Annex 3. Statistical Analysis of the Survey

To fully understand the dynamics of the flourishing private sector requires firm-level microeconomic information, in addition to the aggregated data that can be obtained from published sources. To this end, the domestic consultants carried out fieldwork in the summer of 2001 to supplement the findings from other sources. The data generated from the fieldwork provide the sound empirical basis from which the analyses and conclusions of this report are drawn. The purpose of this annex is to provide a brief description of the fieldwork methodology and the overall data set, as well as to present the statistical analyses that are the most relevant for the report. For information on other aspects of the survey that are not presented here please refer to the survey report prepared by the domestic consultants (Annex 2).

Fieldwork Methodology

The 2001 survey follows the methodology of the survey underlying the International Finance Corporation (IFC) (2000) study in several ways. First, it strikes a similar balance between geographical representation and resource constraints by conducting fieldwork in five cities that reflect regional differences in private sector development in the People's Republic of China (PRC). A brief description of the economic conditions of the five cities, the rationale for their selection, and the extent to which they represent their respective regions can be found in the main body of the report.

Second, similar to the IFC (2000) study, this survey also comprises structured interviews with chief executive officers (CEOs) from selected firms and a questionnaire covering a much larger number of firms. Although the CEO interviews provide substantial details for case-based studies, most of the data used in the report come from the questionnaire.

Third, the design of the questionnaire also draws upon the IFC (2000) study. To the extent that the two questionnaires are consistent (at least in content), we can convey a sense of the changes in the PRC's private sector based on changes in the data over 1999–2001.

But there are significant departures between the two surveys. For one, the cities selected are different. The IFC survey was conducted in four cities: Beijing, Chengdu, Shunde, and Wenzhou. While the cities selected for this survey are: Beijing, Nanhai, Shenyang, Wenzhou, and Xi'an. Nanhai and Shunde are both located in the suburbs of Guangzhou, and their geographical proximity is thought to imply significant similarities in their experiences with reform, especially for their private enterprises.

Furthermore, for the IFC (2000) study, the questionnaire was mailed out directly to a random sample of firms in the database of the State Administration for Industry and Commerce (SAIC). As a consequence, response rates were low and quality of the data was problematic. This current questionnaire remedies these problems by sampling only the members of the China General Chamber of Commerce (CGCC). (Xi'an was an exception. The limited size of the local Chamber meant that, for adequate coverage, nonmember firms had to be surveyed as well.) Since doing so introduced a non-negligible sampling bias towards CGCC members (and thus more established firms), the data from the questionnaire need to be interpreted with the potential bias in mind. One must note, however, that the IFC survey (1999) suffered from a similar sampling bias towards "the larger, more mature private enterprises" (pp.5). Therefore, in making

intertemporal comparisons between the two questionnaires, sampling bias may not pose as big a problem.

Survey Activities

After the sample was decided, and the questionnaire and interview outline designed, survey teams for each of the five cities were assembled and trained in Beijing. Each team included a professor from Tsinghua University, an official from the China General Chamber of Commerce, a doctoral or masteral student, and five to six undergraduate students from Tsinghua University. In every sampled city, two officials from the local Chamber of Commerce assisted in the survey process.

The survey was conducted from 15 July to 30 August 2001. The data were collected in the following fashion. About 70% of the data were from firms that were invited to a central location, where they completed the questionnaire after explanations were given. Another 20% of the data were similarly collected, except that the firms were notified of the questionnaire before hand, and the survey team visited the firms on-site to collect the data. The way these data were collected allowed the survey team to verify the responses immediately to check for mistakes, resulting in an improved quality of the data. The remaining 10% of the data were collected from returned mail-out questionnaires, a large portion of which was dropped because of the poor quality of the data.

Altogether more than 1,000 questionnaires were handed out; only 777 were returned (largely due to the low response rate of the mail-out questionnaires). After a preliminary screening of the data, some 21 firms were dropped because of apparently questionable data. Another round of screening shed off an additional 32 observations, all of which have either fewer than 8 or more than 10,000 employees. The rationale for rejecting these firms rests in the legal definition of private enterprises; the latter seemed implausible because the survey teams did not find such firms while conducting their fieldwork. Therefore, the final sample had 724 firms and 82 CEO interviews. The distribution by location is shown in Table A3.1.

Table A3.1. Geographic Distribution of Firms in the Final Sample

	Beijing	Nanhai	Shenyang	Wenzhou	Xi'an	Total
Questionnaires	143	147	152	148	134	724
CEO Interviews	15	15	20	15	17	82

Findings

Statistical analysis of the raw data, coupled with the preliminary findings in the report prepared by the domestic consultants, portray important features of private firms in the PRC. The following findings also quantify the extent to which private firms vary across regions and by firm characteristics.

Firm History

The five sampled cities represent regions where reform had occurred at different times and brought about different effects that also correlate with regional economic characteristics. For instance, Nanhai, right outside the city of Guangzhou in the Pearl River Delta region, was one of the forerunners of the reform, where private firms had emerged. Shenyang, on the other hand, formerly the industrial heartland of the centrally planned economy, is relatively new to reform and presumably, embraced private ownership at a later phase. Based on these regional characteristics, one would expect that the average age of private firms would differ in these cities. The data, rather surprisingly, failed to reject the hypothesis that the average age of firms is identical in all cities. Although the average age of firms in the five cities do differ from 8.6 years for Xi'an to 10.3 for Nanhai, a One-way ANOVA test yielded a low F-statistic (1.675, insignificant at even the 10% level).

Firm Size

The issue of firm size is an important one. Given that the objective of this study is to determine the constraints to private sector development, it is important to quantify to what extent firms of varying sizes face different constraints. Before evaluating if "size matters," it is important to quantify if size indeed differs across regions. There are a number of ways to measure firm size: by sales, by profits, by assets, and by number of employees. Since there is insufficient confidence in their accuracy, profit figures are excluded from the analysis. The correlation of the remaining three measures of firm size are presented in Table A3.2.

Table A3.2 Correlations between Various Measures of Firm Size

	Sales–2000	**Employees**	**Assets–2000**
Sales–2000	1.000	.286	.561
Employees	.286	1.000	.218
Assets–2000	.561	.218	1.000

Note: All correlations are significant at the 1% level (2-tailed).

The frequency distribution of firm size by these three measures is presented in Figures A3.1 to A3.3. Note that the scale of the horizontal axis is not completely linear.

Figure A3.1 Frequency Distribution of Firms by 2000 Sales

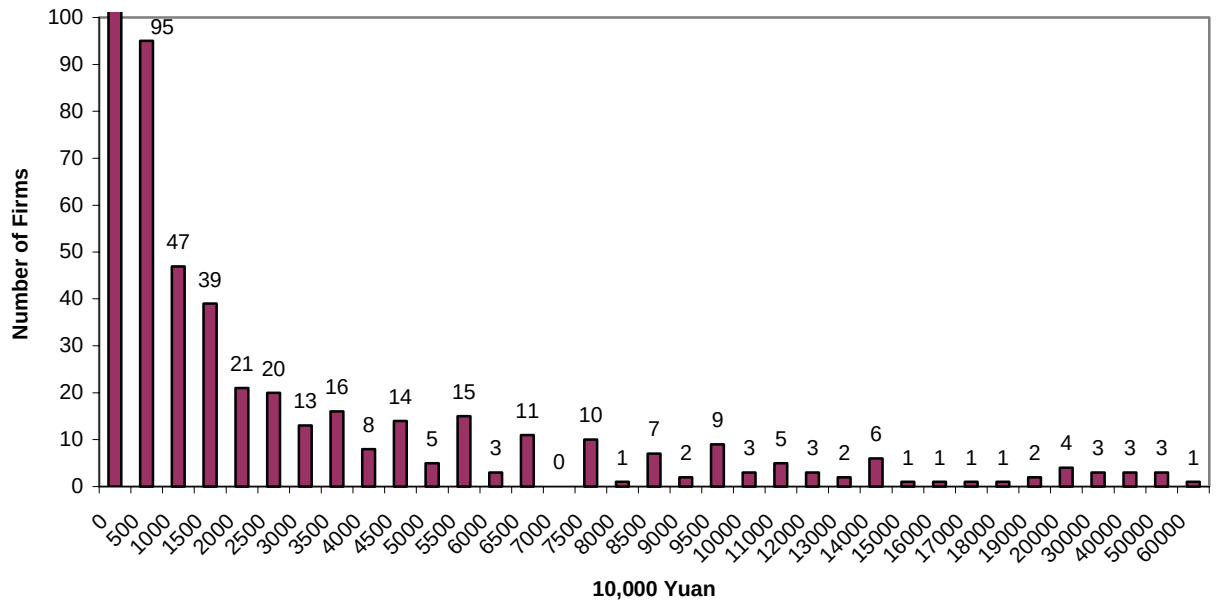


Figure A3.2 Frequency Distribution of Firms by 2000 Employment

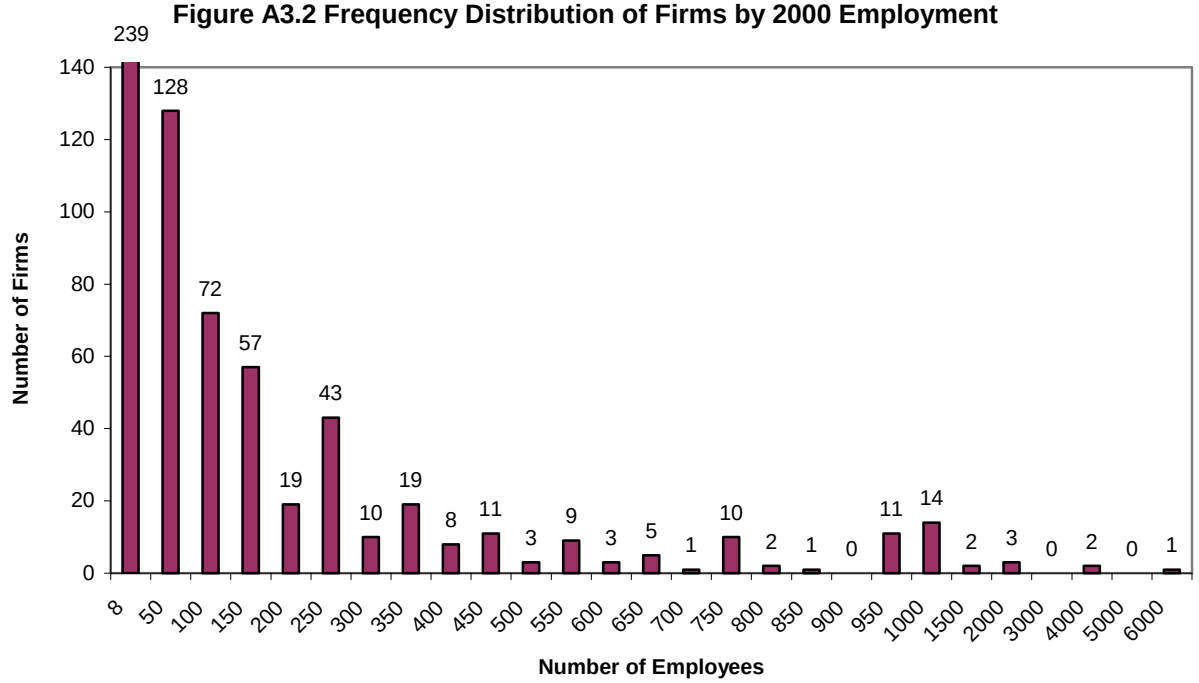
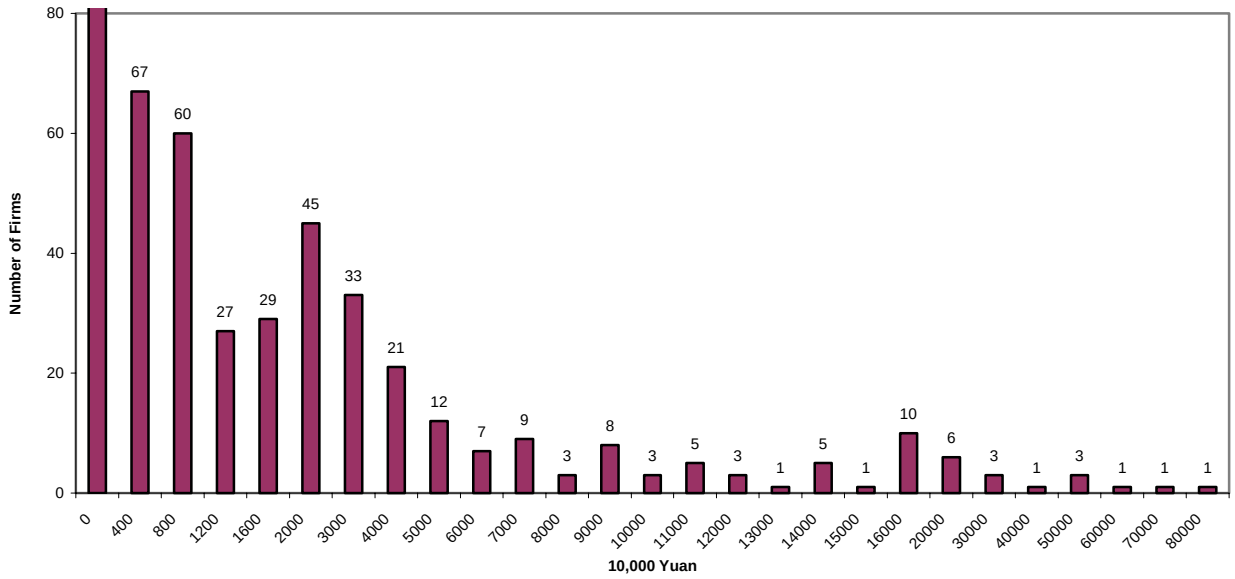


Figure A3.3 Frequency Distribution of Firms by 2000 Assets



The table below reports how firm size varies by city, depending on the measures used.

Table A3.3 Various Measures of Firm Size in Sampled Cities (10,000 yuan)

Item	Beijing	Nanhai	Shenyang	Wenzhou	Xi'an	Total
Sales						
Mean	3,519	4,506	1,149	4,525	1,712	3,093
Standard Deviation	7,216	8,265	2,321	7,913	7,168	6,990
Median	1,200	1,650	280	1,725	350	800
Profits						
Mean	395	286	194	356	190	285
Standard Deviation	1,105	545	534	1,194	785	862
Median	100	100	37	80	22	60
Assets						
Mean	7,031	4,088	2,275	2,781	1,802	3,706
Standard Deviation	29,573	8,333	5,543	4,320	6,267	15,000
Median	1,000	1,500	300	1,000	300	800
Return on Assets (%)	5.6	7.0	8.5	12.8	10.6	7.7
Employees						
Mean	346	261	120	289	114	228
Standard Deviation	854	281	186	469	203	481
Median	120	150	55.5	120	44	96.5
Asset per Employee	20	16	19	10	16	16

At first glance, the surveyed firms are, on average, significantly bigger than the representative private firm portrayed by the aggregate data. To the extent that the information

extracted from this particular survey applies to more established firms, the relevant policy question to ask is: "How to promote the growth of existing private firms?" and not "How to encourage more private firms to emerge?"

The high means and standard deviations indicate that firm distribution by size by all standards is highly skewed. While most firms cluster around the lower end of the distribution, a few extremely large firms inflate the average measures.

One-way ANOVA tests that compare the differences in the average sales, profits, assets, and number of employees in firms in different cities yields F-statistics of 6.83, 1.31, 2.48, and 6.48, respectively. At the 5% significance level, we reject the null hypotheses that average sales, assets, and the number of employees are identical across cities. We can only conclude that average profitability is potentially the same for all five cities. However, the suspected inaccuracy of profit data, probably due to the firms' unwillingness to reveal their true profits, prohibits us from drawing firm conclusions in this respect.

Resource Constraints

The questionnaire asks the firms to evaluate the ease for them to access various resources on a scale of 1-5, with "1" indicating "very difficult" and "5" indicating "very easy." The answers to these questions, by city, are summarized in Table A3.4.

Table A3.4 Perception of Resource Constraints by City

Item	Beijing	Nanhai	Shenyang	Wenzhou	Xi'an	Total	One-way Anova F-stat
Market/industry/technology information	3.09 (.81)	2.89 (.74)	2.90 (.82)	2.96 (.72)	3.00 (.84)	2.97 (.79)	1.58 [.18]
Policies & and regulations information	3.00 (.87)	2.88 (.72)	2.92 (.88)	2.94 (.76)	3.06 (.88)	2.96 (.82)	1.00 [.41]
Technology and equipment	3.15 (.76)	2.94 (.74)	3.00 (.95)	3.04 (.78)	3.29 (.84)	3.07 (.82)	3.66 [.006]
Raw materials	3.46 (.80)	3.41 (.74)	3.30 (.82)	3.38 (.88)	3.42 (.80)	3.39 (.81)	.71 [.58]
Senior technicians	2.66 (.87)	2.55 (.89)	2.73 (.91)	2.57 (.85)	2.74 (.91)	2.65 (.89)	1.32 [.26]
Senior management	2.46 (.80)	2.33 (.94)	2.59 (.98)	2.50 (.85)	2.53 (.87)	2.48 (.89)	1.74 [.14]
Skilled labor	3.29 (.83)	3.11 (.80)	3.30 (.85)	3.25 (.76)	3.44 (.76)	3.27 (.81)	2.96 [.02]
Professional svs	3.31 (.79)	3.05 (.83)	3.20 (.81)	3.30 (.77)	3.31 (.79)	3.23 (.80)	2.71 [.03]
Managerial/technical staff	2.92 (.83)	2.73 (.76)	2.85 (.83)	2.84 (.63)	2.85 (.79)	2.84 (.77)	1.07 [.37]

Note: Standard deviations in ( ) parentheses, and significance level in [ ] brackets.

Because of the size of the standard deviations, none of the sample means are statistically significantly different from "3," i.e., the data fail to reject the hypothesis that firms are quite neutral about all the listed resource constraints.

However, there also seem to be *relative* differences in how firms perceive different resource constraints. In general, raw materials, skilled labor, and professional consulting services are more accessible, as compared to senior technicians and senior management. A series of paired sample t-tests reveal that for the sample as a whole (and similarly for each city) firms perceive different constraints differently (although not significantly different from "neutral"). For instance, at 5% significance level, firms in the sample as a whole perceive "market-industry-technical information" and "government policies and regulations," and "skilled labor" and "professional services" as being equally difficulty to obtain. For all other resource pairs, there are statistically significant differences in firms' perception. (See Table A3.5)

Table A3.5 Paired Sample t-tests for Various Resource Constraints

	Market/ind/ tech information	Policies and regulations information	Tech & equipment	Raw Materials	Senior technicians	Senior management	Skilled labor	Prof consulting services	Manager/ technical staff
Market/industry/ technology information									
Policies and regulations information	.001 (.962)								
Technology and equipment	-.11 (.000)	-.11 (.001)							
Raw materials	-.43 (.000)	-.43 (.000)	-.31 (.000)						
Senior technicians	.32 (.000)	.32 (.000)	.43 (.000)	.74 (.000)					
Senior management	.49 (.000)	.49 (.000)	.61 (.000)	.92 (.000)	.17 (.000)				
Skilled labor	-.31 (.000)	-.31 (.000)	-.20 (.000)	.12 (.001)	-.63 (.000)	-.80 (.000)			
Professional consulting services	-.27 (.000)	-.28 (.000)	-.15 (.000)	.17 (.000)	-.57 (.000)	-.76 (.000)	.044 (.153)		
Managerial/ technical staff	.13 (.000)	.12 (.001)	.25 (.000)	.57 (.000)	-.18 (.000)	-.36 (.000)	.44 (.000)	.4 (.000)	

Notes: 1) Significant levels are in brackets. 2) The differences in means are not the same as those computed from the last column of Table A3.4 because here the matching pairs are used.

Apart from differences between types of resources, there also exist differences in how firms in each city evaluate a particular resource constraint. To test for city-wise differences, a one-way ANOVA test by cities on each resource type was performed, and the results appear in the last column of Table A3.4. The results indicate that there are significant differences (5% significance level) in how firms in different cities view the constraints of "technology and equipment,"

"skilled labor," and "professional consulting services." However, the city-wise differences in these areas do not reflect any obvious patterns. Firms do not perceive the difficulty in obtaining other resources differently across cities.

Resource Constraints—Does Size matter?

The significant variations in firm size leads to the hypothesis that larger firms would find it relatively easy to obtain certain resources, while smaller firms may view other constraints more favorably. Table A3.6 shows the average perceived difficulty for each quartile of firms by assets. Since not all firms report the value of their assets, the last column of this table differs slightly from that in Table A3.4.

Table A3.6 Resource Constraints by Asset Quartiles

	Assets-1	Assets-2	Assets-3	Assets-4	Total	One-way Anova F-Stat
Market/industry/technology information	2.87 (.80)	2.97 (.85)	2.96 (.79)	3.07 (.70)	2.96 (.79)	1.48 [.22]
Policies & regulations info	2.80 (.84)	2.91 (.83)	2.92 (.78)	3.10 (.74)	2.93 (.80)	3.31 [.02]
Technology and equipment	2.97 (.85)	3.05 (.87)	3.03 (.81)	3.19 (.76)	3.05 (.82)	1.93 [.12]
Raw materials	3.22 (.84)	3.38 (.85)	3.42 (.77)	3.57 (.78)	3.39 (.82)	4.35 [.005]
Senior technicians	2.72 (.92)	2.52 (.90)	2.58 (.87)	2.71 (.83)	2.63 (.88)	1.69 [.17]
Senior management	2.54 (.89)	2.34 (.88)	2.35 (.88)	2.58 (.86)	2.45 (.88)	2.95 [.03]
Skilled labor	3.23 (.73)	3.13 (.80)	3.26 (.76)	3.40 (.88)	3.25 (.79)	2.66 [.048]
Professional consulting services	3.17 (.74)	3.09 (.77)	3.20 (.78)	3.46 (.73)	3.23 (.77)	6.00 [.000]
Managerial/technical staff	2.84 (.75)	2.69 (.70)	2.82 (.79)	2.98 (.77)	2.83 (.76)	3.41 [.02]

Note: Standard deviations are in ( ) parentheses, and significance levels are in [ ] brackets.

Although the size of the standard deviations make all averages statistically indistinguishable from "3," the ANOVA test results in the last column seem to suggest that size does matter for "policies & regulations," "raw materials," "senior management," "skilled labor," "professional consulting services," and "managerial, technical staff." Based on Table A3.6, it seems that larger firms, in general, are more advantaged at procuring information concerning policies and regulations, raw material, and professional consulting services. The relationship between firm size (by assets) and the ease of obtaining human resource seems less monotonic. In particular, mid-sized firms seem to have more pressing need of senior management, skilled labor, and managerial, technical and (information and technology) IT staff.

How would the conclusions differ if we look at firm size by sales?

Table A3.7 Resource Constraints by Sales Quartiles

	Sales-1	Sales-2	Sales -3	Sales -4	Total	One-way Anova F-Stat
Mkt/ind/tech information	2.78 (.80)	2.96 (.83)	2.93 (.73)	3.18 (.69)	2.97 (.78)	7.37 [.000]
Policies & regulations info	2.79 (.91)	2.94 (.75)	2.93 (.75)	3.13 (.78)	2.95 (.81)	4.71 [.003]
Tech & equipment	3.03 (.89)	2.99 (.81)	3.07 (.85)	3.16 (.72)	3.06 (.82)	1.25 [.29]
Raw Materials	3.24 (.80)	3.26 (.81)	3.45 (.82)	3.53 (.73)	3.37 (.80)	4.72 [.003]
Senior technicians	2.67 (.94)	2.70 (.88)	2.44 (.80)	2.72 (.90)	2.63 (.89)	3.38 [.02]
Senior management	2.55 (.89)	2.54 (.90)	2.20 (.82)	2.56 (.90)	2.46 (.89)	6.10 [.000]
Skilled labor	3.19 (.74)	3.24 (.78)	3.23 (.85)	3.36 (.81)	3.26 (.80)	1.33 [.26]
Professional consulting services	3.12 (.79)	3.20 (.82)	3.17 (.78)	3.35 (.75)	3.21 (.79)	2.62 [.05]
Manager/tech staff	2.77 (.78)	2.84 (.75)	2.72 (.75)	2.97 (.78)	2.83 (.77)	3.01 [.03]

Note: Standard deviations are in ( ) parentheses, and significance levels are in [ ] brackets.

Again, although all average perceptions are not statistically different from "neutral," the ANOVA tests suggest that size does matter for "market/industry/technical information" "policies & regulations," "raw materials," "senior management," "skilled labor," "professional consulting services," and "managerial, technical and IT staff." Based on Table A3.7, it seems that larger firms, in general, are more advantaged at procuring information concerning market conditions and policies, raw material, skilled labor, and professional consulting services. The relationship between firm size (by assets) and the ease of obtaining senior management and managerial/technical/IT staff seems less monotonic. In particular, mid-sized firms seem to have more pressing need in these areas.

By performing the same exercise on firm size by number of employees, we produce Table A3.8.

Table A3.8 Resource Constraints by Employees Quartiles

	Emp-1	Emp-2	Emp-3	Emp-4	Total	One-way Anova F-Stat
Market/industry/technology information	2.89 (.81)	2.99 (.83)	2.95 (.79)	3.10 (.66)	2.98 (.78)	2.30 [.08]
Policies and regulations information	2.90 (.91)	2.97 (.87)	2.92 (.72)	3.04 (.78)	2.96 (.82)	.837 [.47]
Technology and equipment	3.11 (.90)	3.06 (.88)	2.97 (.79)	3.20 (.69)	3.08 (.82)	2.18 [.09]
Raw materials	3.29 (.84)	3.42 (.83)	3.48 (.83)	3.39 (.73)	3.40 (.81)	1.49 [.22]
Senior technicians	2.73 (.90)	2.69 (.95)	2.49 (.86)	2.67 (.84)	2.64 (.89)	2.26 [.08]
Senior management	2.62 (.89)	2.46 (.92)	2.29 (.94)	2.53 (.79)	2.47 (.89)	3.94 [.008]
Skilled labor	3.27 (.79)	3.30 (.84)	3.24 (.77)	3.29 (.82)	3.27 (.80)	.21 [.89]
Professional consulting services	3.10 (.81)	3.32 (.84)	3.20 (.79)	3.34 (.74)	3.24 (.80)	3.26 [.02]
Managerial/technical staff	2.78 (.77)	2.87 (.83)	2.76 (.73)	2.89 (.73)	2.82 (.76)	1.05 [.37]

Note: Standard deviations are in ( ) parentheses, and significance levels are in [ ] brackets.

Although all average perceptions are not statistically different from "neutral," the ANOVA tests suggest that size does matter for "*senior management*," and "*professional consulting services*." It seems that larger firms are more advantaged at procuring professional consulting services, while mid-sized firms seem particularly strapped by the lack of senior managerial talents.

The correlation of firm size (by different measures) and resource constraints is produced in Table A3.9. Denote a disadvantage for smaller firms with "S" and for medium-sized firms with "M."

Table A3.9 Summary of Firm size and Resource Constraints

	Asset	Sales	Employment
Market/industry/technology information	S	S	
Policies and regulations information		S	
Technology and equipment			
Raw materials	S	S	
Senior technicians		M	
Senior management	M	M	M
Skilled labor	M		
Professional consulting services	S	S	S
Managerial/technical staff	M	M	

Note: This table illustrates how size impact resource constraints, where size does matter. In general, *all* firms perceive raw materials, skilled labor, and professional consulting services as being relatively accessible, and senior technicians and senior management relatively inaccessible.

External Environment

A section of questionnaire is devoted to ask firms how they perceive problems with the market (financial) and regulatory environment, using a scale of 1 to 5 ("1" being the most negative). Table A3.10 reports how the average perceptions vary across cities.

Table A3.10 Perception of Environment by City

	Beijing	**Nanhai**	**Shenyang**	**Wenzhou**	**Xi'an**	**Total**	**One-way Anova F**
Property Security	3.46	3.56	3.36	3.76	3.36	3.46	6.50
	(.81)	(.74)	(.76)	(.82)	(.76)	(.79)	[.000]
Contract enforced	3.38	3.17	3.26	3.53	3.44	3.35	4.42
	(.78)	(.82)	(.91)	(.77)	(.74)	(.82)	[.002]
Central government function	3.93	3.49	3.66	3.88	3.83	3.76	6.28
	(.88)	(.86)	(.79)	(.84)	(.87)	(.86)	[.000]
Local government function	3.71	3.33	3.44	3.64	3.54	3.53	4.10
	(.89)	(.93)	(.85)	(.92)	(.83)	(.89)	[.003]
Central government attitude	3.99	3.61	3.65	3.96	3.81	3.80	7.91
	(.73)	(.69)	(.80)	(.70)	(.73)	(.74)	[.000]
Local government attitude	3.87	3.60	3.53	3.72	3.45	3.64	5.29
	(.87)	(.74)	(.92)	(.84)	(.85)	(.86)	[.000]
Bank loan difficulty	2.13	2.39	2.03	3.27	2.16	2.41	34.07
	(1.01)	(1.13)	(.96)	(1.05)	(.97)	(1.12)	[.000]
Nonbank loan difficulty	1.94	2.20	1.83	2.96	2.30	2.23	24.06
	(.90)	(1.17)	(.85)	(1.01)	(1.01)	(1.06)	[.000]
Administrative harassment	3.58	3.64	3.05	3.35	3.28	3.38	6.42
	(1.11)	(1.12)	(1.05)	(1.18)	(.98)	(1.11)	[.000]
Market competition	1.75	1.63	2.01	1.90	2.27	1.90	10.69
	(.87)	(.83)	(.94)	(.85)	(.91)	(.91)	[.000]

Note: Standard deviations are in ( ) parentheses and significance levels are in [ ] brackets.

Because of the size of standard deviations, none of the sample means are statistically significantly different from "3" at the 1% level. Although firms are on average neutral about their external environment, they also seem particularly positive about "central government functions" and "central government attitude." The difficulty in obtaining bank and nonbank loans, together with "market competition" seem particularly problematic.

Despite an overall "neutrality," city-wise differences also exist, as indicated by very significant F-statistics for all one-way ANOVA tests (last column in table). The pattern of city-wise variations is presented in Table A3.11.

Table A3.11 Patterns of City-wise Variations in Perceptions of the Environment

	Beijing	**Nanhai**	**Shenyang**	**Wenzhou**	**Xi'an**
Property Security			-	+	-
Contract enforced		-		+	
Central government function	+	-			
Local government function	+	-			
Central government attitude	+	-	-	+	
Local government attitude	+				-
Bank loan difficulty			-	+ +	
Nonbank loan difficulty			-	+ +	
Administrative harassment	+	+	-		
Market competition	-	-			+

Note: This table illustrates how location affects firms' perceptions of their environment, where the location factor does matter. Relatively speaking, *all* firms view the central government's functions and attitude quite positively, while they perceive the difficulty in obtaining bank and nonbank loans and market competition as particularly worrisome.

Clearly private firms in Beijing and Wenzhou are quite positive about their market and regulatory environment, contrasting with the pessimism of firms in Shenyang, a city with probably a higher transition cost from the plan to the market. Unlike Shenyang, Xi'an, although also a latecomer in the reform, is quite neutral overall. This perhaps reflects the central government's recent policy bias towards the western region. Surprisingly, Nanhai's private enterprises, despite their rapid growth in recent years, are quite negative about their environment, perhaps reflecting the high expectations of these firms.

Firm Size and External Environment

A similar exercise is performed, breaking down the perceptions of the external environment by firm size. Tables A3.12-–A3.14 report the results, together with their respective one-way ANOVA tests.

Table A3.12: External Environment and Firm Size (by Assets)

	Assets-1	Assets-2	Assets-3	Assets-4	One-way Anova F-stat
Property Security	3.34 (.84)	3.46 (.77)	3.62 (.71)	3.64 (.75)	5.14 [.002]
Contract enforced	3.25 (.76)	3.27 (.92)	3.39 (.85)	3.50 (.69)	2.97 [.03]
Central government function	3.67 (.84)	3.78 (.88)	3.70 (.90)	3.87 (.82)	1.53 [.21]
Local government function	3.37 (.91)	3.54 (.89)	3.51 (.92)	3.68 (.84)	2.94 [.03]
Central government attitude	3.72 (.82)	3.77 (.74)	3.86 (.73)	3.92 (.68)	2.13 [.096]
Local government attitude	3.47 (.94)	3.63 (.87)	3.68 (.83)	3.87 (.81)	5.48 [.01]
Bank loan difficulty	2.07 (1.04)	2.23 (1.13)	2.43 (1.15)	2.74 (1.07)	9.67 [.000]
Nonbank loan difficulty	2.00 (.98)	2.18 (1.08)	2.27 (1.05)	2.38 (1.09)	3.05 [.03]
Administrative harassment	3.17 (1.13)	3.22 (1.12)	3.46 (1.06)	3.56 (1.07)	4.22 [.006]
Market competition	2.10 (.94)	1.89 (.92)	1.89 (.95)	1.66 (.76)	5.62 [.001]

Note: Standard deviations are in ( ) parentheses, and significance levels are in [ ] brackets.

Table A3.13 External Environment and Firm Size (by Sales)

	Sales-1	Sales-2	Sales-3	Sales-4	One-way Anova F-stat
Property Security	3.22	3.46	3.66	3.67	11.37
	(.79)	(.81)	(.74)	(.74)	[.000]
Contract enforced	3.09	3.43	3.44	3.42	6.95
	(.77)	(.89)	(.83)	(.73)	[000]
Central government	3.63	3.84	3.72	3.89	2.89
function	(.90)	(.80)	(.86)	(.81)	[.04]
Local government function	3.36	3.52	3.52	3.68	3.46
	(.92)	(.80)	(.93)	(.90)	[.02]
Central government attitude	3.67	3.76	3.84	3.96	4.38
	(.80)	(.77)	(.73)	(.66)	[.005]
Local government attitude	3.45	3.54	3.61	3.90	8.28
	(.91)	(.88)	(.84)	(.79)	[.000]
Bank loan difficulty	1.93	2.38	2.39	2.84	18.17
	(.87)	(1.16)	(1.10)	(1.12)	[.000]
Nonbank loan difficulty	1.97	2.14	2.30	2.48	5.74
	(.96)	(1.01)	(1.09)	(1.09)	[.001]
Administrative harassment	3.09	3.38	3.40	3.60	5.59
	(1.08)	(1.11)	(1.08)	(1.08)	[.001]
Market competition	2.13	1.89	1.79	1.71	6.73
	(.96)	(.84)	(.86)	(.83)	[.000]

Note: Standard deviations are in ( ) parentheses, and significance levels are in [ ] brackets.

Table 14: External Environment and Firm Size (by Employment)

	Emp-1	Emp-2	Emp-3	Emp-4	One-way Anova F-stat
Property Security	3.38	3.46	3.53	3.64	3.00
	(.83)	(.78)	(.82)	(.72)	[.03]
Contract enforced	3.31	3.34	3.37	3.43	.602
	(.77)	(.89)	(.85)	(.71)	[.61]
Central government function	3.78	3.78	3.62	3.89	2.73
	(.80)	(.86)	(.95)	(.79)	[.04]
Local government function	3.53	3.51	3.39	3.73	4.22
	(.82)	(.93)	(.97)	(.77)	[.006]
Central government attitude	3.81	3.79	3.70	4.00	5.03
	(.79)	(.67)	(.84)	(.59)	[.002]
Local government attitude	3.48	3.61	3.62	3.87	5.96
	(.92)	(.87)	(.85)	(.77)	[.001]
Bank loan difficulty	2.15	2.33	2.32	2.81	10.59
	(1.15)	(1.08)	(1.10)	(1.07)	[.000]
Nonbank loan difficulty	2.11	2.09	2.24	2.41	2.81
	(1.02)	(1.06)	(1.12)	(.99)	[.04]
Administrative harassment	3.25	3.32	3.39	3.53	1.75
	(1.10)	(1.09)	(1.15)	(1.08)	[.16]
Market competition	2.13	1.95	1.79	1.73	6.46
	(.93)	(.94)	(.84)	(.83)	[.000]

Note: Standard deviations are in ( ) parentheses, and significance levels are in [ ] brackets.

The size-wise comparisons are summarized in Table A3.15, similar to Table A3.11. "L" denotes that larger firms are disadvantaged.

Table A3.15 Summary of Firm size and External Environment

	Asset	Sales	Employment
Property Security	S	S	S
Contract enforced	S	S	
Central government function		S	M
Local government function	S	S	M
Central government attitude		S	M
Local government attitude	S	S	S
Bank loan difficulty	S	S	S
Nonbank loan difficulty	S	S	S
Administrative harassment	S	S	
Market competition	L	L	L

Note: This table illustrates how size affects the firms' perceptions of their environment, where size does matter. Relatively speaking, all firms view the central government's functions and attitude quite positively, while they perceive the difficulty in obtaining bank and nonbank loans and market competition as particularly worrisome.

The above tables allow us to conclude that: (i) in general, larger firms find their external environment more favorable than their smaller counterparts; (ii) larger firms consistently face stiffer market competition; (iii) there are no definite relationships between firm size and the perceptions of local and central government attitudes and functions; and (iv) based on asset

measurement, firms of different sizes perceive significant differences in the local government's attitude and functions, while those of the central government are more muted.

Illicit Fees

The fact that local government agencies frequently impose illicit (unauthorized by the central government) fees on local enterprises is openly acknowledged by both policy makers and scholars. Therefore, it is important to quantify the amount of illicit fees on private enterprises before we can evaluate their impact. Do local government agencies behave differently across cities? Table A3.16 reports the average fees paid by enterprises in the surveyed cities.

Table A3.16 Illicit Fees (10,000 yuan)

	N [xx pls use full form]	**Median [xx can we use 2 decimal places, for consistency?]**	**Mean**	**Std. Deviation**
Beijing	67	1	3.04	5.92
Nanhai	56	2.75	7.45	15.17
Shenyang	82	2	6.77	14.09
Wenzhou	57	3	8.65	15.97
Xi'an	62	1.7	4.20	12.79
Total	324	2	5.96	13.24

The one-way Anova test for illicit fees across cities yields a F-statistic of 1.953, or a significance level of 10.2%. Therefore, we cannot conclude that firms, on average, pay different amounts of illicit fees in different cities.

A simple linear regression of illicit fees on firm size characteristics yields positive coefficients on assets and employment (but not sales). None of the location dummies are significant either. When we regress fees on assets and employees only, we can infer that the effects of assets and employees on fees: increasing assets by 10,000 yuan is associated with 4.01 yuan increase in fees; increasing employment by 1 is associated with 53.36 yuan in additional fees.

Annex 3a: Statistical Tables

Geographic Distribution of Firms in the Final Sample

Item	Beijing	Nanhai	Shenyang	Wenzhou	Xi'an	Total
Questionnaires	143	147	152	148	134	724
CEO Interviews	15	15	20	15	17	82

Histories of Private Enterprises in Different Cities (unit: years)

City	Average	Median
Beijing	9.1	8
Nanhai	10.3	10
Shenyang	9.0	7
Wenzhou	9.5	8
Xi'an	8.6	7.5
Total	9.3	8

A One-way Anova test for comparing the differences in the average age of firms in different cities yields a F-statistic of 1.675, indicating a significance level of 15%. Therefore, there is insufficient reason to reject the null hypothesis that the mean for all cities are the same.

Comparing sector distribution of the sample and national statistics (%)

Sample		Nation 1999	
Retail	8.9	Retail and Dining	58
Food service	5.7		
Total retail and food	14.6		
Manufacture-metal	6.7		
-machinery	5.8		
-textile	5.3		
-apparel	5.2		
Total manufacturing	23	Manufacturing	17
Other services	5.4		

Various Measures of Enterprises in the Sampled Cities (10,000 yuan)

	Beijing	Nanhai	Shenyang	Wenzhou	Xian	Total
Sales						
Mean	3519	4506	1149	4525	1712	3093
Standard Deviation	7216	8265	2321	7913	7168	6990
Median	1200	1650	280	1725	350	800
Profits						
Mean	395	286	194	356	190	285
Standard Deviation	1105	545	534	1194	785	862
Median	100	100	37	80	22	60
Assets						
Mean	7031	4088	2275	2781	1802	3706
Standard Deviation	29573	8333	5543	4320	6267	15000
Median	1000	1500	300	1000	300	800
Return on Assets (%)	5.6	7.0	8.5	12.8	10.6	7.7
Employees						
Mean	346	261	120	289	114	228
Standard Deviation	854	281	186	469	203	481
Median	120	150	55.5	120	44	96.5
Asset per Employee	20	16	19	10	16	16

One-way Anova tests that compare the differences in the average sales, profits, assets, and employees of firms in different cities yields F-statistics of 6.833, 1.310, 2.482, and 6.484. At the 5% significance level, we fail reject only one null hypothesis: average profitability is the same for all five cities. We can conclude that enterprises in the five cities do perform differently in terms of sales, assets and employees.

Corporate Governance and Decision Making Power

Decision-making body	Percentage	Management Decision Maker	Percentage
Shareholders' meeting	12.6	Major shareholders	81.5
Board of directors	31.6	Minor shareholders	2.5
President/Chairman	34.4	Nonshareholding manager	6.4
Major shareholders	13.7	Others	3.3
Others	3.3		
Missing 32 observations		Missing 45 observations, 1 problem	

Manager's Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Elementary	10	1.4	1.4	1.4
Junior high	97	13.4	14.1	15.5
Senior high	187	25.8	27.1	42.6
Vocational school	37	5.1	5.4	48.0
Associate	170	23.5	24.6	72.6
College	136	18.8	19.7	92.3
Graduate	52	7.2	7.5	99.9
Unclear entry	1	.1	.1	100.0
Total	690	95.3	100.0	
Missing	34	4.7		
Total	724	100.0		

Destination of Export

Top Destination		**Second Destination**		**Third Destination**	
North America	23%	Southeast Asia	33%	Mideast	20%
Southeast Asia	22%	Europe	19%	Other Asia	18%
Europe	16%	Japan & Korea	14%	Australia	16%
Japan & Korea	14%	Other Asia	12%	Southeast Asia	14%
Other America	9%	Other America	7%	Former USSR	8%
Former USSR	6%	Former USSR	5%	Africa	8%
Other Asia	6%	Mideast	5%	Europe	7%
Africa	1%	Africa	4%	Japan & Korea	7%
Mideast	1%	N. America	1%	N. America	1%
Australia	1%	Australia	1%		
Valid obs	233	Valid obs	139	Valid obs	84

Suppose all firms filled out surveys correctly (only firm #284 lists Southeast Asia twice)

	Number of Firms
North America	55
Southeast Asia	110
Europe	69
Japan and Republic of Korea	58
Other America	31
Former USSR	29
Other Asia	45
Africa	16
Middle East	27
Australia	16

Branches and Subsidiaries

Overseas		**Domestic**	
Firms with subsidiaries	Total subsidiaries	Firms with subsidiaries	Total subsidiaries
84	208	266	3,784

Therefore, overseas branches per firm is 2.5, and domestic branches per firm is 14.2. Excluding three outliers, two with 300 branches and one with 1,100 branches, the average falls to 7.9.

Resource constraints, standard deviations in parentheses

	Beijing	**Nanhai**	**Shenyang**	**Wenzhou**	**Xian**	**Total**
Market/industry/technology information	3.09 (.81)	2.89 (.74)	2.90 (.82)	2.96 (.72)	3.00 (.84)	2.97 (.79)
Policies and regulations	3.00 (.87)	2.88 (.72)	2.92 (.88)	2.94 (.76)	3.06 (.88)	2.96 (.82)
Technology and equipment	3.15 (.76)	2.94 (.74)	3.00 (.95)	3.04 (.78)	3.29 (.84)	3.07 (.82)
Raw materials	3.46 (.80)	3.41 (.74)	3.30 (.82)	3.38 (.88)	3.42 (.80)	3.39 (.81)
Senior technicians	2.66 (.87)	2.55 (.89)	2.73 (.91)	2.57 (.85)	2.74 (.91)	2.65 (.89)
Senior management	2.46 (.80)	2.33 (.94)	2.59 (.98)	2.50 (.85)	2.53 (.87)	2.48 (.89)
Skilled labor	3.29 (.83)	3.11 (.80)	3.30 (.85)	3.25 (.76)	3.44 (.76)	3.27 (.81)
Professional consulting services	3.31 (.79)	3.05 (.83)	3.20 (.81)	3.30 (.77)	3.31 (.79)	3.23 (.80)
Managerial/technical staff	2.92 (.83)	2.73 (.76)	2.85 (.83)	2.84 (.63)	2.85 (.79)	2.84 (.77)

Testing of city-wise differences, one-way Anova

	F-statistic	**Significance level**
Market/industry/technology info	1.58	.18
Policies and regulations	1.00	.41
Technology and equipment	3.66	.006
Raw materials	.71	.58
Senior technicians	1.32	.26
Senior management	1.74	.14
Skilled labor	2.96	.019
Professional consulting services	2.71	.029
Managerial/technical staff	1.07	.37

Based on these results, we can only reject the absence of regional differences in technology and equipment, skilled labor, and professional consulting services. In all other aspects, cities tend to behave similarly.

Sources of Managerial and Technical Personnel (%)

	Beijing	Nanhai	Shenyang	Wenzhou	Xian	Total
Local	55	38	73	54	74	58
Nonlocal	40	53	20	46	27	40
National recruit	25	24	23	30	17	25
SOE layoff	17	14	31	16	14	21
Headhunter/overseas	6	3	6	7	14	7
College grad	23	20	21	17	20	20
Government agency	9	4	9	5	7	8

One-way Anova test results

	F-statistic	Significance level
Local	31.46	.000
Nonlocal	25.67	.000
National recruit	.814	.518
State-owned enterprise layoff	6.57	.000
Headhunter/overseas	1.136	.353
College graduates	.386	.819
Government agency	.458	.766

Therefore, we conclude significant city variations in the percentage of managerial and technical personnel hired locally, non-locally, and from SOE layoff. City variations in other aspects of personnel hiring are not significant.

Analysis of employee data

	Beijing	Nanhai	Shenyang	Wenzhou	Xian	Total
Local	56	25	75	42	76	54
Nonlocal	43	72	31	60	33	52
National recruit	21	24	16	26	15	22
SOE layoff	20	12	29	13	21	21
Government agencies	6	3	10	5	8	6

Anova test results

	F-statistic	Significance level
Local	79.43	.000
Nonlocal	45.97	.000
National recruit	.78	.542
SOE layoff	5.85	.000
Government agencies	1.57	.199

Therefore, we conclude significant city variations in the percentage of regular employees hired locally, nonlocally, and from state-owned enterprise layoff. City variations in other aspects of regular employee hiring are not significant.

Firms' main sources of capital (%)

	First Source	Second Source	Third Source	Total Number of Observations	Total Firms
Beijing:					
State-owned enterprise	.7	.9	2.9	4	2.8
Government	1.4			2	1.4
Personal/family	46.0	.9		65	45.5
Foreign	4.3	1.9		8	5.6
Private firms	13.7	10.3		30	21.0
VC	.7	1.9	2.9	5	3.5
Rolled over K	23.0	41.1	4.3	79	55.2
Bank loans	5.0	25.2	27.1	53	37.1
Relatives/friends	.7	5.6	12.9	16	11.2
Internal funds	4.3	12.1	50.0	54	37.8
Valid observations = 139					
Nanhai:					
SOE					
Government					
Personal/family	54.3		1.5	76	51.7
Foreign	5.1	2.0		9	6.1
Private firms	8.0	11.9		23	15.6
VC	.7			1	.7
Rolled over K	22.5	37.6	4.4	72	49.0
Bank loans	5.8	35.6	38.2	70	47.6
Relatives/friends	1.4	2.0	13.2	13	8.8
Internal funds	2.2	10.9	42.6	43	29.3
Valid observations = 138					

Shenyang:					
SOE	1.5	1.2		3	2.0
Government	4.4			6	3.9
Personal/family	51.9	2.4		72	47.4
Foreign	3.0	4.8		8	5.3
Private firms	9.6	10.8	1.9	23	15.1
VC		3.6	5.7	6	3.9
Rolled over K	17.8	32.5	1.9	52	34.2
Bank loans	2.2	19.3	22.6	35	23
Relatives/friends	1.5	18.1	24.5	30	19.7
Internal funds	8.1	7.2	43.4	40	26.3
Valid observations = 135					
Wenzhou:					
SOE	1.4			2	1.5
Government	.7			1	.7
Personal/family	60.4	1.0		85	63.4
Foreign	1.4	4.0		6	4.5
Private firms	6.5	6.0	2.7	17	12.7
VC		3.0		3	2.2
Rolled over K	16.5	21.0	1.4	45	33.6
Bank loans	5.8	50.0	24.3	76	56.7
Relatives/friends	.7	8.0	24.3	27	20.1
Internal funds	6.5	7.0	47.3	51	38.1
Valid observations = 139					
Xian:					
SOE	1.7			2	1.5
Government	5.2			6	4.5
Personal/family	50.9	1.2		60	44.8
Foreign	2.6			3	2.2
Private firms	11.2	7.1		19	14.2
VC		1.2		1	.7
Rolled over K	16.4	38.1	7.7	55	41.0
Bank loans	2.6	27.4	25.0	39	29.1
Relatives/friends	.9	14.3	15.4	21	15.7
Internal funds	8.6	10.7	51.9	46	34.3
Valid observations = 116					

Constraints (standard deviations in parentheses)

	Beijing	**Nanhai**	**Shenyang**	**Wenzhou**	**Xian**	**Total**
Property Security	3.46 (.81)	3.56 (.74)	3.36 (.76)	3.76 (.82)	3.36 (.76)	3.46 (.79)
Contract enforced	3.38 (.78)	3.17 (.82)	3.26 (.91)	3.53 (.77)	3.44 (.74)	3.35 (.82)
Central government function	3.93 (.88)	3.49 (.86)	3.66 (.79)	3.88 (.84)	3.83 (.87)	3.76 (.86)
Local government function	3.71 (.89)	3.33 (.93)	3.44 (.85)	3.64 (.92)	3.54 (.83)	3.53 (.89)
Central attitude	3.99 (.73)	3.61 (.69)	3.65 (.80)	3.96 (.70)	3.81 (.73)	3.80 (.74)
Local attitude	3.87 (.87)	3.60 (.74)	3.53 (.92)	3.72 (.84)	3.45 (.85)	3.64 (.86)
Bank loan difficulty	2.13 (1.01)	2.39 (1.13)	2.03 (.96)	3.27 (1.05)	2.16 (.97)	2.41 (1.12)
Nonbank loan difficulty	1.94 (.90)	2.20 (1.17)	1.83 (.85)	2.96 (1.01)	2.30 (1.01)	2.23 (1.06)
Administrative harassment	3.58 (1.11)	3.64 (1.12)	3.05 (1.05)	3.35 (1.18)	3.28 (.98)	3.38 (1.11)
Market competition	1.75 (.87)	1.63 (.83)	2.01 (.94)	1.90 (.85)	2.27 (.91)	1.90 (.91)

One-way Anova test results on city-wise comparison

	F-Stat	**Sig level**
Property Security	6.50	.000
Contract enforced	4.42	.002
Central government function	6.28	.000
Local government function	4.10	.003
Central attitude	7.91	.000
Local attitude	5.29	.000
Bank loan difficulty	34.07	.000
Nonbank loan difficulty	24.06	.000
Administrative harassment	6.42	.000
Market competition	10.69	.000

Conclusion: All between-city variations are significant. We can conclude that there is little reason to believe that cities behave or perceive exactly the same.

Break down of total sample in quartiles by sales/revenue and produce the same set of tables.

	Assets-1	**Assets-2**	**Assets-3**	**Assets-4**
Property Security	3.34 (.84)	3.46 (.77)	3.62 (.71)	3.64 (.75)
Contract enforced	3.25 (.76)	3.27 (.92)	3.39 (.85)	3.50 (.69)
Central government function	3.67 (.84)	3.78 (.88)	3.70 (.90)	3.87 (.82)
Local government function	3.37 (.91)	3.54 (.89)	3.51 (.92)	3.68 (.84)
Central attitude	3.72 (.82)	3.77 (.74)	3.86 (.73)	3.92 (.68)
Local attitude	3.47 (.94)	3.63 (.87)	3.68 (.83)	3.87 (.81)
Bank loan difficulty	2.07 (1.04)	2.23 (1.13)	2.43 (1.15)	2.74 (1.07)
Nonbank loan difficulty	2.00 (.98)	2.18 (1.08)	2.27 (1.05)	2.38 (1.09)
Administrative harassment	3.17 (1.13)	3.22 (1.12)	3.46 (1.06)	3.56 (1.07)
Market competition	2.10 (.94)	1.89 (.92)	1.89 (.95)	1.66 (.76)

One-way Anova test results on assets

	F-Stat	**Sig level**
Property Security	5.14	.002
Contract enforced	2.97	.03
Central government function	1.53	.205
Local government function	2.94	.033
Central attitude	2.13	.096
Local attitude	5.48	.001
Bank loan difficulty	9.67	.000
Nonbank loan difficulty	3.05	.028
Administrative harassment	4.22	.006
Market competition	5.62	.001

Conclusion: Central governments are perceived to have similar functions and attitudes by enterprises of different sizes by assets.

Breakdown by employment

	Emp-1	Emp-2	Emp-3	Emp-4
Property Security	3.38 (.83)	3.46 (.78)	3.53 (.82)	3.64 (.72)
Contract enforced	3.31 (.77)	3.34 (.89)	3.37 (.85)	3.43 (.71)
Central government function	3.78 (.80)	3.78 (.86)	3.62 (.95)	3.89 (.79)
Local government function	3.53 (.82)	3.51 (.93)	3.39 (.97)	3.73 (.77)
Central attitude	3.81 (.79)	3.79 (.67)	3.70 (.84)	4.00 (.59)
Local attitude	3.48 (.92)	3.61 (.87)	3.62 (.85)	3.87 (.77)
Bank loan difficulty	2.15 (1.15)	2.33 (1.08)	2.32 (1.10)	2.81 (1.07)
Nonbank loan difficulty	2.11 (1.02)	2.09 (1.06)	2.24 (1.12)	2.41 (.99)
Adm harassment	3.25 (1.10)	3.32 (1.09)	3.39 (1.15)	3.53 (1.08)
Market competition	2.13 (.93)	1.95 (.94)	1.79 (.84)	1.73 (.83)

One-way Anova test results on the number of employees

	F-Stat	Significance level
Property security	3.00	.030
Contract enforced	.602	.614
Central government function	2.73	.043
Local government function	4.22	.006
Central attitude	5.03	.002
Local attitude	5.96	.001
Bank loan difficulty	10.59	.000
Nonbank loan difficulty	2.81	.039
Administrative harassment	1.75	.156
Market competition	6.46	.000

Conclusion: At one percentage significance level, large and small firms, in terms of employment, perceive different constraints posed by local government functions and attitude, central government attitude, bank loans, and market competition. At five percentage significance level, only contract enforcement and administrative harassment are not significantly different for differently sized firms.

Breakdown by sales/revenue

	Sales-1	Sales-2	Sales-3	Sales-4
Property Security	3.22 (.79)	3.46 (.81)	3.66 (.74)	3.67 (.74)
Contract enforced	3.09 (.77)	3.43 (.89)	3.44 (.83)	3.42 (.73)
Central government function	3.63 (.90)	3.84 (.80)	3.72 (.86)	3.89 (.81)
Local government function	3.36 (.92)	3.52 (.80)	3.52 (.93)	3.68 (.90)
Central attitude	3.67 (.80)	3.76 (.77)	3.84 (.73)	3.96 (.66)
Local attitude	3.45 (.91)	3.54 (.88)	3.61 (.84)	3.90 (.79)
Bank loan difficulty	1.93 (.87)	2.38 (1.16)	2.39 (1.10)	2.84 (1.12)
Nonbank loan difficulty	1.97 (.96)	2.14 (1.01)	2.30 (1.09)	2.48 (1.09)
Administrative harassment	3.09 (1.08)	3.38 (1.11)	3.40 (1.08)	3.60 (1.08)
Market competition	2.13 (.96)	1.89 (.84)	1.79 (.86)	1.71 (.83)

One-way Anova test results on the volume of sales

Item	F-Stat	Significance level
Property Security	11.37	.000
Contract enforced	6.95	.000
Central government function	2.89	.035
Local government function	3.46	.016
Central attitude	4.38	.005
Local attitude	8.28	.000
Bank loan difficulty	18.17	.000
Nonbank loan difficulty	5.74	.001
Administrative harassment	5.59	.001
Market competition	6.73	.000

Conclusion: At one percentage significance level, large and small firms, in terms of sales, perceive similar constraints posed by central and local government functions. At 3% significance level, only central government's functions are similar. The evidence strongly supports differences according to size.

Enterprises' impression of their inability to borrow from banks (%)

Item	Beijing	Nanhai	Shenyang	Wenzhou	Xian	Total
Small	21	12	35	11	22	19
Nonstate-owned enterprise	21	31	32	16	37	24
No loan guarantee	37	47	33	26	34	30
Policy restrictions	28	26	23	10	22	14
Lack of credibility	3	1	5	1	4	3
Lack of personal ties	17	22	24	14	32	23
Others	6	3	7	3	6	4

Enterprises' impression of their inability to borrow from nonbanks

Item	Beijing	Nanhai	Shenyang	Wenzhou	Xian	Total
Small	22	10	32	9	20	19
Nonstate-owned enterprise	28	25	30	12	22	24
No loan guarantee	32	37	34	16	29	30
Policy restrictions	18	18	15	9	10	14
Lack of credibility	3	0	5	2	4	3
Lack of personal ties	18	23	23	14	36	23
Others	3	3	7	5	3	4

Extralegal fees (10,000 yuan)

	N	Median	Mean	Std. Deviation
Beijing	67	1	3.043	5.921
Nanhai	56	2.75	7.454	15.170
Shenyang	82	2	6.766	14.085
Wenzhou	57	3	8.653	15.969
Xian	62	1.7	4.199	12.785
Total	324	2	5.956	13.243

One-way Anova test for extralegal fees: F-stat = 1.953, significance level = .102. Conclude: No significant city-wise differences.

Local PE compared to 3 years ago

	N	Mean	Standard Deviation
Beijing	140	3.94	.95
Nanhai	136	3.15	1.11
Shenyang	143	3.59	.91
Wenzhou	140	3.88	.87
Xian	122	3.47	.92
Total	681	3.61	1.00

One-way Anova test for comparison: F –stat = 15.45, significance level = .000
Conclude: Not all cities have the same perception!