China's Industrial Economy at a Crossroad
2014 Q2 Large-Sample Firm Survey[1]

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Executive Summary

China's industrial economy is at a crossroad. The diffusion indices of current and expected operating conditions are, respectively, 55 and 52, both near the turning point of 50. Production and employment indices both stand at 51. 1% of the firms report a reduction in employment of more than 20%. Finally, corporate fixed investment is at a low level, with only 15% of the firms seeing fixed investments in the second quarter.

There are two major challenges facing the industrial sector. The first is weak demand. 44% of the firms report that supply exceeds demand. This problem is more severe in the domestic market than in the international market, with diffusion indices of 71 and 63 respectively. About one-third of all industries and provinces exhibit severe excess capacity. The second challenge is rising costs, especially labor costs. The diffusion index for unit costs is 75. The diffusion indices for the costs of labor and raw materials are 85 and 69 respectively.

Financing is not a bottleneck for the growth of the industrial sector. In the second quarter, 24% of firms obtained new loans. Among those firms that did not, the vast majority (92%) report they do not have the need for capital. Moreover, 86% of the firms report that their loan demand has generally been satisfied by banks.

Government policy should take two directions: increase domestic demand, and facilitate industry upgrades and technological innovation. Both require fundamental changes in the economic system and calls for a deepening of economic reforms.

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[1] This survey is implemented by Beijing Allinfo Co., based on the questionnaire and sample provided by Professor Jie Gan, Director of the Center on Finance and Ecomomic Growth. We thank Beijing Allinfo for its hard work and professionalism.

Introduction

A long-standing challenge facing both government policymaking and corporate development in China is a lack of timely and reliable data. Official statistics are notoriously unreliable. The most cited is perhaps HSBC's Purchasing Manager Index, which is a highly-aggregated number based on a small sample of export firms. As a result, the government decision is often arbitrary. The Premier has to use his own "Keqiang Index". Although this index is widely praised, both domestically and internationally, its very presence does not reflect well on the country's national statistics. The firms often do not have reliable information when they attempt to assess market opportunities, make investments and decide on financing strategies.

We believe the only way to obtain reliable data on the economy is through micro-level company surveys. To this end, starting from the second quarter of 2014, we have conducted a quarterly survey of industrial firms on their operating conditions and financing, through telephone interviews. The initial sample of the survey contained 10,139 companies, of which 2,005 companies responded, equating to a response rate of 20%. The initial sample was based on a stratified random sampling by industry, region and size from the National Bureau of Statistics' population of 48,800 industrial firms that have sales over five million RMB. Therefore, our survey not only reflects the overall situation, but also captures industry and regional trends. Appendix A details the sampling procedure and compares our sample with the NBS population. Table A shows that both our initial sample and response sample represent the population well in terms of industry, region, size and company characteristics.

The first survey (Survey 2014 Q2) was conducted in July and August 2014. In the future, the survey will be conducted quarterly. The economic indices and the research report will be published within the first six weeks following the end of the quarter. To our knowledge, the depth and coverage of this survey is far above any existing ones. It is our intention to help enhance understanding of the opportunities and challenges facing the Chinese economy, improve the effectiveness of government policies, and explore new ways of growth in the upcoming industrial upgrading and restructuring.

I. China's Industrial Economy: at a Crossroad

When asked about their overall operating conditions in the second quarter, 29% of surveyed firms answered "increased", 53% answered "the same", and 18% answered "declined", with a diffusion index of 55.[2] The diffusion index ranges between 0 and 100. A larger value indicates better operating conditions and 50 is the turning point between expansion and contraction. The diffusion index of expected operating

[2] The diffusion index is computed as % of firms answering "increase" + 0.5 * % of firms answering "same".

conditions is 52, also near the turning point.

Consistent with overall operating conditions, the production index stands at 51. The employment situation is not optimistic, with 13% and 10.5% of the firms reporting an increased and decreased number of workers respectively; the rest are unchanged. The diffusion index is 51. The magnitude of employment change is asymmetric: 5% of the firms reduced employment by more than 5%, and in 1% of the firms the reduction in employment was above 20%. Meanwhile, only 2% of the firms increased employment by more than 5%, and just 0.1% reported an increase in employment of above 20%. Finally, investment in fixed assets is at a low level, with only 15% of the firms making fixed investments in the second quarter.

Interestingly, the diffusion index of electricity consumption, an important component of the Keqiang index, is 56, similar to our overall index. However, in the large sample, the correlation between the two is 0.39, which is moderately correlated. This means that, although electricity consumption may be able to reflect overall economic trends, it cannot capture the variation across different industries, regions, and types of firms. The latter can only be observed using a micro-level firm survey.

Table 1 shows the performance of different types of firms. We have categorized firms by product type, ownership structure, and size. There is not any significant variation across firms of different sizes. Unsurprisingly, state-owned enterprises outperform collectively-owned enterprises and private-sector firms. Firms in production of nondurable consumption goods perform better than those producing intermediate goods and durable consumption goods. When the economy slows down, these firms are likely to be affected the most, because consumers tend to hold off on their consumption, or because they face price squeezes from upstream and downstream firms.

We further analyze the operating conditions of different industries (Table 2.1). Industry classification is based on the 35 two-digit industries of the National Bureau of Statistics. There is a wide variation of conditions across industries, with diffusion indices ranging from 15 to 97. Table 2.2 shows the top five and bottom five industries respectively. The top five include Electric and Thermal Power (97), Water Supply (93), Food (77), Petroleum (73) and Paper Manufacturing (67). The bottom five are Coal Mining (15), Chemical Fibers (21), Nonmetal Ores Mining (30), Rubber (37) and Non-ferrous Metals (48). All are upstream industries. Tables 2.2.1-3 further demonstrate the variation within the above industries. For industries with the best operating conditions, firms are concentrated on the production of nondurable consumption goods and intermediate goods. There is not any significant variation within firms with different ownership structure or sizes. Among the bottom five industries, firms are mostly in the production of intermediate goods and they are more likely to be private-sector firms or collectively-owned firms.

Table 3 shows regional business operating conditions. Table 3.1 and Table 3.2 show the diffusion indices of business operating conditions of all provinces and those ranked top five and bottom five respectively. The best and worst provinces are geographically dispersed. The top five, except for Beijing, are generally economically-underdeveloped provinces in northern China, including Heilongjiang (78), Xinjiang (70), Gansu (69) and Guizhou (67). The bottom five include the resource-rich Shanxi, economically-advanced Shanghai (51), Shandong (52), Hebei (48) and Chongqing (52). It is worth noting that, among the bottom five, four have investment rates exceeding, or similar to, the national level. Table 3.2.1 further illustrates that there is significant industrial variation within these provinces. The most troublesome are the mining industries in Shanxi and Hebei (with a diffusion index of 0), the chemical industries in Shanxi and Chongqing (25 and 13, respectively), equipment manufacturing in Hebei (32) and other heavy industry in Shanxi and Chongqing (38 and 13, respectively).

II. The Biggest Challenge: Weak Demand

The biggest challenge facing the industrial sector is weak demand. The extent is alarming: 44% of the firms reported that supply exceeds demand for their products either domestically or internationally. The problem is more severe in domestic markets than in international markets. 42% of the firms answered that supply exceeds demand in their domestic markets; the diffusion index reflecting weak demand is as high as 71. Among the surveyed firms, 46% have exports, and 29% of them reported weak demand in their international markets. The diffusion index is 63, slightly better than the domestic market. Clearly, China has a long way to go to increase its domestic demand.

The level of finished-goods inventory shows a slight decline, with a diffusion index of 48. This implies that, in the face of insufficient demand, firms are reducing production instead of increasing inventory. This could be because the firms' inventory level is already quite high, or because they do not expect the situation will improve in the short run - consistent with the fact that the diffusion index of the expected operating conditions is lower than that of the actual conditions.

We asked the firms to give a quantitative assessment of excess capacity. 15% of the firms reported excess capacity of over 10%, and 7.5% had excess capacity exceeding 20%. In Table 4.2, we categorize an industry as having severe excess capacity if more than 10% of the firms reported excess capacity of over 20%. (See Table A.1 in the Appendix for excess capacity in all industries.) There are 11 industries on the list, representing one-third of all industries. The first five industries are Water Supply, Beverage Manufacturing, Leather-related Products, Nonmetal Ores Products and Cultural-related Products. All contain more than 15% of firms with excess capacity of over 20%. Three firms on the list are among the bottom five

industries, further confirming that excess capacity is one of the reasons why operating conditions are not encouraging.

Using the same criteria, ten provinces exhibit severe excess capacity, again representing about one-third of all provinces. The first five regions include Inner Mongolia, Yunnan, Jiangxi, Shaanxi and Shanxi. Three provinces on the list are also among the five worst performing provinces in terms of overall operating conditions.

III. The Second Challenge: Rising Costs

The second challenge facing the industrial economy is rising costs, especially labor costs. As many as 50% of the firms reported an increase in unit costs. The diffusion index is 75. Rising labor costs are prominent and occurred in 71% of firms, with raw material costs rising in 44% of firms, yielding diffusion indices of 85 and 69, respectively. These numbers suggest that China is losing its labor cost advantage. Among the different firm types, we note that the cost index for firms producing capital goods is higher than that for other products. There are no significant variations within other firm types.

Given weak demand, it is hard for firms to raise output prices as cost increases. Indeed, the data show that prices stayed the same in the second quarter with a diffusion index of 50, resulting in squeezed profit margins for many firms.

Tables 5.2 and 5.3 show industries and provinces with cost indices above the national average. Cost indices for all regions and industries are listed in Appendices 2.1 and 2.2. The five industries with the highest cost indices are Chemical Fibers (100), Printing (99), Food (94), Timber (93), and Nonmetal Ores Mining (90). Three of the industries on the list are among the industries with the worst operating conditions. The five provinces with the highest cost indices include Hunan (84), Xinjiang (80), Hubei (80), Chongqing (79), and Shaanxi (77). One of the provinces on the list is among the provinces with the worst operating conditions.

IV. Financing: Easy Lending Attitude, Money Is Not An Issue

Nearly a quarter of the firms surveyed (24%) obtained new loans in the second quarter. Table 6.1 shows that firms with fixed investment are much more likely to take out new loans (40% vs. 21%). Among the firms without new loans, the vast majority (92%) reported that they do not have the need for capital.

Among those with new loans, when asked about the bank's lending attitude, 50% of the firms answered "easy", 12% answered "moderate" and 38% answered "difficult". The diffusion index reflecting easy lending attitude is 69. 86% of the firms reported that their demand for loans has been generally satisfied by banks: the amount borrowed was at least 80% of its loan demand. The cost of borrowing mostly stayed

the same. The diffusion index reflecting rising interest rates is 58, which is consistent with a slight increase in the interbank borrowing rate during the second quarter. Finally, 79% of the firms reported that they use land and plants (60%) or machinery and equipment (15%) as collateral in their bank borrowing.

It is not common for firms to borrow from sources other than banks. Only 109 firms (5%) have other borrowings. Among these firms, a vast majority (86%) reported interest rates below 15%. It is rare for interest rates to go above 15%. There are only 18 such cases, representing less than 1% of the sample.

The above analysis suggests that, after a long period of development since the onset of China's economic reform, industrial firms have accumulated a certain level of capital and that they have fixed assets as collateral for corporate borrowing. These factors, combined with low investment demand, imply that financing is not a constraining factor for growth at this stage.

V. Policy Suggestions and Conclusion

The operating conditions of industrial firms are not optimistic. The diffusion indices for actual and expected operating conditions are, respectively, 55 and 52, both near the turning point. Production and employment indices are both 51. 1% of the firms reported a reduction in employment of above 20%. Finally, corporate fixed investment is at a low level. Only 15% of the firms had fixed investment in the second quarter. The most worrisome industries are Coal Mining (15), Chemical Fibers (21), Nonmetal Ores Mining (30), Rubber (37) and Non-ferrous Metals (48). All are upstream industries.

China's industrial sector must deal with two main challenges. The first is weak demand. The domestic market is worse than the overseas market: the diffusion indices reflecting weak demand are as high as 71 and 63. We consider industries and regions as having severe excess capacity when the percentage of firms with 20% excess capacity is above 10%. One-third of the industries and regions fall into this category. The second challenge is rising costs, especially labor costs. The diffusion index for unit costs is 75. The diffusion indices for labor cost and raw materials are 85 and 69, respectively. Consistent with these findings, when firms were asked about the factors constraining next quarter's production, the top answer was "order" (59%); "raw material costs" came second (9%) (Table 7).

Somewhat surprisingly, financing is not a bottleneck for the growth of the industrial sector. In the second quarter, 24% of firms had new loans. Among those that did not, 92% reported that they do not need capital. 86% of the firms reported that their loan demand was generally satisfied by banks. Firms rated the lending attitude as quite easy, with a diffusion index of 69. Finally, only 5% of the firms listed financing as one of the constraining factors for the next-quarter production (Table 7).

The above analysis suggests a few policy directions.

1. The policy of increasing domestic demand should be strengthened. This involves raising income and reducing household savings.
   1.1 Income growth requires more high-paid jobs. This calls for a deepening of economic reform, encouraging the growth of the private sector, and lowering the entry barrier in certain monopolistic industries.
   1.2 On the supply of skilled workers, given that the country is losing its labor cost advantage, low-end labor forces must be transformed to skilled workers. The government should encourage and support programs that produce and train skilled workers.
   1.3 The extent to which increased income can be translated into greater consumption depends on the savings need of households. Right now, the household savings rate is high due to expected medical, pension, and education expenses. Therefore, to encourage consumption, the government needs to provide these public goods more effectively.

2. Another way to tackle both weak demand and rising costs is industry upgrade and technological innovation.
   2.1 The government should encourage technological innovation and product upgrades that can truly boost markets and employment.
   2.2 Industrial automation is a natural way to solve the problem of rising labor costs and to encourage the transformation of manual labor into highly-skilled workers. Automated machinery and industrial robots are also an important direction for industrial economy in the world. The development of the automation industry depends on several areas including key components, robots production, and system integration. China is technologically lagging behind in each of these areas. The government needs to encourage and support clustering of this industry in terms of talent, technology, and production in certain areas.

Finally, the finding that financing is not a constraining factor for industrial growth has direct implications for the debate on whether the central bank should loosen its monetary policy. The answer is a clear no. Given weak demand, injecting liquidity would only sustain the excess capacity, prompting a repeat of the policy mistakes seen after the financial crisis,[3] and would be harmful for the upgrading of the industrial sector and its long-term growth.

[3] For our analysis of China's stimulus plan after the financial crisis, see a *21 Century Herald* article "The Current Rebound is Unfounded" (in Chinese, October 22, 2009).

Table1. Operating Conditions of Industrial Firms

	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - Expected Operating Conditions	Diffusion Index - Electricity Consumption	Diffusion Index - % of Firms with Fixed Investment
Nation	2005	55	52	56	16
By Size					
Large	733	57	53	57	19
Medium	679	53	50	55	14
Small	593	56	51	54	13
By Ownership					
State-owned	100	68	54	60	21
Collectively-owned	64	49	45	48	8
Private	1841	55	52	56	16
By Product Type					
Consumer Goods - Durable	573	53	51	60	12
Consumer Goods - Nondurable	362	62	55	56	22
Capital Goods	214	58	50	56	14
Intermediate Goods	856	53	50	52	16

Notes:
Diffusion index is computed using the percentage of firms that answer "increase" (% increase) and "same" (% same) according to the formula: (% increase + 0.5 * % same). The index ranges between 0 and 100. A larger value indicates a better operating condition.

Table 2. Operating Conditions by Industry

Table 2.1 Operating Conditions of All Industries

	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - Expected Operating Conditions	Diffusion Index - Electricity Consumption	Diffusion Index - % of Firms with Fixed Investment
Nation	2005	55	52	56	16
Mining					
Coal Mining and Washing	10	15	35	40	30
Mining and Processing of Ferrous Metal Ores	2	50	50	50	0
Mining and Processing of Non-ferrous Metal	5	50	50	60	0
Mining and Processing of Nonmetal Ores	5	30	30	30	0
Production and Supply of Electricity, Heat, Gas and Water					
Production and Supply of Electric Power and Heat Power	19	97	63	71	11
Production and Supply of Gas	2	50	50	50	0
Production and Supply of Water	23	93	50	50	9
Light Manufacturing					
Processing of Agricultural and Related Products	89	56	56	58	25
Manufacture of Foods	35	77	50	63	51
Manufacture Beverage	25	56	54	50	32
Manufacture of Textiles	137	51	51	46	12
Manufacture of Textile, Wearing Apparel, Footwear and Caps	75	51	51	41	0
Manufacture of Leather, Fur, Feather and Related Products	19	63	47	63	11
Processing of Timber, Manufacture of Wood, Bamboo, Rattan, Palm and Straw Products	28	59	54	57	18
Manufacture of Furniture	18	61	50	53	28
Manufacture of Paper and Paper Products	35	67	56	63	9
Printing, Reproduction of Recording Media	53	54	50	62	21
Manufacture of Cultural, Educational and Sports Products	20	50	58	58	20
Manufacture of Medicines	40	64	65	63	25
Manufacture of Handicrafts and Others	35	56	56	46	17
Chemical Industry					
Processing of Petroleum, Coking and Processing of Nuclear Fuel	22	73	50	64	45
Manufacture of Chemical Raw Materials and Chemical Products	123	58	58	54	13
Manufacture of Chemical Fibers	7	21	21	29	0
Manufacture of Rubber Products	49	37	40	51	6
Manufacture of Plastics	87	53	50	51	13
Equipment Manufacturing					
Manufacture of General-purpose Machinery	258	51	49	59	15
Manufacture of Special-purpose Machinery	146	54	51	58	15
Manufacture of Transport Equipment	96	60	50	53	16
Manufacture of Electric Machinery and Apparatus	109	63	58	57	23
Manufacture of Computers, Communication and Other Electric Equipment	89	57	55	72	11
Manufacture of Measuring Instruments and Machinery for Cultural Activity and Office Work	2	100	50	75	0
Other Heavy Manufacturing					
Manufacture of Non-metallic Mineral Products	108	53	50	49	19
Smelting and Pressing of Ferrous Metals	26	52	56	48	19
Smelting and Pressing of Non-ferrous Metals	53	48	49	72	8
Manufacture of Metal Products	155	49	46	55	10

Table 2.2 Industry Ranking of Operating Conditions

	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment
Nation	2005	55	16
Top Five			
Production and Supply of Electric Power and Heat Power	19	97	11
Production and Supply of Water	23	93	9
Manufacture of Foods	35	77	51
Processing of Petroleum, Coking and Processing of Nuclear Fuel	22	73	45
Manufacture of Paper and Paper Products	35	67	9
Bottom Five			
Coal Mining and Washing	10	15	30
Manufacture of Chemical Fibers	7	21	0
Mining and Processing of Nonmetal Ores	5	30	0
Manufacture of Rubber Products	49	37	6
Smelting and Pressing of Non-ferrous Metals	53	48	8

Table 2.2.1 Diffusion Index of Top Five and Bottom Five Industries: by Product Type

	Consumer Goods - Durable			Consumer Goods - Nondurable			Capital Goods			Intermediate Goods		
	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment
Top Five												
Production and Supply of Electric Power and Heat Power	0	n.a.	n.a.	7	93	0	0	n.a.	n.a.	12	100	17
Production and Supply of Water	0	n.a.	n.a.	17	94	12	0	n.a.	n.a.	6	92	0
Manufacture of Foods	0	n.a.	n.a.	32	75	50	0	n.a.	n.a.	3	100	67
Processing of Petroleum, Coking and Processing of Nuclear Fuel	0	n.a.	n.a.	15	67	60	0	n.a.	n.a.	7	86	14
Manufacture of Paper and Paper Products	15	73	13	6	58	17	0	n.a.	n.a.	14	64	0
Bottom Five												
Coal Mining and Washing	0	n.a.	n.a.	0	n.a.	n.a.	0	n.a.	n.a.	10	15	30
Manufacture of Chemical Fibers	1	50	0	0	n.a.	n.a.	0	n.a.	n.a.	6	17	0
Mining and Processing of Nonmetal Ores	0	n.a.	n.a.	0	n.a.	n.a.	0	n.a.	n.a.	5	30	0
Manufacture of Rubber Products	19	45	5	4	50	0	0	n.a.	n.a.	26	29	8
Smelting and Pressing of Non-ferrous Metals	27	26	4	0	n.a.	n.a.	20	80	15	6	42	0

Table 2.2.2 Diffusion Index of Top Five and Bottom Five Industries: by Size

	Large			Medium			Small		
	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment
Top Five									
Production and Supply of Electric Power and Heat Power	12	96	8	3	100	33	4	100	0
Production and Supply of Water	1	100	0	11	100	18	11	86	0
Manufacture of Foods	11	86	64	8	81	50	16	69	44
Processing of Petroleum, Coking and Processing of Nuclear Fuel	17	71	47	4	75	25	1	100	100
Manufacture of Paper and Paper Products	11	73	0	15	60	13	9	72	11
Bottom Five									
Coal Mining and Washing	8	13	38	1	0	0	1	50	0
Manufacture of Chemical Fibers	6	17	0	1	50	0	0	n.a.	n.a.
Mining and Processing of Nonmetal	2	25	0	3	33	0	0	n.a.	n.a.
Manufacture of Rubber Products	17	32	18	19	47	0	13	27	0
Smelting and Pressing of Non-ferrous Metals	29	50	14	12	38	0	12	54	0

Table 2.2.3 Diffusion Index of Top Five and Bottom Five Industries: by Ownership

	State-owned			Collectively-owned			Private		
	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment
Top Five									
Production and Supply of Electric Power and Heat Power	10	100	10	2	75	0	7	100	14
Production and Supply of Water	14	93	14	3	100	0	6	92	0
Manufacture of Foods	0	n.a.	n.a.	0	n.a.	n.a.	35	77	51
Processing of Petroleum, Coking and Processing of Nuclear Fuel	5	60	40	0	n.a.	n.a.	17	76	47
Manufacture of Paper and Paper Products	1	100	0	0	n.a.	n.a.	34	66	9
Bottom Five									
Coal Mining and Washing	2	0	100	3	0	0	5	30	20
Manufacture of Chemical Fibers	0	n.a.	n.a.	0	n.a.	n.a.	7	21	0
Mining and Processing of Nonmetal Ores	1	50	0	0	n.a.	n.a.	4	25	0
Manufacture of Rubber Products	0	n.a.	n.a.	3	67	0	46	35	7
Smelting and Pressing of Non-ferrous Metals	6	83	33	4	38	0	43	44	5

Notes:

1. Ranking includes industries with at least three firms.

2. Diffusion Index of Manufacture of Measuring Instruments and Machinery for Cultural Activity and Office Work is 100. But this industry contains only two firms and thus is not included in the ranking.

Table 3. Operating Conditions by Region

Table 3.1 Operating Conditions of All Regions

	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - Expected Operating Conditions	Diffusion Index - Electricity Consumption	Diffusion Index - % of Firms with Fixed Investment
Nation	2005	55	52	56	16
North China					
Beijing	35	73	51	66	14
Hebei	64	48	47	53	20
Tianjin	34	53	56	60	21
Northeast					
Heilongjiang	9	78	61	61	0
Jilin	17	53	53	56	18
Liaoning	79	55	53	53	11
Northwest					
Gansu	8	69	38	63	38
Inner Mongolia	10	55	50	40	20
Ningxia	2	25	50	50	0
Shaanxi	13	54	54	50	15
Xinjiang	5	70	60	50	0
Central North					
Henan	68	54	49	60	19
Shandong	186	52	52	57	18
Shanxi	13	38	46	46	15
Southewest					
Guizhou	3	67	50	50	33
Sichuan	46	54	53	51	11
Yunnan	18	58	44	47	11
Chongqing	29	52	50	55	21
East China					
Jiangsu	400	54	50	56	13
Shanghai	69	51	52	51	12
Zhejiang	328	55	52	56	17
South China					
Fujian	84	55	56	55	12
Guangdong	331	59	51	56	15
Guangxi	23	54	46	57	26
Hainan	2	25	50	50	0
Central South					
Anhui	40	58	50	49	15
Hubei	42	62	58	60	24
Hunan	22	57	50	64	18
Jiangxi	25	62	52	54	20

Table 3.2 Regional Ranking of Operating Conditions

	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment
Nation	2005	55	16
Top Five			
Heilongjiang	9	78	0
Beijing	35	73	14
Xinjiang	5	70	0
Gansu	8	69	38
Guizhou	3	67	33
Bottom Five			
Shanxi	13	38	15
Hebei	64	48	20
Shanghai	69	51	12
Shandong	186	52	18
Chongqing	29	52	21

Table 3.2.1 Diffusion Index of Top Five and Bottom Five Regions: by Broad Industry

	Mining			Production and Supply of Electricity, Heat, Gas and Water			Light Manufacturing		
	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment
Top Five									
Heilongjiang	0	n.a.	n.a.	1	100	0	3	83	0
Beijing	0	n.a.	n.a.	0	n.a.	n.a.	11	82	36
Xinjiang	0	n.a.	n.a.	0	n.a.	n.a.	2	50	0
Gansu	0	n.a.	n.a.	0	n.a.	n.a.	5	90	40
Guizhou	0	n.a.	n.a.	0	n.a.	n.a.	2	50	0
Bottom Five									
Shanxi	2	0	50	0	n.a.	n.a.	2	50	50
Hebei	1	0	0	0	n.a.	n.a.	24	54	29
Shanghai	0	n.a.	n.a.	0	n.a.	n.a.	14	50	7
Shandong	2	100	50	3	100	33	61	50	18
Chongqing	0	n.a.	n.a.	2	100	0	5	70	40

	Chemical Industry			Equipment Manufacturing			Other Heavy Manufacturing		
	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment	Number of Firms	Diffusion Index - Operating Conditions	Diffusion Index - % of Firms with Fixed Investment
Top Five									
Heilongjiang	1	100	0	2	75	0	2	50	0
Beijing	0	n.a.	n.a.	22	68	5	2	75	0
Xinjiang	3	83	0	0	n.a.	n.a.	0	n.a.	n.a.
Gansu	1	0	100	0	n.a.	n.a.	2	50	0
Guizhou	0	n.a.	n.a.	0	n.a.	n.a.	1	100	100
Bottom Five									
Shanxi	2	25	0	3	67	0	4	38	0
Hebei	13	50	8	14	32	14	12	58	25
Shanghai	9	67	11	34	47	15	12	50	8
Shandong	32	56	28	57	46	9	31	52	19
Chongqing	4	13	25	14	61	21	4	13	0

Notes:
1. Ranking includes regions with at least three firms.
2. Diffusion Index of Ningxia and Hainan is 25. But these two provinces contain only two firms and thus are not included in the ranking.

Table 4. Market Supply and Demand

Table 4.1 Overall

	Number of Firms	Diffusion Index for Supply and Demand in Domestic Market	Diffusion Index for Supply and Demand in Overseas Market	Diffusion Index for Manufactured Inventory
Nation	2005	71	63	48
By Size				
Large	733	71	63	47
Medium	679	71	63	49
Small	593	72	62	48
By Ownership				
State-owned	100	64	63	49
Collectively-owned	64	66	65	52
Private	1841	72	63	48
By Product Type				
Consumer Goods - Durable	573	69	59	55
Consumer Goods - Nondurable	362	65	58	48
Capital Goods	214	69	64	53
Intermediate Goods	856	75	67	43

Table 4.2 Industries with Severe Excess Capacity

Industry	Number of Firms	% of Firms with 20% excess capacity and above	% of Firms with 10% excess capacity and above
Production and Supply of Water	23	39	91
Manufacture of Beverage	24	25	25
Manufacture of Leather, Fur, Feather, Related Products	19	21	37
Manufacture of Non-metallic Mineral Products	108	16	20
Manufacture of Cultural, Educational and Sports Products	20	15	25
Manufacture of Chemical Fibers	7	14	29
Manufacture of Textiles	128	12	16
Manufacture of Furniture	18	11	11
Manufacture of Rubber Products	48	10	29
Manufacture of Metal Products	155	10	21
Manufacture of Special-purpose Machinery	146	10	26

Notes:
1. Two industries, Production and Supply of Gas and Manufacture of Measuring Instruments, are not includ
2. This table includes industries that have at least 10% of firms with 20% or above excess capacity.

Table 4.3 Regions with Severe Excess Capacity

Province	Number of Firms	% of Firms with 20% excess capacity and above	% of Firms with 10% excess capacity and above
Inner Mongolia	10	30	30
Yunan	18	22	33
Jiangxi	25	16	20
Shaanxi	13	15	15
Shanxi	13	15	15
Henan	68	15	25
Shandong	186	13	21
Guangxi	23	13	22
Hubei	42	12	17
Hebei	64	11	23

Notes:

1. Two provinces, Ningxia and Hainan, are not included in the ranking because they have less than three firm
2. This table includes regions that have at least 10% of firms with 20% or above excess capacity.

Table 5. Cost and Price

Table 5.1 Overall

		Diffusion Indices			
	Number of Firms	Unit Cost Index	Labor Cost Index	Raw Material Cost Index	Price Index
Nation	2005	75	85	69	50
By Size					
Large	733	75	85	68	51
Medium	679	74	84	69	49
Small	593	74	86	70	50
By Ownership					
State-owned	100	76	79	68	50
Collectively-owned	64	70	81	61	47
Private	1841	75	85	69	50
By Product Type					
Consumer Goods - Durable	573	68	83	69	49
Consumer Goods - Nondurable	362	76	83	77	54
Capital Goods	214	81	88	69	52
Intermediate Goods	856	77	86	65	48

Table 5.2 Industries with Unit Cost Increase Above the National Average

		Diffusion Indices			
	Number of Firms	Unit Cost Index	Labor Cost Index	Raw Material Cost Index	Price Index
Nation	2005	75	85	69	50
Manufacture of Chemical Fibers	7	100	100	71	43
Printing, Reproduction of Recording Media	53	99	99	88	55
Manufacture of Foods	35	94	94	76	54
Processing of Timber, Manufacture of Wood, Bamboo, Rattan, Palm and Straw Products	28	93	95	89	59
Mining and Processing of Nonmetal Ores	5	90	80	75	30
Manufacture of Medicines	40	89	93	88	54
Production and Supply of Electric Power and Heat Power	19	84	87	75	53
Manufacture of Furniture	18	83	86	86	58
Manufacture of Rubber Products	49	83	95	66	51
Manufacture of Chemical Raw Materials and Chemical Products	123	79	91	75	52
Processing of Petroleum, Coking and Processing of Nuclear Fuel	22	77	77	73	68
Processing of Agricultural and Related Products	89	77	76	77	59
Manufacture of Special-purpose Machinery	146	76	86	66	52

Notes:
1. Industries are sorted by Diffusion Index for Unit Cost in descending order. The table includes industries with at least three firms.
2. Three industries, Mining and Processing of Ferrous Metal Ores, Production and Supply of Gas, Manufacture of Measuring Instruments and Machinery for Cultural Activity and Office Work, are not included in the table because they have less than three firms.

Table 5.3 Regions with Unit Cost Increase Above the National Average

		Diffusion Indices			
	Number of Firms	Unit Cost Index	Labor Cost Index	Raw Material Cost Index	Price Index
Nation	2005	75	85	69	50
Hunan	22	84	84	79	43
Xinjiang	5	80	80	60	60
Hubei	42	80	86	70	50
Chongqing	29	79	86	65	41
Shaanxi	13	77	88	71	50
Henan	68	76	86	68	49
Jilin	17	76	82	75	56
Anhui	40	76	83	76	49
Guangxi	23	76	83	63	46

Notes:
1. Provinces are sorted by Diffusion Index for Unit Cost in descending order. The table includes provinces with at least three
2. Diffusion Index of Hainan is 25. But the province contains only two firms and thus is not included in the table.

Table 6. Financing Environment

	% Firms with New Loans	Diffusion Index - Lending Attitude	Diffusion Index - Interest Rate
Nation	24	69	58
Firms with Investment	40	73	60
Firms without Investment	21	68	58
By Size			
Large	26	72	60
Medium	25	68	56
Small	20	66	60
By Ownership			
State-owned	22	75	55
Collectively-owned	17	73	64
Private	24	69	59
By Product Type			
Consumer Goods - Durable	35	69	56
Consumer Goods - Nondurable	19	66	60
Capital Goods	34	64	57
Intermediate Goods	16	73	62

Notes:
1. A higher Diffusion Index for lending attitude reflects easier lending.
2. A higher Diffusion Index for interest rate reflects higher interest rate.

Table 7. Factors Constraining Next Quarter Production

	Total Number	Response Number
Reason	2291	100
Lack of orders	1341	59
Costs for raw material	217	9
Financing	118	5
Skilled workers	63	3
Machines and Equipment	50	2
Non-skilled workers	37	2
Others (economic environmnet, costs for labor etc.)	341	15
None	124	5

Appendix 1. Industry and Regional Ranking of Excess Capacity

Appendix 1.1 Industry Ranking of Excess Capacity

Industry	Number of Firms	% of Firms with 20% excess capacity and above	% of Firms with 10% excess capacity and above
Production and Supply of Water	23	39	91
Manufacture of Beverage	24	25	25
Manufacture of Leather, Fur, Feather and Related Products	19	21	37
Manufacture of Non-metallic Mineral Products	108	16	20
Manufacture of Cultural, Educational and Sports Products	20	15	25
Manufacture of Chemical Fibers	7	14	29
Manufacture of Textiles	128	12	16
Manufacture of Furniture	18	11	11
Manufacture of Rubber Products	48	10	29
Manufacture of Metal Products	155	10	21
Manufacture of Special-purpose Machinery	146	10	26
Manufacture of Handicrafts and Others	35	9	14
Manufacture of General-purpose Machinery	261	7	15
Manufacture of Plastics	88	7	24
Manufacture of Transport Equipment	96	6	7
Processing of Agricultural and Related Products	88	6	10
Manufacture of Computers, Communication and Other Electric Equipment	89	6	9
Manufacture of Foods	36	6	8
Production and Supply of Electric Power and Heat Power	19	5	5
Manufacture of Chemical Raw Materials and Chemical Products	124	4	10
Manufacture of Electric Machinery and Apparatus	108	4	11
Processing of Timber, Manufacture of Wood, Bamboo, Rattan, Palm and Straw Products	28	4	4
Manufacture of Paper and Paper Products	35	3	6
Manufacture of Textile, Wearing Apparel, Footwear and Caps	84	2	8
Mining and Processing of Nonmetal Ores	5	0	40
Mining and Processing of Ferrous Metal	3	0	33
Smelting and Pressing of Non-ferrous Metals	50	0	8
Smelting and Pressing of Ferrous Metals	26	0	4
Mining and Processing of Non-ferrous Metal	5	0	0
Processing of Petroleum, Coking and Processing of Nuclear Fuel	10	0	0
Coal Mining and Washing	53	0	0
Manufacture of Medicines	40	0	0
Printing, Reproduction of Recording Media	22	0	0

Notes:

1. Industries are sorted based on the percentage of firms with over 20% excess capacity in descending order. The ranking includes industries with at least three firms.

2. Two industries, Production and Supply of Gas and Manufacture of Measuring Instruments, are not included in the ranking because they have less than three firms.

Appendix 1.2 Regional Ranking of Excess Capacity

Province	Number of Firms	% of Firms with 20% excess capacity and above	% of Firms with 10% excess capacity and above
Inner Mongolia	10	30	30
Yunan	18	22	33
Jiangxi	25	16	20
Shaanxi	13	15	15
Shanxi	13	15	15
Henan	68	15	25
Shandong	186	13	21
Guangxi	23	13	22
Hubei	42	12	17
Hebei	64	11	23
Hunan	22	9	18
Jiangsu	400	7	17
Guangdong	331	7	15
Chongqing	29	7	17
Sichuan	46	7	15
Liaoning	79	6	10
Jilin	17	6	6
Zhejiang	328	5	13
Fujian	84	4	10
Shanghai	69	3	9
Anhui	40	3	13
Xinjiang	5	0	20
Tianjin	34	0	3
Heilongjiang	3	0	0
Beijing	8	0	0
Guizhou	35	0	0
Gansu	9	0	0

Notes:

1. Provinces are sorted based on the percentage of firms with over 20% excess capacity in descending order. The ranking includes provinces with at least three firms.

2. Two provinces, Ningxia and Hainan, are not included in the ranking because they have less than three firms.

Appendix 2. Industry and Regional Diffusion Index for Cost and Price

Appendix 2.1 Industry Diffusion Index for Cost and Price

		Diffusion Indices			
	Number of Firms	Unit Cost Index	Labor Cost Index	Raw Material Cost Index	Price Index
Nation	2005	75	85	69	50
Mining					
Coal Mining and Washing	10	70	70	70	30
Mining and Processing of Ferrous Metal Ores	2	75	100	50	25
Mining and Processing of Non-ferrous Metal	5	70	70	70	60
Mining and Processing of Nonmetal Ores	5	90	80	75	30
Production and Supply of Electricity, Heat, Gas and Water					
Production and Supply of Electric Power and Heat Power	19	84	87	75	53
Production and Supply of Gas	2	75	75	n.a.	50
Production and Supply of Water	23	50	50	n.a.	50
Light Manufacturing					
Processing of Agricultural and Related Products	89	77	76	77	59
Manufacture of Foods	35	94	94	76	54
Manufacture Beverage	25	70	82	68	50
Manufacture of Textiles	137	70	86	76	44
Manufacture of Textile, Wearing Apparel, Footwear and Caps	75	62	86	84	49
Manufacture of Leather, Fur, Feather and Related Products	19	66	79	68	47
Processing of Timber, Manufacture of Wood, Bamboo, Rattan, Palm and Straw Products	28	93	95	89	59
Manufacture of Furniture	18	83	86	86	58
Manufacture of Paper and Paper Products	35	64	70	64	40
Printing, Reproduction of Recording Media	53	99	99	88	55
Manufacture of Cultural, Educational and Sports Products	20	73	83	60	55
Manufacture of Medicines	40	89	93	88	54
Manufacture of Handicrafts and Others	35	71	80	70	41
Chemical Industry					
Processing of Petroleum, Coking and Processing of Nuclear Fuel	22	77	77	73	68
Manufacture of Chemical Raw Materials and Chemical Products	123	79	91	75	52
Manufacture of Chemical Fibers	7	100	100	71	43
Manufacture of Rubber Products	49	83	95	66	51
Manufacture of Plastics	87	68	90	78	45
Equipment Manufacturing					
Manufacture of General-purpose Machinery	258	76	86	55	48
Manufacture of Special-purpose Machinery	146	76	86	66	52
Manufacture of Transport Equipment	96	71	78	62	51
Manufacture of Electric Machinery and Apparatus	109	75	88	74	50
Manufacture of Computers, Communication and Other Electric Equipment	89	64	89	68	51
Manufacture of Measuring Instruments and Machinery for Cultural Activity and Office Work	2	75	100	25	75
Other Heavy Manufacturing					
Manufacture of Non-metallic Mineral Products	108	75	82	73	50
Smelting and Pressing of Ferrous Metals	26	69	67	40	42
Smelting and Pressing of Non-ferrous Metals	53	63	75	57	48
Manufacture of Metal Products	155	76	85	57	48

Appendix 2.2 Regional Diffusion Index for Cost and Price

		Diffusion Indices			
	Number of Firms	Unit Cost Index	Labor Cost Index	Raw Material Cost Index	Price Index
Nation	2005	75	85	69	50
North China					
Beijing	35	70	83	70	53
Hebei	64	73	82	64	45
Tianjin	34	71	76	71	54
Northeast					
Heilongjiang	9	72	83	72	44
Jilin	17	76	82	75	56
Liaoning	79	75	84	69	45
Northwest					
Gansu	8	75	88	69	44
Inner Mongolia	10	75	75	72	45
Ningxia	2	50	75	50	25
Shaanxi	13	77	88	71	50
Xinjiang	5	80	80	60	60
Central North					
Henan	68	76	86	68	49
Shandong	186	76	83	65	53
Shanxi	13	69	81	65	38
Southewest					
Guizhou	3	67	67	67	67
Sichuan	46	72	80	68	54
Yunnan	18	75	86	72	47
Chongqing	29	79	86	65	41
East China					
Jiangsu	400	73	88	67	50
Shanghai	69	75	91	71	46
Zhejiang	328	75	87	69	49
South China					
Fujian	84	74	83	71	53
Guangdong	331	74	84	71	52
Guangxi	23	76	83	63	46
Hainan	2	75	100	75	100
Central South					
Anhui	40	76	83	76	49
Hubei	42	80	86	70	50
Hunan	22	84	84	79	43
Jiangxi	25	70	78	72	50

Appendix A. Sampling Procedure

1. The Population

The initial sample of our panel is taken from the 2008 Economic Census. This is the most complete and reliable economic census data available. A new round of Economic Census is currently ongoing, although the completion date has not been announced by the National Bureau of Statistics.

Although the 2008 Economic Census is our best choice, it is six years old, which gives rise to two potential concerns. First, if many firms no longer exist and if those that disappear are concentrated in certain industry, region, or size categories, our final response sample may not be representative of the population. In our survey, we found that only 91 firms, or 0.9% of the initial sample, went out of business or no longer exist. The second concern is that firm characteristics, such as which industry they are in, might have changed significantly. We deal with this concern by explicitly asking firms about their main products and product types.

The 2008 Economic Census database consists of provincial databases each containing 2 sets of data: one uses industrial units and the other uses legal person units.[1] We start with the legal person units in the 2008 Economic Census database. We then drop non-industrial firms and firms with sales below five million RMB to obtain the population of what the NBS terms as "sizable" industrial firms.

2. The Sampling Procedure

1. First, we simplify the industrial classification code. Using the industrial classification code for national economic activities (GBT4754-2002) as the standard, we only define firms' industry within major groups of two-digit codes from 01 to 98.
2. Next we simplify the area code. We use the first two digits to place firms in 31 provinces and municipalities.
3. Then we remove non-industrial firms: using the industrial classification code specified in step 1, we remove those with codes smaller than 6 or larger than 46, leaving 39 industry categories. Those remaining are mining (06-11), manufacturing (13-43) and electricity, gas and water production & processing (44-46).
4. We remove below-scale firms i.e. those with less than five million RMB in annual sales. This step removed about ¾ of total firms. By now, we have obtained the population of sizable industrial firms, which consists of 488,052 firms.
5. Classify firms by size into three categories of sales using 33% and 66% percentiles.

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1. Legal person units are composed of industrial activity units and industrial activity units are all under management and control of legal person units.
2. Legal person units are either single industry legal units or multi-industry legal units. (Link)

6. Take a stratified random sample using size, region and industry as strata, accounting for 2.1% of the population. The final sample consists of 10,139 firms.

3. Other Notes

As we are sampling 2.1% of the population, some small strata may not be sampled. For example, tobacco and other mining industries are two sectors not sampled and Tibet is not sampled as a region.

4. Sample Representativeness

Tables A1-A3 show that our sample (both the initial sample and the response sample) represents the population well, in terms of industry, region, and size. The only difference is perhaps between the average size of the response sample and that of the population. This has to do with the fact that the response rate of large firms is slightly higher: the response rates of large, medium, and small firms are 36%, 33%, and 30% respectively. Thus the large and small firms are off by 3% each, within acceptable range. Most importantly, we note that the distribution of firm size is very skewed, with the average much higher than the median. In this case, the median represents the location better and the median firm size of our sample is very similar to that of the population. Thus the response sample matches the population in terms of firm size well.

Table A. Comparisons between Survey Sample and the Population

Table A1. Industry Distribution

Industry	Population		Initial Sample		Response Sample	
	Number of Firms	Percentage	Number of Firms	Percentage	Number of Firms	Percentage
Production and Supply of Electric Power and Heat Power	6,719	1.38	142	1.4	19	0.95
Manufacture of Electric Machinery and Apparatus	28,977	5.94	606	5.98	109	5.44
Manufacture of Textile, Wearing Apparel and Accessories	21,272	4.36	443	4.37	75	3.74
Manufacture of Textiles	38,945	7.98	815	8.04	137	6.83
Mining and Processing of Nonmetal Ores	4,900	1	99	0.98	5	0.25
Manufacture of Non-metallic Mineral Products	34,714	7.11	730	7.2	108	5.39
Recycling and Disposal of Waste	1,363	0.28	20	0.2	-	-
Manufacture of Handicrafts and Others	8,588	1.76	178	1.76	35	1.75
Mining and Processing of Ferrous Metal Ores	5,391	1.1	110	1.08	2	0.10
Smelting and Pressing of Ferrous Metals	8,894	1.82	191	1.88	26	1.30
Manufacture of Chemical Fibers	2,374	0.49	42	0.41	7	0.35
Manufacture of Chemical Raw Materials and Chemical Products	30,571	6.26	639	6.3	123	6.13
Manufacture of Computers, Communication and Other Electric Equipment	16,339	3.35	340	3.35	89	4.44
Manufacture of Furniture	6,114	1.25	124	1.22	18	0.90
Manufacture of Transport Equipment	20,880	4.28	442	4.36	96	4.79
Manufacture of Metal Products	29,042	5.95	609	6.01	155	7.73
Manufacture of Liquor, Beverage and Refined Tea	5,824	1.19	120	1.18	25	1.25
Coal Mining and Washing	12,267	2.51	255	2.52	11	0.55
Processing of Timber, Manufacture of Wood, Bamboo, Rattan, Palm and Straw Products	11,471	2.35	234	2.31	28	1.40
Processing of Agricultural and Related Products	25,503	5.23	533	5.26	89	4.44
Manufacture of Leather, Fur, Feather, Related Products and Footwear	9,932	2.03	202	1.99	19	0.95
Mining of other Ores	46	0.01	-	-	-	-
Production and Supply of Gas	1,024	0.21	9	0.09	2	0.10
Extraction of Petroleum and Natural Gas	323	0.07	3	0.03	-	-
Processing of Petroleum, Coking and Processing of Nuclear Fuel	2,669	0.55	51	0.5	21	1.05
Manufacture of Foods	8,724	1.79	178	1.76	35	1.75
Production and Supply of Water	2,327	0.48	42	0.41	23	1.15
Manufacture of Plastics	22,987	4.71	483	4.76	87	4.34
Manufacture of General-purpose Machinery	42,882	8.79	900	8.88	258	12.87
Manufacture of Articles for Culture, Education, Arts and Crafts, Sport and Entertainment Activities	5,310	1.09	108	1.07	20	1.00
Manufacture of Rubber Products	5,277	1.08	106	1.05	49	2.44
Manufacture of Tobacco	163	0.03	-	-	-	-
Manufacture of Medicines	6,802	1.39	144	1.42	40	2.00
Manufacture of Measuring Instruments	6,475	1.33	136	1.34	2	0.10
Printing, Reproduction of Recording Media	7,681	1.57	162	1.6	53	2.64
Mining and Processing of Non-ferrous Metal	2,885	0.59	57	0.56	5	0.25
Smelting and Pressing of Non-ferrous Metals	9,176	1.88	190	1.87	53	2.64
Manufacture of Paper and Paper Products	11,390	2.33	239	2.36	35	1.75
Manufacture of Special-purpose Machinery	21,838	4.47	457	4.51	146	7.28
Total	**488,059**	**100**	**10,139**	**100**	**2005**	**100**

Table A2. Regional Distribution

Province	Population		Initial Sample		Response Sample	
	Number of Firms	Percentage	Number of Firms	Percentage	Number of Firms	Percentage
Anhui	13,600	2.8	281	2.8	40	2.0
Beijing	7,913	1.6	163	1.6	35	1.7
Fujian	19,531	4.0	409	4.0	84	4.2
Gansu	2,113	0.4	37	0.4	8	0.4
Guangdong	59,052	12.1	1,240	12.2	331	16.5
Guangxi	5,699	1.2	117	1.2	23	1.1
Guizhou	3,498	0.7	65	0.6	3	0.1
Hainan	657	0.1	4	0.0	2	0.1
Hebei	17,732	3.6	373	3.7	64	3.2
Henan	19,395	4.0	403	4.0	68	3.4
Heilongjiang	4,921	1.0	96	1.0	9	0.4
Hubei	13,056	2.7	272	2.7	42	2.1
Hunan	12,381	2.5	257	2.5	22	1.1
Jilin	5,328	1.1	105	1.0	17	0.8
Jiangsu	80,696	16.5	1,690	16.7	400	20.0
Jiangxi	10,150	2.1	212	2.1	25	1.2
Liaoning	22,336	4.6	468	4.6	79	3.9
Inner Mongolia	5,269	1.1	112	1.1	10	0.5
Ningxia	1,288	0.3	19	0.2	2	0.1
Qinghai	519	0.1	3	0.0	-	-
Shandong	43,347	8.9	911	9.0	186	9.3
Shanxi	7,129	1.5	146	1.4	13	0.6
Shaanxi	4,398	0.9	92	0.9	13	0.6
Shanghai	20,256	4.2	425	4.2	69	3.4
Sichuan	14,796	3.0	303	3.0	46	2.3
Tianjin	7,902	1.6	164	1.6	34	1.7
Tibet	112	0.0	-	-	-	-
Xinjiang	2,126	0.4	34	0.3	5	0.2
Yunnan	5,291	1.1	110	1.1	18	0.9
Zhejiang	69,938	14.3	1,474	14.5	328	16.4
Chongqing	7,596	1.6	154	1.5	29	1.4
Total	**488,025**	**100.0**	**10,139**	**100.0**	**2005**	**100.0**

Table A3. A Comparison of Company Characteristics

	Population		Initial Sample		Response Sample	
	Mean	Median	Mean	Median	Mean	Median
Assets	90,050	12,920	75,778	12,836	120,540	15,929
Sales	104,739	20,073	98,055	19,988	188,020	22,776
Employment	182	70	166	70	195	77
Sales / Fixed Assets	687	310	618	310	605	306