classification)	**Distribution of FIEs' fixed asset investments (1997)**		**Distribution of FIEs' fixed asset investments (1997)**		**Distribution of foreign equity (1995)**	
	Jiangsu	**Zhejiang**	**Jiangsu**	**Zhejiang**	**Jiangsu**	**Zhejiang**
Food Processing	1.0	4.7	1.1	5.5	2.3	2.9
Food Manufacturing	1.0	0.9	1.9	0.0	3.4	2.6
Beverage Manufacturing	4.0	6.9	0.0	0.0	2.3	0.2
Tobacco Processing	0.0	0.0	0.0	0.0	0.0	0.0
Textile Industry	5.8	8.9	4.3	28.4	11.2	12.0
Garments and Footwear	0.5	0.3	0.5	0.6	5.6	6.6
Leather and Related Products	0.3	0.7	1.0	2.5	2.5	3.1
Wood, Bamboo and Straw Products	1.3	0.0	5.2	0.0	15	1.3
Furniture Manufacturing	0.0	0.2	0.0	0.3	1.0	0.3
Papermaking and Paper Products	9.6	18.5	0.0	0.2	2.0	14.3
Printing and Record Pressing	0.0	1.1	0.0	0.0	0.7	1.0
Cultural, Educational, and Sports Articles	1.0	1.3	0.0	0.0	0.9	1.0
Petroleum Processing and Products	0.0	7.7	0.0	1.9	0.2	4.4
Chemical Materials and Products	6.8	8.3	10.5	0.0	4.3	4.3
Medical and Pharmaceutical Products	1.7	0.0	0.0	0.1	1.7	2.1
Chemical Fibers	5.7	0.4	1.9	2.0	7.4	2.7
Rubber Products	0.7	2.7	0.1	0.0	0.6	1.2
Plastic Products	2.3	1.8	8.1	0.5	4.1	5.3
Nonmetal Mineral Products	7.6	5.8	22.3	11.3	6.3	6.2
Smelting and Pressing of Ferrous Metals	4.3	9.7	14.2	0.2	3.2	0.7
Smelting and Pressing of Nonferrous Metals	1.4	0.7	2.2	0.0	1.3	1.0
Metal Products	2.6	3.3	0.7	5.4	6.0	3.6
Ordinary Machinery Manufacturing	6.3	6.5	7.5	33.5	4.7	4.7
Special Purpose Equipment	9.3	0.0	0.4	0.0	2.5	2.5
Transportation Equipment	11.0	3.8	7.0	1.7	4.5	3.5
Electric Equipment and Machinery	4.7	4.4	3.9	1.9	8.1	7.6
Electronics and Telecommunications	9.2	0.9	5.6	3.6	9.9	3.7
Instruments	1.5	0.3	0.3	0.2	1.8	1.2
Other manufacturing	0.4	0.3	1.3	0.2	--	--
Summary statistics						
--Total	100	100	100	100	100.0	100
--Standard deviation	3.4	**4.2**	5.2	**8.0**	2.9	**3.38**
--Coefficient of variation	1.0	**1.2**	1.5	**2.3**	0.8	**0.95**
--Share of top three industries	29.9	**37.1**	47.0	**73.2**	29.2	**33.9**

.Source:. (Office of Third Industrial Census 1997). The data are based on enterprises with independent accounting system. These firms account for 85 percent of the industrial output value.

Table 4 Political and Economic Rankings of Firms in Jiangsu and Zhejiang

	Jiangsu		Zhejiang	
	Shares of officials rating economic contributions of firms as 8 or above, 1999 (%)[a]	Shares of domestic gross industrial output value in 1997 (%)[b]	Shares of officials rating economic contributions of firms as 8 or above, 1999 (%)[a]	Shares of domestic gross industrial output value in 1997 (%)[b]
SOEs	81.0	20.1	60.2	10.0
Collective firms	56.0	61.5	52.5	43.2
Private firms	27.0	18.5	44.2	46.8

Notes:

[a] : These represent the percentage of responses giving 8 or above to the following three separate questions on a 0-10 scale in the FDI Survey of 1999: 1) Rank the economic contributions of SOEs, 2) Rank the economic contributions of collective firms, and 3) Rank the economic contributions of private firms (excluding FIEs). The results reported here cover only officials from Zhangjiagang of Jiangsu and from Wenzhou of Zhejiang.

[b]: The Chinese statistical source break down output value by SOEs, collective firms, individually-owned businesses, and firms of other types. The same source also gives data on FIEs under firms other types. Thus the output value of domestic private firms is derived by adding to the output value of individually-owned businesses the difference between the output value of firms of other types and output value of FIEs.

Sources: Ratings of firms' economic contributions are based on FDI survey implemented in 1999. The economic data are from (State Statistical Bureau 1998).

Table 5 Descriptive statistics of major variables

Variable	Definition	Mean	Std Dev.	Min.	Max.	Obs
2002 private sector survey						
FDIPREF1	5 discrete values from 1 (=have not thought about forming a JV) to 5 (=already formed a JV)	2.40	1.4	1	5	706
FDIPREF2	1 if the firm has formed a JV, is forming or is in the process. 0 if not in the process or no such a plan.			0	1 (353)	706
Bank bias (BANK_BIAS)	1 if credit discrimination viewed as ownership-related and 0 for bank discrimination on technical grounds.			0	1 (64)	614
Employment	Employment in persons in 2001.	159	293	1	3000	726
Sales	Values of sales in 2001 (in 10,000 yuan)	2770	7172	2	77000	697
Patent dummy	1 for firms with patent holdings and 0 otherwise.			0	1 (106)	694
1993 private sector survey						
FDIPREF1	5 discrete values from 1 (=have not thought about forming a JV) to 5 (=already formed a JV)	2.89	1.04	1	5	178
FDIPREF2	1 if the firm has formed a JV, is forming or is in the process. 0 if not in the process or no such a plan.			0	1 (111)	178
Environmental bias (ENV_BIAS)[a]	1=support, 2=neutral and 3=no support	1.71	0.52	1	3	104
Bias by bureau of industry and commerce (BIC_BIAS) [a]	1=support, 2=neutral and 3=no support	1.15	0.36	1	2	187
Bias by Agency of Technical Standards (STD_BIAS) [a]	1=support, 2=neutral and 3=no support	1.53	0.5	1	2	81
Association of Privately-Operated Enterprise membership dummy	1 if belonging to the association; 0 if not.			0	1 (82)	189
Export dummy	1 if firm exported; 0 if not			0	1 (14)	189
Employment	Number of persons	45	56.7	0	400	189
R&D dummy	1 if firm had R&D; 0 if not.			0	1 (27)	189

Note: [a]: Observations with missing values are excluded.

Table 6 FDI preferences and ownership bias: Ordered probit estimates (2002 survey)

Dependent variable:	FDIPREF1 (=1 if having not thought about forming JV; 2=no plan to form JV; =3 if planning to form JV in 3-5 years; =4 if already in the process of forming JV, and =5 if already formed JV)				
Specification:	1	2	3	4	5
Explanation:	Baseline	Excluding firms with JVs already	National sample	Industry dummy variables	Zhejiang dummy
Ownership bias:					
Bank bias	0.398***	0.424***	0.099*	0.438***	0.365**
(BANK_BIAS)	(0.155)	(0.17)	(0.05)	(0.158)	(0.151)
Firm attributes:					
Log employment	0.227***	0.143***	0.024***	0.219***	0.245***
	(0.04)	(0.04)	(0.018)	(0.14)	(0.039)
Patent dummy	0.296**	0.329**	0.48***	0.284**	0.255**
	(0.138)	(0.15)	(0.059)	(0.14)	(0.133)
Location:					
Development zone	0.231	0.405**	0.161*	0.151	0.38**
	(0.197)	(0.22)	(0.09)	(0.20)	(0.19)
Countryside	-0.304***	-0.347***	-0.189***	-0.369***	-0.22**
	(0.117)	(0.126)	(0.05)	(0.119)	(0.11)
Other controls:					
Provincial dummies			Yes		Zhejiang=1 Jiangus=0
Regional dummies	Yes	Yes	Yes	Yes	
Manufacturing dummy	Yes	Yes	Yes	Yes	
Industry dummies				Yes	Yes
Period dummy (since 1991)	Yes	Yes	Yes	Yes	Yes
Observations	572	511	2625	572	572

Note: Standard errors are in the brackets. *: 0.10, **: 0.5 and ***: 0.01.

Table 7 FDI preferences and ownership bias: Alternative independent and dependent variables (2002 survey)

Dependent variable:	Ordered probit: FDIPREF1 (=1 if having not thought about forming JV; 2=no plan to form JV; =3 if planning to form JV in 3-5 years; =4 if already in the process of forming JV, and =5 if already formed JV)				Probit: FDIPREF2 (=1 if planning to form JV in 3-5 years or already in the process of forming JV or already formed JV; =0 if no plan to form JV or having not thought about forming JV)	
Specification:	1	2	3	4	5	6
Explanation:	Size measured by sales	Technology measured by technicians/employment ratio	Without firm-level controls	Additional firm-level controls	Binary dependent variable	Excluding firms with JVs already
Ownership bias:						
Bank bias (BANKBIAS)	0.394*** (0.16)	0.366** (0.173)	0.36** (0.152)	0.422*** (0.168)	0.504*** (0.19)	0.527*** (0.19)
Firm attributes:						
Log sales	0.128*** (0.032)					
Log employment		0.21*** (0.045)		0.205*** (0.048)	0.182*** (0.048)	0.133*** (0.052)
Patent dummy	0.392*** (0.139)			0.339** (0.144)	0.469** (0.172)	0.458** (0.18)
Technicians/employment ratio		0.262 (0.416)				
New investments in 2001				0.000 (0.000)		
The amount of capital needed to expand production				0.000 (0.000)		
Location:						
Development zone	0.283 (0.19)	0.197 (0.20)	0.217 (0.189)	0.164 (0.27)	0.547** (0.27)	0.654** (0.28)
Countryside	-0.26** (0.119)	-0.308** (0.126)	-0.315*** (0.11)	-0.277** (0.129)	-0.32** (0.14)	-0.299** (0.15)
Other controls:						
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Manufacturing dummy	Yes	Yes	Yes	Yes	Yes	Yes
Period dummy (since 1991)	Yes	Yes	Yes	Yes	Yes	Yes
Observations	551	493	594	489	571	510

Note: Standard errors are in the brackets. *: 0.10, **: 0.5 and ***: 0.01.

Table 8 FDI preferences and bureaucratic bias: Ordered probit estimates (1993 survey)

Dependent variable:	Ordered probit: FDIPREF1 (=1 if having not thought about forming JV; 2=no plan to form JV; =3 if planning to form JV in 3-5 years; =4 if already in the process of forming JV, and =5 if already formed JV)				
Specification:	1	2	3	3a	4
Explanation of sources of bias:	Environmental agency	Bureau of Industry and Commerce	Bureau of Standards	Bureau of technical standards	Association of Privately-Operated Enterprise
Coding of variables:	Excluding all the missing values			Missing values coded 1 (=no support)	
Bureaucratic bias:					
Environmental bias (ENV_BIAS)	-0.415* (0.24)				
Bureau of Industry and Commerce bias (BIC_BIAS)		0.448* (0.26)			
Bias by Bureau of Technical Standards (STD_BIAS)			0.529* (0.29)		
Bias by Bureau of Technical Standards (STD_BIAS1)[a]				0.373* (0.218)	
Dummy for Association of Privately-Operated Enterprises member (APE)					0.342* (0.187)
Firm attributes:					
Export dummy	0.59 (0.39)	0.37 (0.32)	0.17 (0.48)	0.29 (0.32)	0.307 (0.32)
Log employment	0.134 (0.133)	0.206** (0.097)	0.138 (0.17)	0.194** (0.096)	0.149 (0.09)
R&D dummy	0.01 (0.44)	0.29 (0.27)	0.31 (0.41)	0.397 (0.27)	0.254 (0.27)
Location:					
Countryside	-0.86*** (0.26)	-0.92*** (0.20)	-1.1*** (0.32)	-0.926*** (0.19)	-0.92*** (0.197)
Other controls:					
Regional dummies	Yes	Yes	Yes	Yes	Yes
Manufacturing dummy	Yes	Yes	Yes	Yes	Yes
Period dummy for the 1980s	Yes	Yes	Yes	Yes	Yes
Observations	85	148	65	149	149

Note: Standard errors are in the brackets. *: 0.10, **: 0.5 and ***: 0.01. [a]: Missing value coded as no support from government.

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