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Is Entrepreneurship Missing in Shanghai?

Yasheng Huang and Yi Qian

Economists and other scholars studying transition economies disagree with one another about the economic and political merits of mass privatization, financial reforms, and foreign trade reforms. Few, however, dispute the vital importance of fostering the development of new, entrepreneurial businesses. Entrepreneurial businesses—defined as new entrants and as privately-owned—create jobs and promote growth at a time when state-owned enterprises (SOEs) are being downsized and retrenched. The economic contributions of new, entrepreneurial businesses in a transitional context exceed not only those of SOEs but also those of newly-privatized firms.

It has been estimated that the vast majority of new jobs in transition economies were created in the emerging private sector. McMillan and Woodruff (2002) provide detailed data. During the first seven years of reforms in Vietnam, net job creation by the new private sector was ten million, whereas job creation in the state sector was negative. In Romania and Slovakia, a higher proportion of new private firms created jobs than either SOEs or privatized firms. In addition, the new private firms grew faster and invested at a higher rate (although the evidence here is not uniform). McMillan and Woodruff also report studies showing a positive correlation between general economic growth and entrepreneurial entry.

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In this respect, it is particularly interesting and—as we would argue, analytically important—to note that a city widely regarded as a huge economic success in China, Shanghai, has an unexpectedly low level of entrepreneurship, defined here as *de novo* private businesses. China as a whole is not short of entrepreneurship. It is well-known that township and village enterprises (TVEs) powered the Chinese economic growth in the 1980s and the early 1990s. (What is less well-known, however, is that the vast majority of the TVEs were *completely* private from the very beginning of the reforms.¹) Relative to the rest of the country, the level of entrepreneurship in Shanghai is conspicuously low. This finding is robust to a variety of specifications—to detailed industry and firm-level controls and to alternative definitions of private firms.

This phenomenon of missing entrepreneurship in Shanghai raises a number of questions. During the period of our data set (1998 to 2001), Shanghai grew rapidly. Its real gross domestic product (GDP) growth was in excess of 10 percent annually. During this period, Shanghai also attracted an enormous amount of foreign direct investment (FDI). (In 2004, FDI inflows amounted to six billion dollars, equivalent to the entire FDI inflows to India during the same period.) That entrepreneurship was lagging at a time when GDP growth was fast in the richest region of China calls into question the mechanism of growth in Shanghai, as well as why the benefits of this growth did not accrue to the indigenous entrepreneurs in Shanghai. We offer some conjectures in the concluding section.

There is also an analytical issue. There are not many *prima facie* reasons why entrepreneurship should be missing in Shanghai. We will elaborate on this point more fully in section 10.1 of the chapter. Suffice it to say here that the phenomenon of a low level of entrepreneurship in Shanghai is particularly intriguing given our primary measure of entrepreneurship. Here, we measure entrepreneurship primarily by the density of private businesses—the number of private businesses per population—and we supplement the measurement with an alternative proxy—the average number of employees per entrepreneurial business. Our priors are that Shanghai should have performed very well by these measures of entrepreneurship.

In the 1990s Shanghai experienced a massive restructuring of SOEs. Total employment in the city declined. In 1995, the broadest measure of employment stood at 7.9 million; in 2000 it was 6.7 million, a reduction of 15 percent (mainly due to the restructuring of the state sector). At the same time, Shanghai had one of the highest unemployment rates in the country. This

1. Based on detailed archival research of Chinese documents going back to the early 1980s, Huang (2008) finds that the Chinese definition of TVEs refers to their *geographic location*—that is, their rural location. However, Western academics assume that TVEs refer to their *ownership*—that is, by townships and villages. In 1985, of the 12 million TVEs in China, 10 million were straightforward private.

is the important macro context against which our regression results should be understood.

Shanghai should have performed very well by our measures of entrepreneurship absent any policy barriers. Because of the high and rising unemployment, there should have been ample incentives to go into entrepreneurship (e.g., self-employment). Studies of entrepreneurship examine whether self-employment is really a disguised form of unemployment. The trade-offs between self-employment and other employment in Shanghai were not substantial during the period in question. Also, to the extent that policy played a role, it is interesting to note that Shanghai had a low density of private business even at a time when the SOEs were shedding jobs on a large scale.

Much of the economics literature on how government affects entrepreneurship focuses on the role of regulation. This focus has led to a proliferation of studies on and development of measures of “ease of doing business.” In this chapter, we propose that government affects entrepreneurship not only by regulations but also by economic policies. Governments in developing countries seldom stand aside and let market determine resource flows among the various economic sectors. Rather, industrial policy intervenes to privilege certain industries to the detriment of others.

Among local governments in China, Shanghai is known as having a particularly strong industrial policy. Our hypothesis about the phenomenon of missing entrepreneurship in Shanghai suggests that it was the industrial policy in Shanghai that suppressed its entrepreneurship. We provide narrative and descriptive evidence of this industrial policy in Shanghai (although, due to data limitations, we are still unable to explicitly link industrial policy with the entrepreneurial measure in our main data set).

An industrial policy model may be anti-entrepreneurial in several ways. One is that it may favor incumbent businesses because incumbent businesses are large. This is the familiar national championship rationale. A second anti-entrepreneurial bias embodied in industrial policy is a technocratic mechanism. An emphasis on technology may prompt government to privilege one type of investment—foreign direct investment (FDI), often associated with high-tech—at the expense of indigenous small, low-tech entrepreneurs.

A third prominent characteristic associated with industrial policy is entry restrictions and government targeting of firms. Would-be entrepreneurial businesses are often viewed as competitors in terms of taking precious resources such as bank credits and, critically in the case of Shanghai, land. Although economists have studied the effects of industrial policy on competition and corruption (Ades and Di Tella 1997), our study probes the potentially detrimental effects of industrial policy on entrepreneurship.

Our main empirical findings are generated by our unique data set. This is the Chinese Industry Census (CIC) compiled by the National Bureau of

Statistics (NBS). (We will provide additional details about this data set in section 10.1 of the chapter.) Our data set is the most detailed data set on firm activities in China. It is an annual *census* covering 1998, 1999, 2000, and 2001, including *all* industrial firms—regardless of ownership type—with sales value above five million yuan in these four years. The advantage, compared with other survey data supplied to Western researchers that does not disclose details about sampling procedures (or with sampling procedures that may contain known or unknown biases), is that our data set is comprehensive. Another advantage is that because our data set contains information on firms of all ownership types, we can benchmark entrepreneurial firms against incumbent firms (such as SOEs). In contrast, very few surveys cover firms of all ownership types.

To be sure, there are also some disadvantages with our data set. One is that the CIC covers firms, rather than entrepreneurs. Due to this limitation, we cannot go into detail about why or how the entrepreneurs in our data set became entrepreneurs. We leave this question to other scholars who have looked into this issue (see, for example, Djankov et al. [2006]). We hope that factors such as motivation, education, and gender—personal attributes deemed relevant to entrepreneurial activity in the academic literature—do not systematically vary between Shanghai and other regions of China.

The second limitation of the CIC is that it only covers industrial firms. This raises the issue of whether Shanghai, as the most urban economy in China, may have larger service-sector entrepreneurial firms. This bias is not too severe, however, for two reasons. One is that we are benchmarking Shanghai against other cities. The vast majority of firms in excess of five million yuan in sales are urban firms and, to the extent we can, we try to control for factors such as rural migration. Second, unlike metropolitan economies in the developed countries, Shanghai has not entered the postindustrial age. As of 2001, in terms of employment, industry still accounted for 55 percent of the total, so it was still larger than the service sector. The results reported in this chapter do not differ qualitatively from the results reported in a previous version of this chapter, which used a private-sector survey conducted in 2002 that did include service-sector firms.²

The other disadvantage of the CIC is that it has a cutoff threshold of five million yuan in annual sales. This means that the CIC is biased toward larger industrial establishments. The issue here is whether these larger industrial establishments can still be considered “entrepreneurial.” We answer in the affirmative. One reason is the recent vintage of these firms—almost all the private firms in the CIC were created in the 1990s. The other reason is that an important criterion of the quality of a business environment is whether it facilitates the *growth* of entrepreneurial businesses. It is thus meaningful

2. The 2002 private-sector survey shows that, after controlling for a variety of industry and firm characteristics, Shanghai has among the smallest entrepreneurial firms in the country.

to ascertain if the entrepreneurial businesses located in the richest and the fastest-growing regional economy in China, *ceteris paribus*, can grow. In our empirical tests, we benchmark the size of entrepreneurial businesses against the size of incumbent businesses such as SOEs. This is to illustrate the relative size differentials between entrepreneurial businesses and non-entrepreneurial businesses in Shanghai and other regions of China.

The chapter is organized as follows. Section 10.1 is a detailed empirical illustration of the missing-entrepreneurship phenomenon in Shanghai. Section 10.2 offers a hypothesis as to why entrepreneurship is missing in Shanghai. The hypothesis focuses on the suppressive role of industrial policy. Section 10.3 concludes with some remarks on the broader implications of our findings.

10.1 The Missing Entrepreneurship in Shanghai: An Empirical Investigation

One reason why the phenomenon of missing entrepreneurship in Shanghai is interesting is that it contrasts sharply with the conventional wisdom in the West—that Shanghai is a dynamic economy. Another is that Shanghai has a number of locational and other advantages that should be propitious to the development of entrepreneurship. In this section we illustrate some of these factors. We then explain our data and our measures.

10.1.1 Some Basic Facts about Shanghai

Shanghai is located in the southeastern region of China.³ It is a coastal city, with a total area of 6,300 square kilometers. According to the 2000 population census, it had a population of around 16.7 million. Shanghai is an economic center of China. With a population of only 1.3 percent and a land area of 0.1 percent of the national totals, its GDP is about 5.4 percent of the national total and 6.9 percent of the total national industrial output value. It is the richest region in China.

To underscore an earlier point, industry continues to power Shanghai's economy. Shanghai is the country's biggest producer of a number of products, such as chemical fibers, ethylene, cars, program-controlled exchanges, power-generating equipment, and personal computers. From 2000 to 2004, Shanghai's heavy industry grew at an annual rate of 24.9 percent and its light industry grew at 10.4 percent. Our data set thus offers valuable insights about the city even though it is limited to industrial firms.

Our priors are that Shanghai should have been abundantly endowed with entrepreneurship if the policy environment had been accommodating. For one thing, history is on its side. Shanghai has a long history of entrepre-

3. Some of these figures are taken from the website of the Shanghai government, at <http://www/shanghai.gov.cn>.

neurship. In the first three decades of the twentieth century, Shanghai was a major business and financial hub of Asia. It was the home of the country's largest textile firms and banks. It was also the founding venue of a number of firms that are still major multinational corporations (MNCs) in the world today, such as Hong Kong Shanghai Banking Corporation (HSBC) and American Insurance Group (AIG).

A very powerful illustration of Shanghai's rich entrepreneurial heritage is the near-absolute dominance of the Hong Kong economy by industrialists who left Shanghai in 1949.⁴ During Hong Kong's take-off period, its most important industry was textiles. As recently as 1977, the textile industry produced 47 percent of Hong Kong's export value and employed 45 percent of its workforce. In the late 1970s, Shanghai industrialists owned twenty-five—out of a total of thirty—of the cotton-spinning mills in Hong Kong. Shanghai industrialists also created twenty out of the twenty-one cotton-spinning mills established between 1947 and 1959. It is not an exaggeration to say that the Hong Kong miracle was a Shanghai miracle in disguise. Thus, it is surprising that contemporary Shanghai should be so short of entrepreneurship.

Entrepreneurial businesses in Shanghai also have some substantial locational advantages. Because it is one of the most important economic centers of China, agglomeration economics should favor its entrepreneurs. There are substantial business opportunities. Measured in terms of per capita GDP, Shanghai is the richest economy in China. It has the highest GDP per capita in the country; in 2005, its GDP per capita was about five times the national average. In the 1990s, annual GDP growth averaged above 11 percent in real terms.

Some scholars have argued that entrepreneurship is rooted and embedded in culture. According to Kirzner (1979), entrepreneurs are those who are particularly alert to business opportunities that often elude others. Saxenian (1994) attributes the difference between Route 128 and Silicon Valley to the latter's more freewheeling culture. Although this is highly anecdotal, the "folk wisdom" in China is that people in Shanghai satisfy one particular definition of entrepreneurs very well; that is, Shanghainese are reputed to be well-endowed with business acumen. Shanghai also has other advantages. It has a rich endowment of human capital, as the home to a number of the best educational institutions in the country (such as Fudan and Jiaotong).

The economics literature stresses the importance of institutions in explaining economic growth. In particular, institutions protecting private property rights and enforcing contracts are of first-order importance (North 1991; Acemoglu, Johnson, and Robinson 2005). New firm growth in transitional economies is shown to be highly sensitive to the security of property

4. For a good account of the role of Shanghai industrialists in Hong Kong, see Wong (1988).

rights (Johnson, McMillan, and Woodruff 2000). Economists also stress financing constraints as important to the investment decisions of private firms (Levine 1997).

However, these theories may not readily apply to Shanghai, at least not in their original formulations. China does not have well-developed legal and financial institutions but it is not clear why Shanghai is substantially underdeveloped as compared with other regions of China. The conventional wisdom is just the opposite. China scholars believe that Shanghai has the most developed legal system in China and many Western legal academics have used Shanghai as a case study to illustrate the progress China has made in terms of rule of law (Guthrie 1999). Transitional economists have also shown that there are a variety of “self-help” coping mechanisms that entrepreneurs have devised to ameliorate the shortcomings of formal institutions. For example, entrepreneurs only do businesses with people whom they know and they rely on supplier or customer credit to obviate a dependency on banks (McMillan and Woodruff 1999a, 1999b). Thus, even if formal institutions in Shanghai are found to be lacking, a deeper and more relevant question is why these informal self-help coping mechanisms have also failed to work in Shanghai.

10.1.2 Data: Chinese Industry Census (CIC)

Our empirical investigation is based on the CIC compiled by the NBS in China. The CIC is, to our knowledge, the most detailed database on Chinese industrial firms. It covers the entire population of Chinese companies with sales above five million yuan for each census year from 1998 to 2001. The firms covered by the CIC account for a huge portion of the Chinese economy. One estimate by Geng (2006) is that the CIC firms account for between 33 to 43 percent of industrial output value and between 14 to 19 percent of GDP. Other researchers who have used this data set have uncovered important dynamics about the Chinese economy (Dougherty and Herd 2005).

The data set contains detailed information about each company’s identity, address, industry classification, incorporation year, total employment, annual wage payments and fringe benefits, the hierarchical level to which the company answers (regional, provincial, town-level, etc.), and registration type (such as SOE, private firm, foreign-invested enterprises [FIE]). The data set also lists the three main products in the order of their relative importance to the firm and the production capacities for these three products, respectively. Furthermore, the data set contains detailed balance sheet information (such as assets, debts, and shareholder equity), as well as information on sales, profits, and exports. There are detailed records of the breakdowns of equity capital by domestic and foreign sources (and foreign investments are further broken down between ethnically Chinese investors and foreign investors).

Our main measures of entrepreneurial development are the number of

entrepreneurial businesses per city normalized by population and average firm employment. However, these measures may be influenced by conventional business dynamics such as technology, the extent of competition in the industry, or the capital intensity of the industry. The difficulty is to distinguish the effects of the policy environment—which is our suggested hypothesis for why entrepreneurship is missing in Shanghai—from the industry effects. One may argue, for example, that Shanghai's industry mix is the reason why the city has fewer entrepreneurial businesses or why their size tends to be small, as compared to the national average.

We tackle this challenge in two ways. First, we have detailed industry controls in all our regression analyses. One of the most significant advantages of the CIC is that it contains detailed industry breakdowns. The Chinese standard of industrial classification (CSIC), modified in 1988, was adapted from the International Standard of Industrial Classification (ISIC). The CSIC in our data set is at the four-digit level, detailed to the level of product groupings, such as leather shoes, as opposed to just shoes. Such fine industry classifications allow us to control for technological and other dynamics at the near product level. Our industry controls, as far as we know, are one of the most detailed and precise among this type of studies (Hall, Jaffe, and Tratjenberg 2001; Khan and Qian 2009). The panel structure further helps to eliminate any time-invariant industry-specific effects.

Our second method is to use the registration information provided in the CIC. We show that entrepreneurial businesses in Shanghai are underdeveloped both absolutely and relatively. They are smaller or fewer as compared with those in other cities and they are smaller or fewer relative to nonentrepreneurial businesses such as SOEs in other cities. Because the CIC contains information on the ownership types of firms, we are able to benchmark private firms against SOEs.

A widely-accepted definition of entrepreneurship is that it is a start-up business. The private-sector firms in the CIC satisfy this condition. The absolute majority of the firms classified as privately-owned in the 1998 to 2001 CIC were established in the 1990s. The average number of years of operation is 5.3 for the Shanghai sample and 9.7 for the entire China sample in the 2000 CIC. Thus, a typical entrepreneurial business in Shanghai was founded in 1995. (In our regression analysis, we will control for the age of the firms.)

The vast majority of the private-sector firms were not privatized SOEs. They are thus the only category of firms in China that are without substantial ties to the government. Even many FIEs are joint ventures with SOEs that have ties to the government. In addition, they are very small, with a median employment of 134 persons in the national sample. This is far below the conventional 500-person cutoff threshold for large firms used by the World Bank (Batra, Kaufmann, and Stone 2003).

They also fit with a behavioral definition of entrepreneurship. Compared

with the state-owned incumbent firms, the private-sector firms are very nimble, and completely profit-driven and market-driven. This attribute is emphasized by scholars such as Frank Knight (1921) and Israel Kirzner (1979). The firms unleash what Schumpeter called “creative destruction” by offering new products and services and by injecting competition to challenge incumbents (Schumpeter 1976). Our concept of entrepreneurship is entirely consistent with previous research on entrepreneurship in transition economies (McMillan and Woodruff 2002).

In all likelihood, the vast majority of the entrepreneurial firms in our data set are still run by their original founders, thus satisfying another condition for these firms to be classified as entrepreneurial. None of the private-sector firms in our data set is listed on Chinese stock markets and they all have a very concentrated ownership structure. Our data set does not contain detailed information on the founders, but in a 2002 survey of private-sector firms that are very similar to the private-sector firms in our data set, the average number of shareholders is only 5.6 persons and the median number of shareholders is only two. The largest number of shareholders is fifty-four. So unlike managers in SOEs and MNCs, the managers in these private-sector firms bear significant residual risks and benefits of ownership.

10.1.3 Variables

We rely on two primary measures of the development of entrepreneurship and we benchmark Shanghai against other cities in China based on these two measures. The two measures are the number of private businesses per city and the employment size of a private business. Both of these measures closely follow the standard treatments in the economics literature. Firm number is often used as an indicator of business development (Spulber 2009). This is a measure of business density. We derive this measure of business density in two ways. One is the ratio of the number of entrepreneurial businesses to the urban population. The other is a more explicit measure of *entrepreneurial* business density, which is the ratio of the number of entrepreneurial businesses to the number of incumbent businesses—defined as state-owned enterprises (SOEs) in this chapter. (We have also carried out a regression analysis based on the log value of the number of entrepreneurial businesses. The qualitatively similar results are not shown in this chapter.)

An alternative measure is the log value of employment size per firm. There is a long tradition in the economics literature of using employment size as a measure of business development (Kumar, Rajan, and Zingales 1999; Cabral and Mata 2003). We use these two measures in part to be consistent with prior economic studies but also because these are especially relevant to Shanghai. Private businesses create jobs, and in the context of a transition economy they are the only source of job creation. The ability of entrepreneurial businesses to generate employment at a time when the SOEs are shedding jobs entails enormous welfare implications. For this reason,

economists studying entrepreneurial dynamics in transition economies focus on employment (Johnson, McMillan, and Woodruff 2000).

The employment measure is particularly pertinent to Shanghai. In the 1990s, as its economy grew rapidly, Shanghai lost a large number of jobs. In 1995, aggregate employment stood at 7.9 million; by 2000 it was 6.7 million, a reduction of 15 percent. Since 2000, however, there has been a recovery in the creation of employment. Only in 2004 did aggregate employment in Shanghai recover to its 1995 level of 8.1 million. The growth of joblessness in Shanghai highlights the important role of policy. Later in this chapter, we propose that Shanghai was an industrial policy state maximizing technological objectives and growth of big firms. This policy orientation was detrimental to employment generation as well as to small-scale entrepreneurial businesses. We hypothesize that it is this feature of Shanghai that depressed entrepreneurial development in the city.

In all our regression analyses, we include industry fixed effects and a set of provincial characteristics. In some of the regression runs, we also control for a set of firm-level characteristics. The firm-level controls refer to the age of the firms (used to proxy for the experience accumulated by the firm), the level of their debt (measured by debt to asset ratios), and the level of the political hierarchy of the firms. The former two controls are common in economic studies and the latter is specific to China. In China, firms of all ownership types are assigned to a particular level of the political hierarchy for management purposes or for data reporting. We control for this dynamic in our analysis. Industry controls refer to the four-digit CSIC to proxy for technology, capital intensity, and other industry characteristics.

In our regression analyses, we benchmark Shanghai against other Chinese cities. We use the five-digit regional codes in the CIC to generate 360 city dummies. (The five-digit regional code is at the county level and we aggregate the five-digit county codes to three-digit city codes.) We present our results in two ways. One is to benchmark Shanghai against all other cities (or the national average) in the data set; the other is to show city-by-city results. In the latter case, because of the large number of cities, we will only present the summary results. (We have also carried our regression analyses benchmarking Shanghai against other provinces. As a provincial-level city Shanghai is often treated as a province rather than as a city. The provincial-level analysis—not shown in this chapter—yields qualitatively similar results to those reported here based on the city-level analysis.⁵)

Because our regressions have city dummies, we cannot control for their economic characteristics. Instead, we control for a set of economic characteristics at the provincial level. There are thirty provinces in China that vary enormously in terms of their levels of economic development, trade

5. The results are available from the authors upon request.

openness, and level of rural migration. In all our regression runs, we include the log value of the per capita GDP of all the provinces (GDP per capita) and trade to GDP ratio (“Trade openness”). We use their values as of 1995 (National Bureau of Statistics 2005).

It can be argued that rural migration may affect entrepreneurial development in Shanghai or our measures of entrepreneurial development.⁶ There are two concerns here. One is that the CIC only covers those firms formally registered with the government. To the extent that rural—and unregistered—migrants also operate businesses, our measure will omit them. A related concern is that Shanghai, because of its aging population, has been particularly open to rural migration. If this is the case, according to this hypothesis, our results will have a downward bias for Shanghai.

A logical implication of the hypothesis is that Shanghai has a larger informal economy. In fact, there is no evidence that this is so. In 2004, the Chinese government conducted a comprehensive economic census of all business in the country, both registered and unregistered. The most common unregistered businesses are what are known in China as household businesses—mom-and-pop single proprietorships. According to the 2004 economic census, Shanghai has the lowest ratio of unregistered to total household businesses in the country, at around 16 percent. By contrast, in the more entrepreneurial provinces such as Guangdong and Zhejiang the ratios are much higher (50 percent and 60 percent, respectively). For the country as a whole, the ratio is 45 percent. Incidentally, Shanghai’s ratio is identical to that of another well-known statist province in China, Jilin, where 16 percent of the household businesses were unregistered.

There is no *prima facie* reason why Shanghai’s missing entrepreneurship is due to a measurement error. Nevertheless, in order to control for any potential impact of rural migration on our measure of entrepreneurship, we include a variable that can act as a proxy for rural migration (“Rural migration”). We derived this measure from a 2002 private-sector survey, which asked about the background of the polled entrepreneurs. On the basis of their answers, we coded the entrepreneurs as rural- or urban-born and calculated the rural-born entrepreneurs as ratios of all the entrepreneurs. The data are at the provincial level. We use this variable as a proxy for rural migration. (It should be noted that by this measure there is no evidence that Shanghai is particularly open to rural entrepreneurial migrants. About 28 percent of Shanghai’s entrepreneurs polled in 2002 were from rural areas, compared with 42 percent for the country as a whole.) In table 10.1, we present the descriptive statistics of the main variables used in the regression analysis.

6. We thank Randall Morck for making this suggestion.

Table 10.1 Summary statistics (variables used in the analyses)

Variable	Observation	Mean	Standard deviation
Employment (headcounts)	148,856	346.74	1,879.87
Age (years)	148,856	37.75	210.19
Leverage	144,594	.59	.29
Political hierarchy level of the firm	148,856	55	18
Total assets (10,000 Yuan)	148,856	68,979.17	619,996.3
Sales (10,000 Yuan)	148,856	41,555.31	317,716.4
Rural migration	148,856	37.71	10.74
Trade openness	148,856	28.35	8.41
GDP per capita (Yuan)	148,856	6,708.66	3,900.64
Living expenditures (Yuan)	148,856	6,247.04	1,443.78
Registration type	148,856	152.87	56.83
Average employment size in the private sector divided by that in SOE firms	2,148	1.57	7.65
Average employment size in the private sector divided by that in foreign-affiliated firms	2,148	1.20	3.93
Average number of private firm establishments at the city and industry levels	5,538	2.77	5.57
Average number of private firms as a ratio of the number of SOE firms at the city and industry levels	2,261	1.34	2.41

Notes: The political hierarchy level of a firm refers to the level of the bureaucracy to which the firm answers. This variable takes on a value of 10 if the firm answers to the central government, 20 if to the provincial level; 40 if to the regional level; 50 if to the country level; 61 if to the street level; 62 if to the town level; 63 if to the village level; 71 if to the residential association level; 72 if to the village association level; and 90 otherwise. The leverage variable is defined as total assets minus shareholder equity and then divided by total assets. Registration type identifies the firm's ownership. A SOE is defined by registration type 110; a private firm as registration type between 170 and 174; and a foreign-affiliated firm (i.e., a FIE) as registration type between 200 and 340.

10.1.4 Regression Results

Table 10.2 reports the regression results on the business density measure as our dependent variable. This variable is the number of private firms in a city divided by the total population of that city. First, let us note the findings on the provincial-level controls. There is some evidence that rural migration does indeed boost entrepreneurship. Rural migration is positively associated with a higher level of business density. Trade openness is also positive but GDP per capita is negative. The latter result indicates that private-sector development is most substantial in the poorer and marginal regions of the country (Huang 2008).

After controlling for these province-fixed effects, a Shanghai city dummy has a significant effect on our business density measure. Specification (1a) benchmarks Shanghai against the average number of private firms in all other cities. The estimation indicates statistically significant negative Shang-

Table 10.2 Density of private firms (number of private firms divided by the city-level population) as the dependent variable

Variables	(1a) Number of private firms/ local population	(1b) Number of private firms/ population	(2a) Ratio of private firms to SOEs	(2b) Ratio of private firms to SOEs
	<i>Substantive variables</i>			
Shanghai dummy	-.02*** (.005)	Omitted	-1.88*** (.39)	Omitted
Number of statistically significant positive city dummies		136		125
Number of statistically significant negative city dummies		111		35
	<i>Provincial-level economic controls</i>			
Rural migration	.0004*** (.0001)	.0002 (.0001)	.02*** (.01)	-.010 (.010)
Trade openness	.000*** (.000)	.000*** (.000)	-.000 (.000)	.000*** (.000)
GDP per capita	.001 (.003)	-.011*** (.001)	.63** (.24)	-.52*** (.13)
Constant	.001 (.032)	.10*** (.01)	-4.84** (2.19)	5.61*** (1.14)
	<i>Industry controls</i>			
Industry dummies included	Yes	Yes	Yes	Yes
	<i>Summary statistics</i>			
Number of observations	5,460	5,460	2,261	2,261
R ²	0.18	0.27	0.21	0.30

Notes: The dependent variable is the density of private firms in a city or their ratio to SOEs. Standard errors are clustered at the industry level and generalized least squares (GLS) models are applied. A Shanghai dummy is included in regression specifications (1a) and (2a) and is omitted in (1b) and (2b). Provincial economic characteristics, firm-level attributes, and industry fixed effects are controlled for.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

hai fixed effects in relation to the local private-firm establishments. The Shanghai dummy is negative and statistically significant at the 1 percent level. This means that the number of private firms in Shanghai is smaller than the national average after controlling for all the economic and industry characteristics. Since we examine the number of firms in each industry, the data for this set of analyses are aggregated at the city and industry level and no firm-level controls can be included. Specification (2a) includes all other city-fixed effects but omits the Shanghai dummy as the benchmarked city. The results are rather striking: there are 136 positive and statistically significant city dummies and 111 negative and statistically significant city dummies. Recall that there are 360 city dummies altogether. Thus, although Shanghai is the richest city in China with many favorable endowment fac-

tors, it has underperformed against a large number of other cities in China. Many of these cities have a fraction of Shanghai's GDP per capita.

We further refined our measure by devising a more explicit measure of entrepreneurial business density. We benchmarked private firms against the SOEs and FIEs—the established incumbent businesses in our data set—by generating two ratios: the number of private firms in a city divided by the average number of SOEs in the city and the number of private firms in a city divided by the number of FIEs in the city. To be as accurate and as fine-tuned as possible, we calculated these two ratios for each city and industry for 1998. We repeated the regression analyses on these two alternative dependent variables of private firm numbers in ratio to SOEs and FIEs. The results are robust across the two alternative ratio dependent variables. To preserve space, we only report the results of the ratios between private firm establishments and SOEs (columns [2a] and [2b] in table 10.2). We highlight that by this measure Shanghai outperformed thirty-five other cities in China and underperformed 125 other cities. It is not statistically distinguishable from an additional 200 cities. The finding is certainly at a huge variance with the impression often conveyed by Western scholars that Shanghai is “the head of the dragon” (Guthrie 1999).

We report the findings based on the second measure of entrepreneurship in our chapter—size of firm employment—in table 10.3. The log value of firm employment is the dependent variable. The provincial-level economic controls and industry fixed effects are identical to those used in table 10.1 and table 10.2. Specification (1a) shows a negative coefficient for the Shanghai dummy, statistically significant at the 1 percent level, illustrating that the private firms in Shanghai are smaller than the national average of all cities. We then omitted the Shanghai dummy to set it as a benchmark for comparison and included all the other city dummies. The number of cities that have statistically significant larger private firms than Shanghai (238) is almost six times the number of cities that have statistically significant smaller private firms (forty-five), as displayed in column (2b) of table 10.3. Recall again that there is a total of 360 cities in the sample.

We then generated the ratio variables to capture the relative employment size of private firms to SOEs in each city and in each industry. We used this employment ratio as an alternative dependent variable in specifications (2a) and (2b) in table 10.3. Since these data are generated at the city and industry levels, firm-level characteristics are not included in the regression runs. The results show that private firm size relative to local SOEs in the same sector in Shanghai is smaller than that in 150 other cities, as indicated by the fact that 150 other cities carry statistically significant and positive coefficients. The debt/equity ratio of a private firm is significantly and positively associated with firm employment size, and private firms that answer to province or local governments tend to have a larger employment size than those that answer to the central government, as demonstrated by the positive and significant coefficients on the set of political hierarchy dummies.

Table 10.3 Private-firm employment as the dependent variable

Variables	(1a) Log employees	(1b) Log employees	(2a) Ratio of private to SOE employment	(2b) Ratio of private to SOE employment
<i>Substantive variables</i>				
Shanghai dummy	-1.67*** (.65)		-.84 (.87)	
Number of statistically significant positive city dummies		238		150
Number of statistically significant negative city dummies		45		117
<i>Provincial-level economic controls</i>				
Rural migration	.041*** (.005)	.05*** (0.01)	-.014 (.013)	-.28*** (.03)
Trade openness	.002*** (.000)	.0003*** (.0001)	-.002 (.001)	-.0003*** (.0001)
GDP per capita	.66*** (.21)	-.13* (.08)	-.193 (.435)	-4.25*** (.47)
<i>Firm-level controls</i>				
Age of firms	.000 (.000)	-.0002 (.0001)		
Debt/asset ratio	.64*** (.09)	.28*** (.05)		
Political hierarchy	1.77*** (.45)	1.50*** (.30)		
Provincial level				
Regional level	1.34*** (.25)	1.15*** (.15)		
County-level	1.28*** (.16)	.85*** (.14)		
Street-level	1.03*** (.19)	.59*** (.15)		
Town level	1.25*** (.14)	.75*** (.13)		
Village level	1.18*** (.14)	.70** (.25)		
Residential-association level	.51** (.20)	.35 (.28)		
Village-association level	.86*** (.12)	.59*** (.12)		
Constant	7.16*** (1.36)	-9.25*** (.60)	4.54*** (.92)	50.67*** (4.91)
<i>Industry controls</i>				
Industry dummies included	Yes	Yes	Yes	Yes
<i>Summary statistics</i>				
Number of observations	10,139	10,139	2,148	2,148
R ²	0.32	0.63	0.44	0.62

Notes: The dependent variable is the log number of employees per private firm or their ratios to SOE employment. Standard errors are clustered at the industry level and GLS models are applied. A Shanghai dummy is included in regression specifications (1a) and (2a) and is omitted in (1b) and (2b). Provincial economic characteristics, firm-level attributes, and industry-fixed effects are controlled for.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

To check the robustness of the results, in addition to the two traditional proxies reported previously, we used additional proxies for entrepreneurship. In particular, we generated log of sales and total assets of the private firms to serve as alternative dependent variables. Table 10.4 reports the findings based on these two measures. Again, there are overwhelmingly more cities where private firms have statistically larger sales and asset levels than Shanghai. This is clearly indicated by the 163 positive and significant coefficients on the other city dummies and the forty-five significantly negative city coefficients in the sales specification (column [1b] in table 10.4), and by the 343 significantly positive city coefficients and the only two significantly negative city coefficients in the total assets specification (column [2b] in table 10.4).

In addition, we also carried out regression analysis using different definitions of private firms. This is necessary in part because the registration status of a firm may not accurately reflect its true shareholding arrangement. For example, an SOE can be privatized but its registration status may still remain as an SOE. We thus used the information on the shareholding structure in the CIC and devised different thresholds for private firms. We define a private firm alternately as one with 30 percent, 50 percent, or 80 percent private shareholding. The regression results are largely unaffected. The only change is that Shanghai tends to have bigger firms as measured in terms of assets when the private investors are minority shareholders; that is, when the private equity share is 30 percent.⁷ The most likely reason for this is that Shanghai has more publicly-listed firms than other cities and the vast majority of publicly-listed firms in China have only 30 percent of their shares freely tradable on the stock market. The remainder of the shares are held by government agencies or state-owned institutions.

10.2 Why Entrepreneurship is Lagging in Shanghai: A Hypothesis

In the previous section, we showed that entrepreneurship in Shanghai is underdeveloped relative to that in other cities in China. This is so even though the city has some substantial historical and economic advantages that normally would be propitious for entrepreneurial growth. In this section, we offer a conjecture that the “missing entrepreneurship” phenomenon is related to policy, specifically industrial policy. The gist of industrial policy is to favor large and incumbent firms and to promote firms in the high-tech industries. The vast majority of the entrepreneurial businesses in China are low-tech, and by definition, small. It is in this sense that industrial policy undermines entrepreneurship.

Our account here is descriptive and narrative. It is a conjecture rather than a direct empirical demonstration of the suppressive effect of industrial policy. As will be detailed later in this section, the industrial policy model was established in the late 1980s, well beyond the coverage of our data set.

7. The results are available from the authors upon request.

Table 10.4 **Alternative dependent variables: Log sales and log assets**

Variables	(1a) Log sales	(1b) Log sales	(2a) Log assets	(2b) Log assets
<i>Substantive variables</i>				
Shanghai dummy	-.14 (.16)		-.38* (.21)	
Number of statistically significant positive city dummies		163		343
Number of statistically significant negative city dummies		45		2
<i>Provincial-level economic controls</i>				
Rural migration	-.002 (.002)	-0.12*** (0.004)	-.007*** (.002)	-0.10*** (0.004)
Trade openness	.0001 (.0001)	-.001*** (.0001)	-.0001 (.0001)	-.0001 (.0001)
GDP per capita	.23** (.11)	.66*** (.12)	-.23** (.10)	-.53*** (.09)
<i>Firm-level controls</i>				
Age of firms	.000 (.000)	-.000 (.000)	.000 (.000)	.0007 (.0007)
Debt/asset ratio	.14*** (.05)	-.42*** (.07)	.63*** (.06)	0.586*** (0.057)
Political hierarchy	-.33 (.40)	.03 (.42)	1.58*** (.36)	1.90*** (0.34)
Provincial level				
Regional level	.34*** (.15)	.15 (.15)	1.70*** (.20)	1.53*** (0.20)
County-level	.10 (.15)	-.01 (.16)	1.27*** (.19)	1.16*** (0.19)
Street-level	.19 (.17)	-.04 (.17)	.71*** (.21)	0.57** (0.21)
Town level	.18 (.13)	-.06 (.13)	.88*** (.18)	0.70*** (0.18)
Village level	.26** (.13)	.09 (.13)	.84*** (.17)	0.77*** (0.18)
Residential-association level	.14 (.17)	-.04 (.19)	.74*** (.24)	0.62** (0.24)
Village-association level	.14 (.12)	.03 (.12)	.65*** (.17)	0.63*** (0.17)
Constant	7.08*** (.69)	7.71*** (.64)	8.97*** (.63)	9.97*** (.80)
<i>Industry controls</i>				
Industry dummies included	Yes	Yes	Yes	Yes
<i>Summary statistics</i>				
Number of observations	10,139	10,139	10,139	10,139
R ²	.20	.22	.21	.29

Notes: The dependent variables are log sales and log assets. Standard errors are clustered at the industry level and GLS models are applied. A Shanghai dummy is included in regression specifications (1a) and (2a) and is omitted in (1b) and (2b). Provincial economic characteristics, firm-level attributes, and industry fixed effects are controlled for.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

This makes it difficult to perform a “before-after” analysis of the effect of the introduction of industrial policy on entrepreneurship. Our approach is to document the historical rise of the industrial policy model in Shanghai and to argue that this account is descriptively consistent with the statistical results presented in the previous section.

10.2.1 The Rise of the Industrial Policy Model in Shanghai

The rise of the industrial policy model in Shanghai closely coincided with the political fortunes of two Chinese leaders—Jiang Zemin and Zhu Rongji. Jiang became mayor of Shanghai in 1985 and party secretary in 1987. Zhu replaced Jiang as mayor in 1987 and as party secretary in 1989. (All Chinese government agencies are headed by two individuals, the party secretary and the administrative leader.) Both of these leaders are regarded as consummate technocrats, having been trained as engineers and having spent long periods of their careers in technology before moving to Shanghai. Jiang had been minister of the electronics industry and Zhu had worked in the State Economic Commission, the agency in charge of upgrading China’s technology base.

There is another significant implication associated with these two leaders—they were both national leaders from 1989 to 2002. Jiang Zemin was promoted to general secretary of the Chinese Communist Party in 1989 and Zhu Rongji was promoted to executive vice premier in 1991, governor of China’s central bank in 1993, and premier in 1998. In other words, these two individuals, who staffed the central government heavily with technocrats from Shanghai, fundamentally shaped China’s economic policy direction in the 1990s. Huang (2008) presents evidence that under Jiang and Zhu, China in the 1990s substantially moved toward a commanding-heights style of economic development.

We have documentary and some statistical evidence showing that rule by Jiang and Zhu in the second half of the 1980s coincided with economic centralization in Shanghai and preceded a huge contraction of fixed-asset investments by the private sector. A policy milestone in Shanghai’s development is the 1987 government document, “A comprehensive development program for Shanghai” (Yatsko 2004). The program laid out many of the key elements of Shanghai’s aspirations to transform itself into a world-class city in short order. The document does not include specific details about what would become the famous Shanghai landmarks of the 1990s, such as the Pudong district, the Maglev train, and so forth. But it sets forth the rationale that came to justify these highly costly projects—Shanghai was to join the ranks of global, world-class cities by the early twenty-first century. Considering that in 1987 Shanghai had a per capita GDP of less than US\$800, this was an extraordinarily ambitious goal.

The 1987 development program established two key mechanisms to leapfrog Shanghai. One was the internationalization of the economy, based on

advanced technology and global brands. The other was a systematic push to eliminate all vestiges of those extant features of the city considered to be backward by the policy elites. These included the ubiquitous small and informal market activities in urban China in the 1980s—food and vegetable stalls operated by peasants at the intersections of cities and the countryside. In the first half of the 1980s, many spontaneous marketplaces had sprung up in various neighborhoods in central Shanghai, hawking goods ranging from vegetables, eggs, and even small-scale industrial goods.

The 1987 development program established a bureaucratic mechanism to systematically cleanse Shanghai of these backward vestiges—a super-municipal agency headed by the Shanghai mayor himself. The agency centralized all urban planning decisions. The Pudong project, which was to rapidly convert an area of 350 square kilometers of farmland into a financial and commercial center, was first conceived by this agency. The essence of the Pudong model is deceptively simple. The government, as the monopoly buyer facing no competition, was to requisition vast tracts of land from rural households at below-market prices and then auction off the land-use rights at prevailing market prices. The proceeds from the land sales would then be used to finance the government's industrial-policy programs, welfare and pension obligations, and, last but not least, corruption.

We have some evidence that the 1987 development program had an immediate effect on entrepreneurship in Shanghai. One reliable indicator of private-sector development is the share of capital for fixed asset investments by the private sector. Figure 10.1 presents the percentage shares of capital

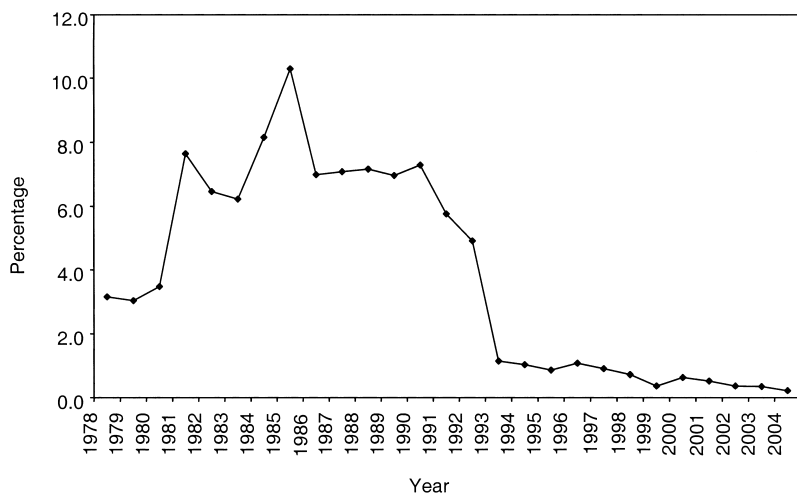


Fig. 10.1 Fixed-asset investments by the individual economy in Shanghai, 1978–2004 (Percentage share of individual economy to total fixed asset investments, 1978–2004)

for fixed asset investments by what is known as the “individual economy” in Chinese statistical parlance—equivalent to single proprietorships or self-employers in the West. In the 1980s and up to the mid-1990s, individual economy units comprised the absolute majority of the indigenous private sector in China.

The patterns are striking. In the first half of the 1980s, Shanghai was liberalizing. The fixed asset share of the individual economy rose from 3.2 percent in 1978 to 10 percent in 1985, with 1985 marking the peak of private-sector development in Shanghai. The turning point seems to be around 1986, the first year of Jiang Zemin’s rule. The ratio declined sharply to 7 percent in 1986, then to 5.8 percent in 1991, and to only 1.1 percent in 1993. Over the next ten years this ratio further steadily declined from an already negligible level in 1993. In 2004, the share was 0.2 percent, less than one-tenth the level in 1978.

We should highlight that the policy environment in Shanghai discouraged investment by both the small mom-and-pop businesses represented in figure 10.1 and the larger private-sector firms covered by the CIC. This finding helps us differentiate between two competing explanations for the policy reversals in Shanghai. One is that the reversal was entirely exogenous—that it coincided with the appointment of two consummate technocrats as Shanghai leaders in the second half of the 1980s. This is our candidate explanation.

The other explanation identifies an endogenous cause. This is the explanation offered by Rajan and Zingales (2003) as to why many countries choose to reverse financial liberalization policies.⁸ There are important analytical as well as empirical reasons to sort out the true causal mechanisms here. The incumbent-power argument would lead one to believe that the entrepreneurial atrophy observed during the 1998 to 2001 period was a result of Shanghai’s early success, whereas our own candidate explanation would argue that Shanghai early on chose a developmental model that entailed important path-dependency dynamics many years down the road. There is also the issue of whether we can be confident of our policy-related explanation, rather than an explanation that views the policy reversals as an endogenous outcome of earlier entrepreneurial successes.

Data in figure 10.1 help us rule out the endogenous explanation. The policy reversal occurred in Shanghai when the private sector was substantially underdeveloped vis-à-vis the rest of the country (a situation that persisted into the 1998 to 2001 period, as we saw earlier). At its peak, the individual economy accounted for 10 percent of total fixed assets in Shanghai, whereas during the early 1980s the ratio was more than 20 percent for China as a whole. Shanghai reversed its private-sector policies when its private sector was very weak, not when it was strong.

8. We thank Antoinette Schoar for pointing out the potential link between our chapter and this strand of the economics literature.

10.2.2 The Visible Hand of the State

The flip side of entrepreneurial development is a highly interventionist and visible hand of the state. In this part of the chapter, we document some of the regulatory and policy practices in Shanghai that may explain why entrepreneurship is missing in Shanghai. Our description here—based on relatively systematic survey evidence and some interview data—is again at a sharp variance with the widespread view in the West that Shanghai has the most developed market economy in China.

An example of research that shows Shanghai to have strong property rights protection is Fan et al. (2007),⁹ where property rights protection is based on “the suit frequency and court efficiency.” We will note that this measure contains both some ambiguities and some empirical anomalies. First, the measure does not distinguish between state property rights and private property rights. In an economy in which state property rights are given automatic precedence over private property rights, we believe that when measuring property rights protection it is highly significant to distinguish between *state* property rights and *private* property rights.

It is quite possible that this definitional ambiguity may have led to a number of empirical anomalies in Fan et al. (2007). For example, by their measure, the two bastions of SOEs, Jilin and Liaoning, have the same score as the two pioneering, reform-oriented, and market-conforming provinces of Guangdong and Fujian. Also, by their measure, Jiangsu is ranked as having stronger property rights protection than Zhejiang. This ranking is rather inconsistent with some basic facts about China. Zhejiang is known to be among the most entrepreneurial and capitalistic provinces in China, whereas Jiangsu was known—at least until the late 1990s—to be interventionist and state-controlled. Zhejiang is associated with the *laissez-faire* Wenzhou model that permits substantial informal credit to the private sector; Jiangsu is associated with the Sunan model that promotes collective TVEs and restricts private enterprises.

We present an alternative ranking of Chinese cities. Our evidence comes from a 2005 World Bank survey of over 120 Chinese cities. Research from this survey appears in *China Governance, Investment Climate, and Harmonious Society: Competitiveness Enhancements for 120 Cities in China* (World Bank 2006). The report awards Shanghai a silver medal in its overall assessment of investment climate (World Bank 2006, 46–47). The World Bank survey has three main components: (a) city characteristics; (b) government effectiveness; and (c) social measures of environmental quality, health, and education. Shanghai ranks very high in a composite ranking of these three components. Shanghai is number six in investment climate for domestic firms and number seventeen in investment climate for foreign firms.

Upon closer inspection of the data, it is clear that Shanghai scores high

9. We thank Professor Randall Morck for bringing our attention to this paper.

in stock conditions. Of the three components in the World Bank survey, two—city characteristics and social measures—are strongly influenced by history and by policy treatments of the central government. It is not surprising that Shanghai would score very high on these two measures. Its excellent geographic position is augmented by massive investments by the central government in its port facilities. It also boasts a high level of human capital and the nation's best hospitals and educational institutions.

Only the measure of government effectiveness truly reflects the portion of the investment climate that is subject to the discretionary influences of local governments. This measure is based on a range of indicators, such as taxes, bureaucratic red-tape, and an indicator that is widely found to be closely correlated with corruption—time spent with government officials. The findings on government effectiveness are much more meaningful in terms of both analytical and policy implications. There is very little a Chinese city located in an interior region can do about its geographical isolation, but it can improve its competitive position by strengthening its policy effectiveness.

On its measure of government effectiveness, Shanghai has a remarkably low score, ranking number seventy-seven in the country as perceived by domestic firms (in comparison with number six in its overall investment ranking). The ranking improved substantially in the perception by foreign firms, where it ranked number twenty-six nationwide. In other words, Shanghai is ranked at the bottom third of Chinese cities by domestic firms while it is ranked in the top third of Chinese cities by foreign firms.

Interviews by one of the authors of this chapter with entrepreneurs in Shanghai reveal a portrayal of the business environment in Shanghai that is consistent with the World Bank rankings of Chinese cities. These interviews uncovered a range of restrictive policies toward household businesses.¹⁰ These restrictions only began to ease in 2005. A summary of some of these policy restrictions includes:

1. The Shanghai government imposed onerous restrictions on who could start a second job as a private entrepreneur. University professors, civil servants, SOE general managers, and workers for nonprofit organizations were not allowed to start private businesses on the side. They had to quit their current jobs, the effect of which was that they lost the risk insurance that comes with a regular job, an insurance that was necessary at the beginning of the reforms. After 2005, this restriction only applied to civil servants.

2. The government imposed a registration capital requirement and required entrepreneurs to register the entire amount of the capital require-

10. The interviews, in October 2007 by Yasheng Huang, were conducted with entrepreneurs, lawyers who specialize in registration regulations, and officials at the All-China Federation of Industry and Commerce, an organization representing private-sector businesses. In addition, Huang visited several district offices of the Shanghai Bureau of Industry and Commerce, the agency in charge of registering and licensing firms.

ment on the day of registration. Thus, a potential entrepreneur would have to show proof of the requisite capital rather than being able to pay the registered capital in installments.

3. Shanghai has very strict zoning regulations. Residential apartments cannot be used for commercial purposes and renting residential space on a commercial lease must be approved by the government. Government enforcement has become progressively more strict. One effect of this is that it has raised the business and rental costs for household entrepreneurs.

4. The Shanghai government tightly controls land transactions. A concrete indicator is that all the demolition businesses—a huge business now as the city is demolishing many old buildings to build new structures—are completely state-owned. This shows the intention of the Shanghai government to strongly control land allocations.

5. The Shanghai government explicitly forbids private-sector firms from bidding for critical infrastructure projects. Since much of the GDP growth in Shanghai in the 1990s was generated by these investment projects, private-sector firms missed out on one of the key growth areas of the economy.

6. The Shanghai government favors FIEs (firms with at least 25 percent of foreign equity) both explicitly and implicitly. One implicit form of policy favoritism is that the Shanghai government allows FIEs to deduct actual labor costs from their tax liabilities. Domestic firms are allowed to deduct labor costs only to the extent of an average level specified by the government. The government also purposely set the level of salaries for domestic firms lower than the market rate, thus limiting the deductions by domestic firms.

7. As compared with other transition economies, the World Bank does not classify China as having onerous business licensing procedures. The length of time to start a business is about forty days, and to register a new business, thirty days. This is substantially better than Vietnam, where it may take six months to set up a business (McMillan and Woodruff 2002). The World Bank's reporting is based on China's business licensing regulations. A close reading of these regulations and other accompanying documents at several business licensing offices in Shanghai reveals a misreading of these classifications. The thirty-day length refers to the amount of time required by the licensing office to notify an applicant whether his application for license has been approved. However, before the business is eligible to apply for a license, it needs to provide documentation from numerous government agencies. For example, if an entrepreneur intends to set up a stall in a particular location, she has to obtain a permit from the agency in charge of that location. She also has to obtain certificates from the health and labor bureaus. If she cannot provide a business address that is separate from her home address, she must provide documentation that her home has been certified for dual residential and business usage.

8. The licensing office accepts applications for business licenses *only after* all these documentation requirements are satisfied. A number of entrepre-

neurs commented that although these documentation requirements are uniform across China, they are enforced more vigorously in Shanghai, meaning that the documentation must be complete in Shanghai, whereas in other regions of the country the licensing agencies do not insist on complete documentation.

10.3 Conclusion

A widespread view among economists is that China has adopted a particularly innovative and welfare-enhancing blend of reform policies that delayed the privatization of SOEs while solving efficiency and social problems via encouraging new entry (Roland 2000; Rodrik 2007). Shanghai seems to have done exactly the opposite—it has aggressively restructured SOEs at a staggering social cost, while it has restricted entry. The density of private business in Shanghai is well below the national average even as its unemployment is among the highest in the country.

The story of Shanghai is one of two extremes. At one extreme, Shanghai is viewed as a model of economic development and as a symbol of a rising and prosperous China. At the other extreme, as we have shown, Shanghai appears to lack private-sector entrepreneurship—a microeconomic mechanism widely regarded as important for economic growth, competition, job creation, and innovation. Despite wide adulation of the city, few analysts have undertaken serious data analysis. To our knowledge, this chapter is the first systematic effort to examine this important microeconomic mechanism of growth in Shanghai.

The findings are at substantial variance with the common view of Western observers that Shanghai has the most developed market economy in China. We find that by controlling for a variety of industry and province fixed effects and firm-level dynamics, entrepreneurial businesses in Shanghai lagged substantially behind entrepreneurial businesses in other Chinese cities. This is the case despite the fact that historically Shanghai has been very entrepreneurial and it possesses propitious endowment factors that would normally be associated with a flourishing of entrepreneurship. We offer the conjecture that the strong push to an industrial policy model of economic development by Shanghai leaders since the second half of the 1980s is the reason for the missing-entrepreneurship phenomenon in Shanghai.

This chapter has implications both for Shanghai and for China as a whole. The “tyranny of numbers,” in the words of Alywn Young (1995), leads us to cast substantial doubt on the economic foundation of Shanghai. It is beyond the scope of this chapter to deal with this issue here, but one hypothesis (offered by Huang [2008]) is that GDP grew very fast in Shanghai in the 1990s because Shanghai, on account of its political privileges, was massively subsidized by the rest of the country. Another hypothesis, offered by Huang (2008), is that Shanghai’s anti-entrepreneurial growth model, while

allowing for rapid GDP growth, did relatively little to improve the welfare of the average residents in Shanghai. Evidence to support the latter hypothesis is already available. In the 1990s, although Shanghai's GDP per capita increased to fivefold the national means, its household income per capita relative to the nation as a whole changed very little. More research is needed to investigate the connections between the missing-entrepreneurship phenomenon documented in this chapter and the seemingly stagnant household income growth in Shanghai.

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