China's Industrial Economy
2018 Q1 Report[1]

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[1] This report is based on a nationwide quarterly survey of industrial firms, which is implemented by Beijing Allinfo Co., based on the questionnaire and sample provided by Professor Gan Jie, Director of the Center on Finance and Economic Growth. We thank Beijing Allinfo for its hard work and professionalism. We acknowledge the able research assistance of Harry Leung and Jessy Yao who provided support to the data analysis and presentation. Mark Dreyer provided excellent copy editing.

Executive Summary

In Q1, the Business Sentiment Index stood at 51, indicating an expansion, albeit small, for the first time in four years. This expansion, mainly driven by state-owned and foreign firms, has been largely due to the optimistic expectations of future operating conditions. Private firms – the vast majority of industrial firms – stayed flat (50). In addition, production, electricity consumption and both foreign and domestic orders, with the diffusion indices ranging between 47 and 49, showed signs of slight contraction. Investments were still weak.

Overcapacity remains the biggest challenge, suggesting a continued need to curtail production capacity. In addition, persistent rises in raw material costs and the resulting price inflation since 2016 Q4 may hinder the recovery of the industrial economy.

Overall, supply-side reform has made positive progress in solving the structural problems of China's industrial economy. The industrial economy continues an L-shaped long-term trend, stable and with noticeable signs of improvement. Given the government's strong commitment to economic development, we remain optimistic about the long-term outlook of the Chinese economy.

Introduction

This report is based on data collected from our quarterly surveys of around 2,000 industrial firms in China. Conducted through telephone interviews, this study is now in its fourth year, having launched in 2014 Q2. If we exclude the agricultural, real estate and financial sectors from China's GDP, the industrial sector now accounts for 50% of non-agricultural sectors.

Our survey design ensures that our sample fully represents industry, region and company size. As a result, we are able to construct business indices that are, to the best of our knowledge, the most informative ones available about the Chinese economy. Furthermore, our survey questions allow us to understand the underlying mechanisms behind the data and analyze why the economy is doing well or not.

There were a total of 2,038 firms surveyed for our 2018 Q1 report, of which 1,722 firms were also polled in our 2017 Q4 survey. The initial survey sample was based on a stratified random sampling by industry, region and size from the 2008 Economic Census. Starting from 2017 Q2, we have also surveyed additional firms from the 2013 Industrial Enterprises database, which allows us to cover firms founded after 2008. Appendix A details the sampling procedure and compares our sample with the population.

I. 2018 Q1 Key Findings

I.1 The Business Sentiment Index Indicates Expansion for the First Time in Four Years, Mainly due to Optimistic Expectations

In Q1, the Business Sentiment Index[2] stood at 51 (Q4: 48), indicating an expansion, albeit small, for the first time since the survey was launched in 2014 Q2 (Figure 1)[3]. This expansion was mainly due to an optimistic expectation, with the diffusion index of expected operating conditions increased markedly from 47 to 54. The diffusion index for investment timing also increased by two points, to 42, also still well below the turning point of 50.

[2] Our BSI is the simple average of three diffusion indices, including current operating conditions, expected change in operating conditions and investment timing. Compared with other economic indices, our BSI is more forward-looking and is a reflection of the absolute level of economic activities.

[3] Specifically, the three questions underlying our Business Sentiment Index are the following: 1. How are current operating conditions – "good", "neutral" or "difficult"? 2. What is the expected change in operating conditions during the next quarter – "up", "same" or "down"? 3. To what extent is it now a good time to invest – "good", "medium" or "bad?" The diffusion index is based on answers to multiple-choice questions, with the choices in analog to "good," "neutral" and "bad", or "up," "same" and "down." The diffusion index is computed as 100 * % of firms answering "good" + 50 * % of firms answering "neutral". The diffusion index ranges between 0 and 100. A larger value indicates better operating conditions, with 50 marking the turning point between expansion and contraction.

This quarter's expansion was driven by state-owned and foreign firms (with the diffusion indices being 61 and 55, respectively). Private firms – the vast majority of industrial firms – stayed flat (50). Production, electricity consumption and both foreign and domestic orders all showed signs of slight contraction, with the diffusion indices standing between 47 and 49. These slight contractions cannot be fully attributable to the Lunar New Year holiday, since the firms generally do not report significant seasonal effects. Investments were still weak and only 4% of the firms made expansionary investments (Q4: 5%) (Figure 2).

I.2 Costs Continued to Rise Significantly

Unit cost rises continued in this quarter, but to a lesser degree both in terms of its prevalence and magnitude. About 39% of the firms reported increased unit costs, slightly lower than the previous quarter, in which 43% of the firms reported increased unit costs. The diffusion index stood at 69, two points down from the previous quarter. Firms with a significant increase in costs (i.e. quarterly costs rise above 5%) accounted for 9%, slightly lower than the 12% seen in Q4 (Figure 3).

Unit cost increases are mostly related to raw material costs. The diffusion index of raw material costs was 68. The proportion of firms that saw increases in raw material costs above 3% was 13% (Q4: 22%).

II. Challenges and Priorities

II.1 Overall Conditions and Industry & Regional Distribution

In Q1, our major indices of the industrial economy generally remained stable. As shown in Figure 4, the employment index increased slightly (52) and the inventory index stayed flat (50). Both production and electricity consumption showed a slight contraction (48 and 47).

Due to rising costs, product prices continued to increase, with the diffusion index standing at 54. Cost rises were the driving force behind the price rises in Q1. As shown in Figure 5, among firms with product cost inflation above 5%, cost rises were the most prominent. The proportion of firms with unit cost increases above 5% and 10% were 58% and 25%, respectively, while 58% reported raw material cost rises above 5%, all much higher than the sample average. Meanwhile, these firms gave similar responses to the whole sample in terms of production expansion and overcapacity. All these patterns in the data point towards price inflation driven by cost run-ups, rather than by increased demand.

As shown in Table 2.2, the top three industries included Gas Production & Supply (63), Production & Supply of Water (63) and Power Production & Supply (62). These

three industries have been on the list for four, five and eight consecutive quarters, respectively. On the other hand, the worst performing industries were Mining & Processing of Ferrous Metal Ores (38), Manufacturing of Others (42), Smelting & Pressing of Ferrous Metals (42), Non-metallic Mineral Products (43) and Processing of Agricultural & Related Products (45). Smelting & Pressing of Ferrous Metals and Non-metallic Mineral Products have been persistently on this list for three and seven consecutive quarters, respectively. Agricultural & Related Products had been on the list for five consecutive quarters three years ago and reappeared on the list this quarter.

Table 3.1 displays regional business conditions. In Q1, the BSI ranged from 40 (Ningxia) to 57 (Guizhou). Both Guizhou and Inner Mongolia reappeared on the top-performing list, after being on the list for five and six consecutive quarters, respectively, around 2016. The bottom five provinces were Ningxia (40), Hebei (47), Heilongjiang (48), Chongqing (48) and Jilin (49). Ningxia, Hebei and Heilongjiang have appeared on the list seven, eight and seven times, respectively, out of the eleven quarters since 2015 Q1.

II.2 Challenges and Priorities

Weak demand is still by far the biggest challenge for the industrial economy (Figure 6). 61% of the firms surveyed in Q1 cited a lack of orders. Costs were listed as the second largest issue, with raw material and labor costs both cited by 22% and 13% of firms, respectively. 13% of firms cited macroeconomic and industrial policies as limiting factors while 12% of firms cited environmental concerns. In addition, financing was not found to be a bottleneck, with only 2% replying that financing was a limiting factor, a finding consistent with past surveys. In addition, despite a slight contraction in production volume, the capacity utilization rate increased, likely reflecting reduced overcapacity.

II.2.1 Overcapacity Still Near a Historical High

In 2018 Q1, close to two-thirds (63%) of the firms reported oversupply in the domestic market, with a diffusion index of 81 (Q2: 81), still close to historically high levels. The proportion of firms with severe overcapacity was similar to the previous quarter: 33% (Q4: 36%) of firms reported that their excess capacity was above 10%, while 12% (Q4: 15%) reported that their excess capacity was above 20% (Figure 7A).

We categorize an industry as having severe excess capacity if more than 10% of firms in the industry report an excess capacity of more than 20%. There are 38 industries and 31 regions in total. In Q1, the number of industries and regions with severe excess capacity accounted for about half of the total firms (17 industries and 17 regions in 2018 Q1 versus 19 industries and 23 regions in 2017 Q4) (Figure 7B). Overall, both the prevalence and severity of overcapacity were close to historically high levels.

Moreover, these firms said they did not expect that overcapacity would improve in the next quarter.

It is also worth noting that overcapacity in the international market was substantially better than in the domestic market, with the diffusion index 7 points lower (Figure 7A).

Weak demand has not caused inventory problems: thanks to the "order-based" production model adopted by many Chinese firms, the finished-goods inventory stayed largely flat. In Q1, for example, as many as 42% of firms said they did not have significant levels of inventory because they started production only after receiving orders. For those carrying inventories, 83% said that they expected their inventory to be digested within three months, with a further 14% saying it would take between four to six months. This leaves only 3% of the whole sample who said they expected to carry inventory for more than six months.

II.2.2 Curtailment of Overcapacity

Each quarter, we attempt to call back all the firms that have been surveyed in the previous quarter. In Q1, about 2.4% of firms had suspended production or were suspected to have suspended production. Those suspected of having suspended production included cases where, after between five to nine attempts to reach them, the phone number was either wrong, suspended or did not exist, and the line could not be connected or was busy (Figure 8A).

As shown in Figure 8B, employment reduction began to drop gradually from the peak in 2016. In Q1, the proportion of firms reducing workers by more than 10% was 0.7% (Q4: 0.5%), while the proportion of firms reducing workers by more than 20% was 0.4% (Q4: 0.4%). Based on the size distribution of firms with employment reduction and the number of industrial workers in 2015 being 220 million, we estimate that a total of 440,000 jobs were lost in 2018 Q1.

Consistent with an improved industrial structure, firms with severe overcapacity are more likely to reduce employment and production. Among those with severe overcapacity (above 20%), the proportion of firms reducing production by more than 5% and 10% was 30% and 19%, respectively, both significantly more than that of the whole sample (12% and 5%). Moreover, the proportion of firms reducing employment by more than 5% and 10% was 2.1% and 1.7%, respectively, also higher than that of the whole sample (1.5% and 0.7%).

Capacity utilization increased slightly in 2018 Q1. About 57% of firms reported a capacity utilization rate above 90%, up from last quarter's 54%. Nevertheless, 12% of

firms still reported levels of below 70% (Figure 9). There is no consensus as to what level of capacity utilization should be considered healthy. However, if we take the examples of the two largest western industrial nations, the US and Germany, their monthly average capacity utilizations were 79% (1994-2015) and 83% (1992-2015), respectively. Their lowest points after the financial crisis in 2008 were 67% and 70%, respectively, both measured in June 2009. Given the low profit margin of Chinese industrial firms, their sustainable utilization rate may be higher than that of their western counterparts.

Consistent with overcapacity and the resulting lack of orders, 28% of firms reported difficulties in collecting trade receivables from their customers in 2018 Q1, similar to the 29% in 2017 Q4. This problem was more prominent among private firms (30%) and firms producing capital goods and intermediate goods (37% and 34%, respectively). SOEs were disproportionally more likely to delay payment, accounting for about 16% of all firms that have done so.

II.2.3 Rising Costs and Low Margins

Cost rises are the second biggest challenge facing the industrial economy. This has become a more prominent problem since 2016 Q4, mainly due to increases in raw materials and labor costs. In Q1, unit costs were still rising significantly, with a diffusion index of 69 (Q4: 71) (Figure 3).

Overcapacity means a lack of pricing power, which, combined with rising costs, results in low profit margins. As shown in Figure 10, as many as 21% of the firms surveyed had gross margins below 10%, while 35% of the firms had gross margins above 15%. Low margins may make it difficult for the firms to invest in R&D and industrial upgrading.

II.2.4 Financing is Not a Bottleneck

Our survey has consistently found, since its inception in the second quarter of 2014, that financing is not a bottleneck for the industrial economy. In Q1, only 2% of firms cited financing as a constraining factor (2017: 2-3%). 26% of firms said they had sufficient funds, 72% answered “neutral”, while only 3% reported insufficient funds (Figure 11A). Of those, the vast majority (96%) reported insufficient funds for production, not for expansion, while none of them reported insufficient funds due to operating losses.

As shown in Table 6.1 and Figure 11B, only a small fraction of firms (2.5%) obtained new loans in Q1. When asked about the reasons, the vast majority of firms without new loans (99%) reported that they did not have the need for capital. Moreover, the diffusion index reflecting an “accommodating” bank lending attitude was 62 (Q4: 69), while the percentage of firms reporting a “difficult” lending attitude stayed at a low

level of 10% in Q1 (Q4: 6%) (Figure 11C). In fact, only one firm in our sample borrowed money from financial institutions, other than banks in Q1.

Table 6.2 provides an overview of how Chinese firms have been financed. Internally-generated funds were, by far, the most important source of financing, with 96% of surveyed firms reporting this as their primary funding source. In Q1, 4% of firms reported the founder's own capital as the primary source of funds, while 34% reported this as the second most important source of funds. 65% of firms indicated bank loans as their second most important source of funds. Sources of financing were highly concentrated in Chinese firms: in the case of internal funds, 96% of firms reported that this largest financing source accounted for more than 50% of their total funds. These patterns have been highly consistent over time.

Taken together, against the background of overcapacity, investment opportunity has been scarce, resulting in low loan demand. Thus, financing is not a bottleneck for the industrial economy at the moment.

III. Conclusion

In Q1, the Business Sentiment Index stood at 51, indicating an expansion, albeit small, for the first time in four years. This expansion, mainly driven by state-owned and foreign firms, has been largely due to the optimistic expectations of future operating conditions. Private firms – the vast majority of industrial firms – stayed flat (50). In addition, production, electricity consumption and both foreign and domestic orders showed signs of slight contraction. Investments were still weak.

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Overall, supply-side reform has made positive progress in solving the structural problems of China's industrial economy. The industrial economy continues an L-shaped long-term trend, stable and with noticeable signs of improvement. Given the government's strong commitment to economic development, we remain optimistic about the long-term outlook of the Chinese economy.

Figure 1. Business Sentiment Index

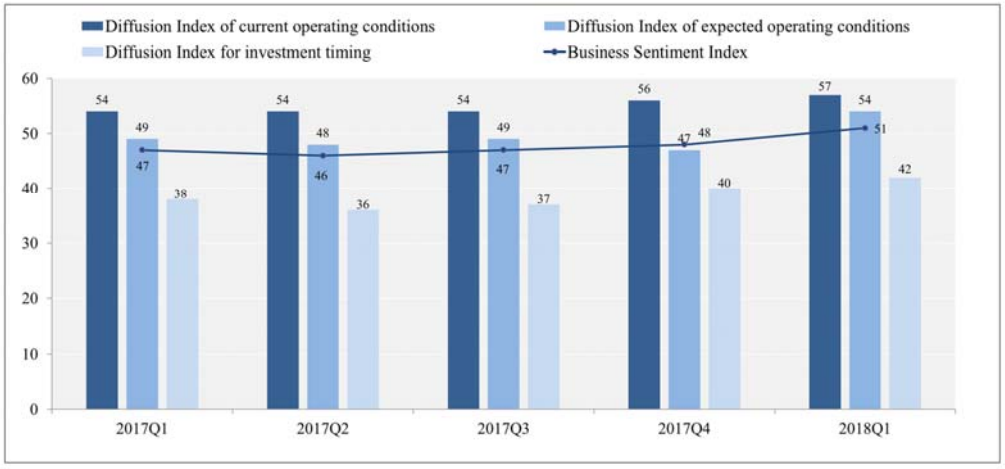

Figure 2. Investment

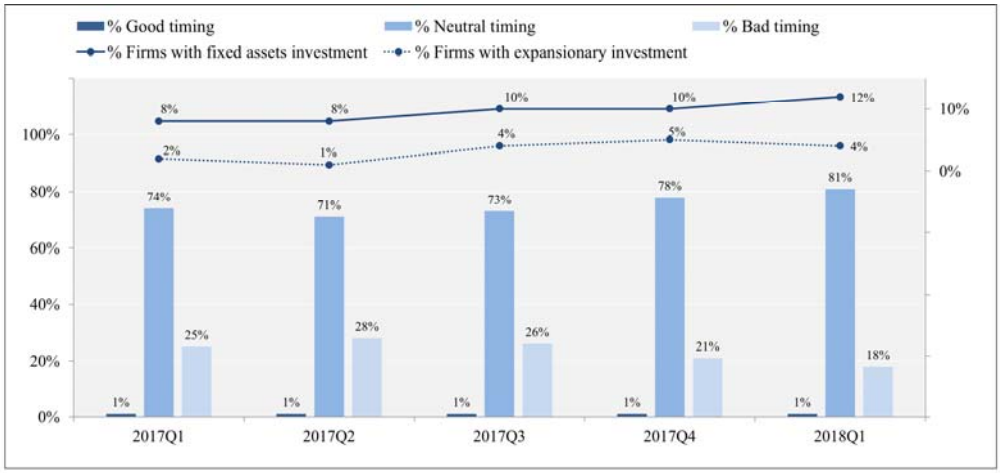

Figure 3. Costs

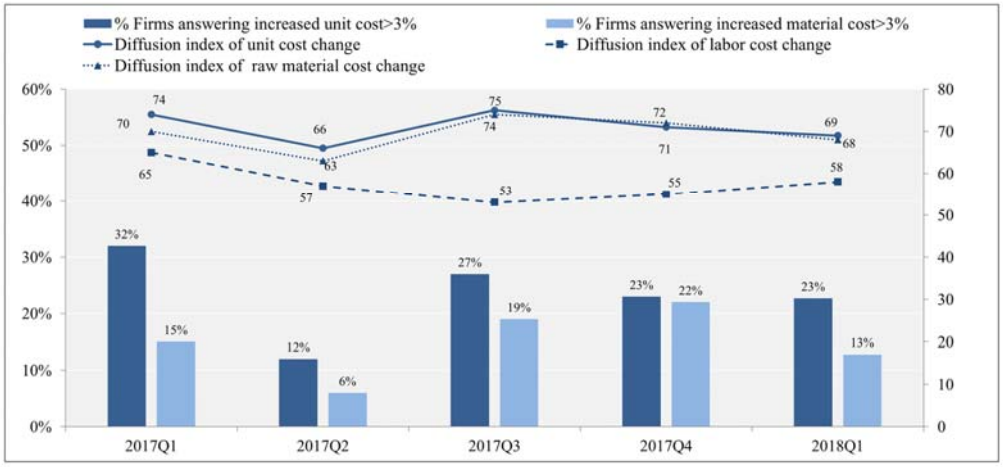

Figure 4. Other Main Economic Indices

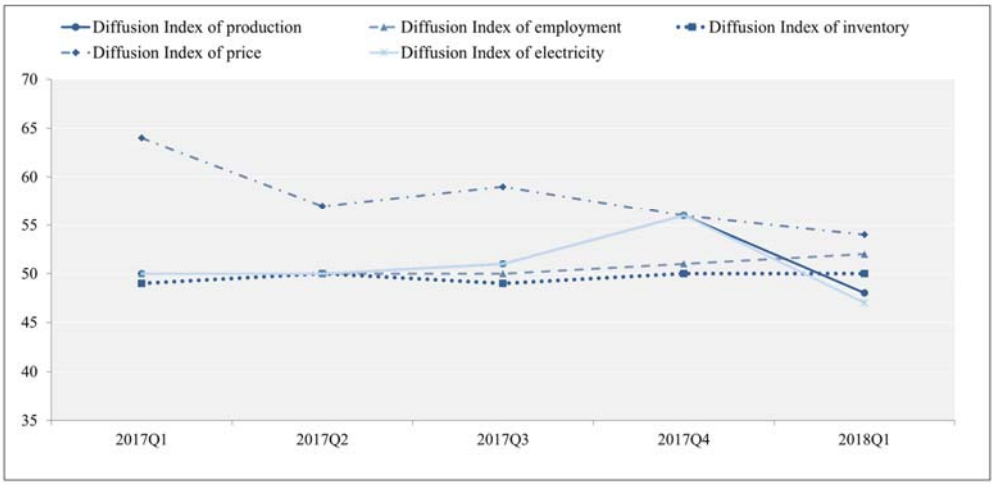

Figure 5. Cost Driven Price Increases

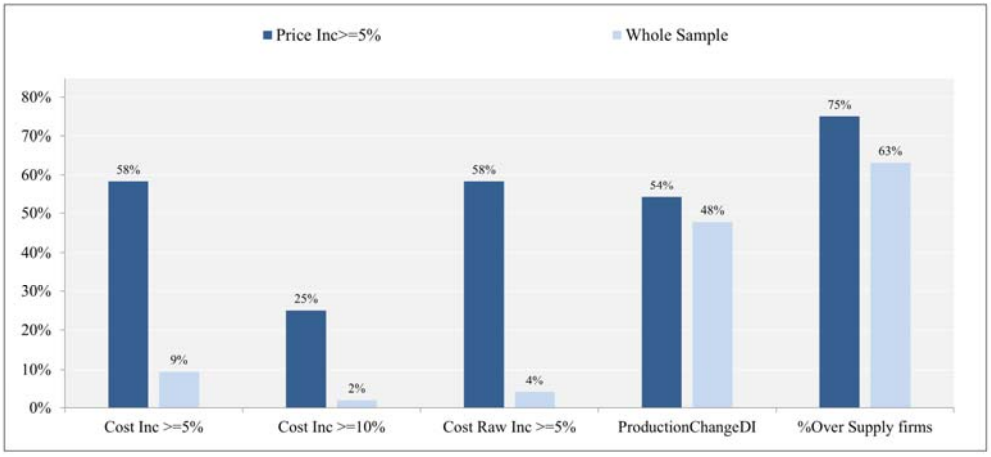

Figure 6. Factors Constraining Production of Next Quarter

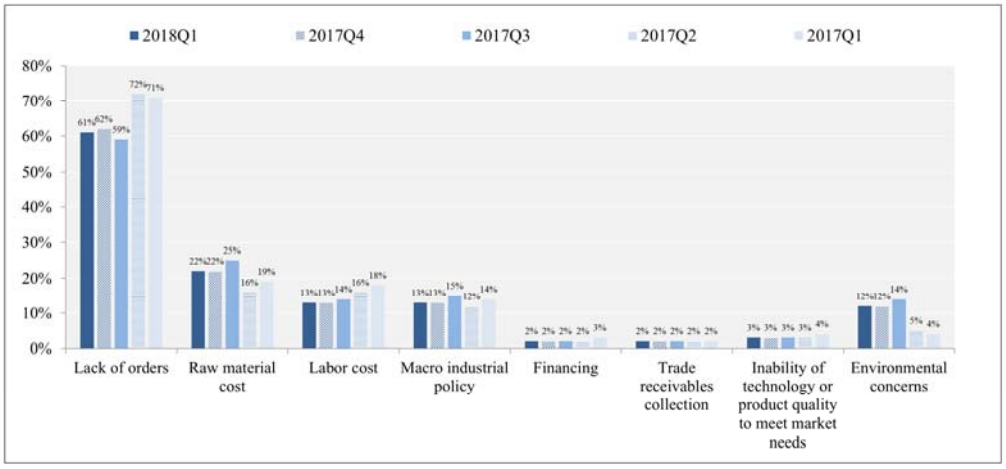

Figure 7A. Excess Capacity

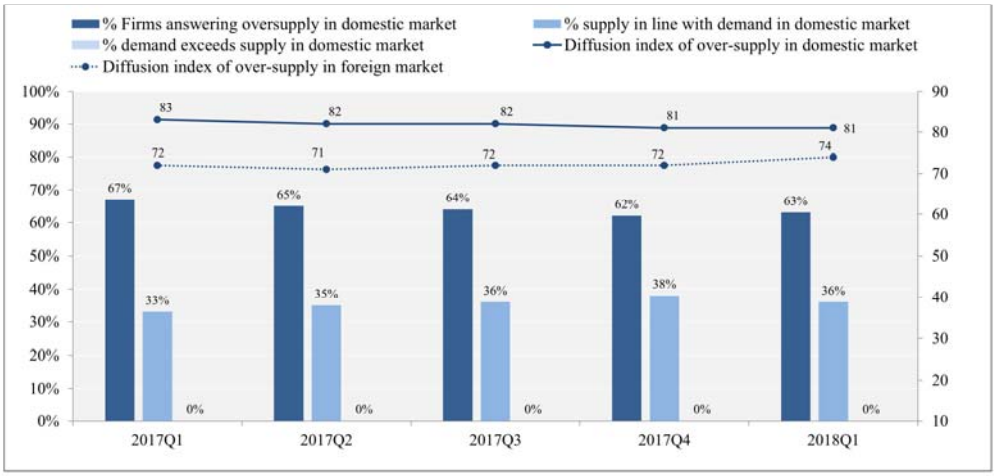

Figure 7B. Firms with Severe Excess Capacity

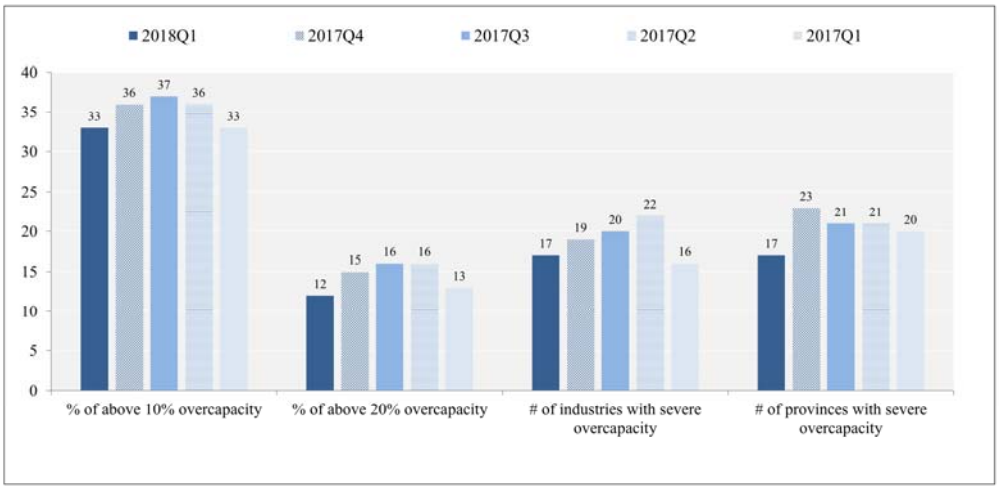

Figure 8A. Suspended Production

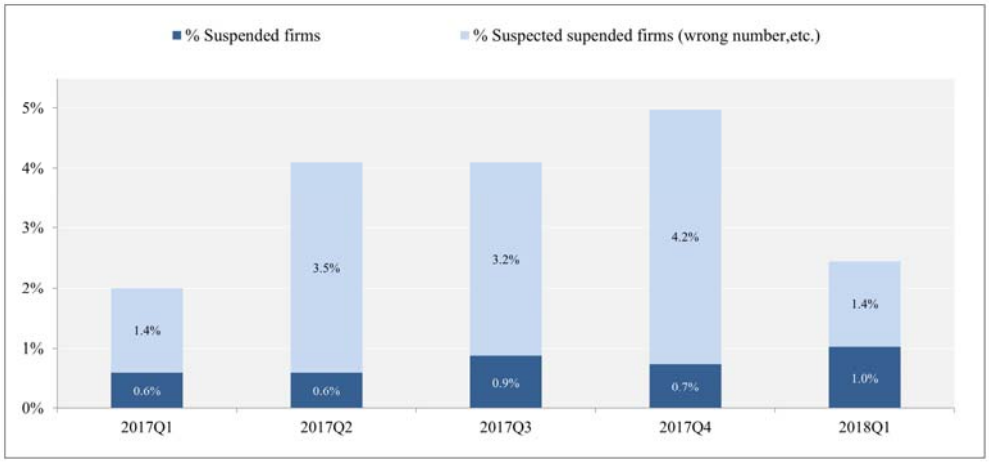

Figure 8B. Firms with Employment Reduction

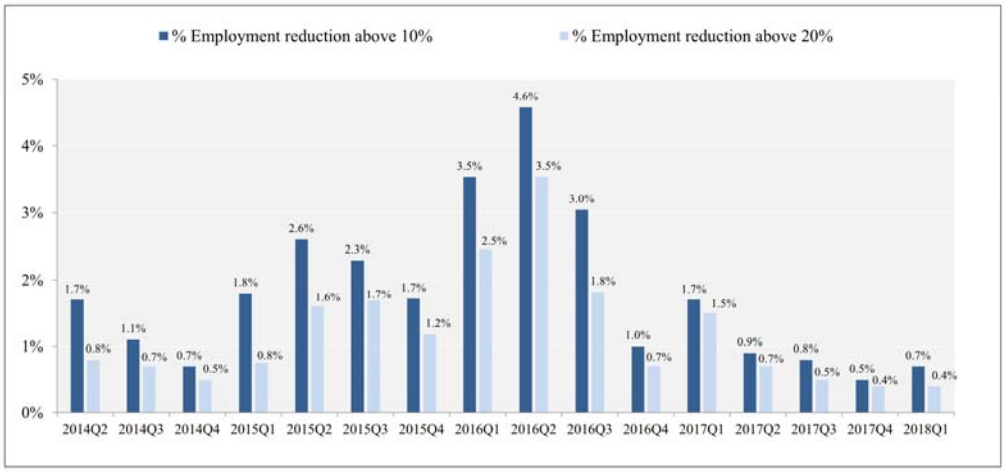

Figure 9. Capacity Utilization

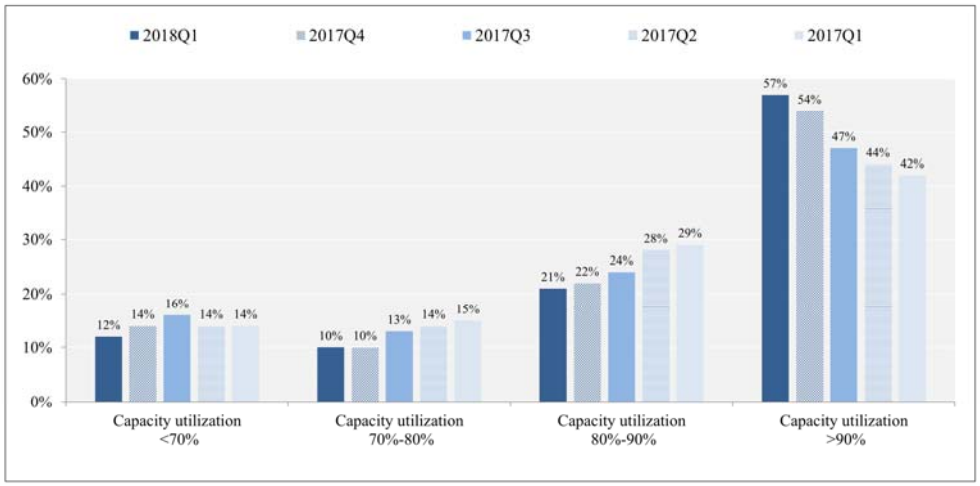

Figure 10. Gross Margins

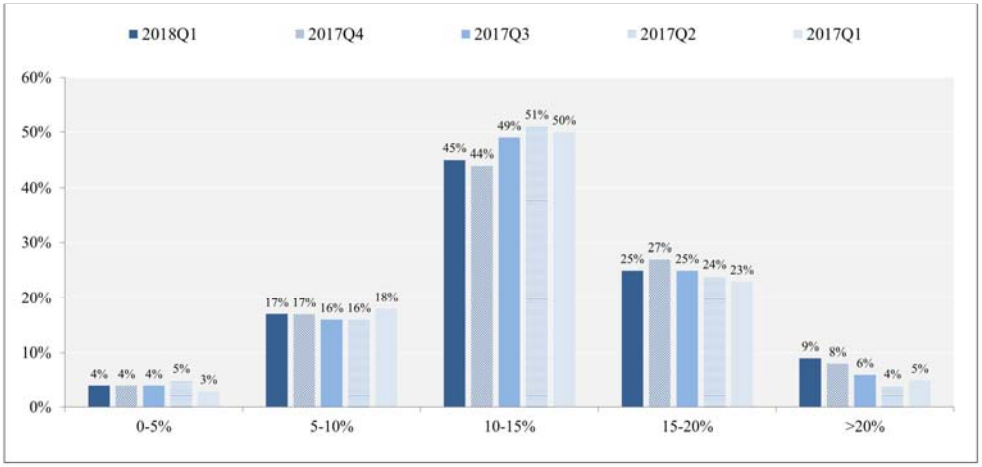

Figure 11. Financing

Figure 11A. Sufficient Capital

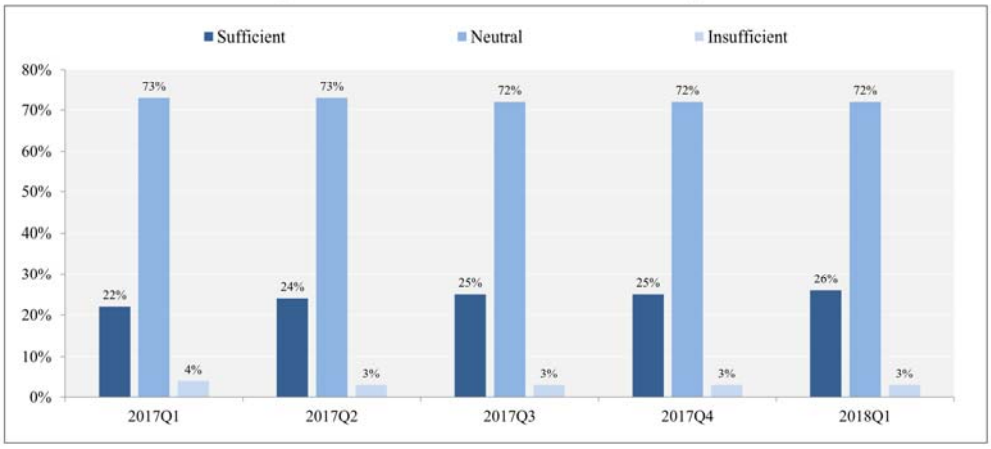

Figure 11B. New Loans

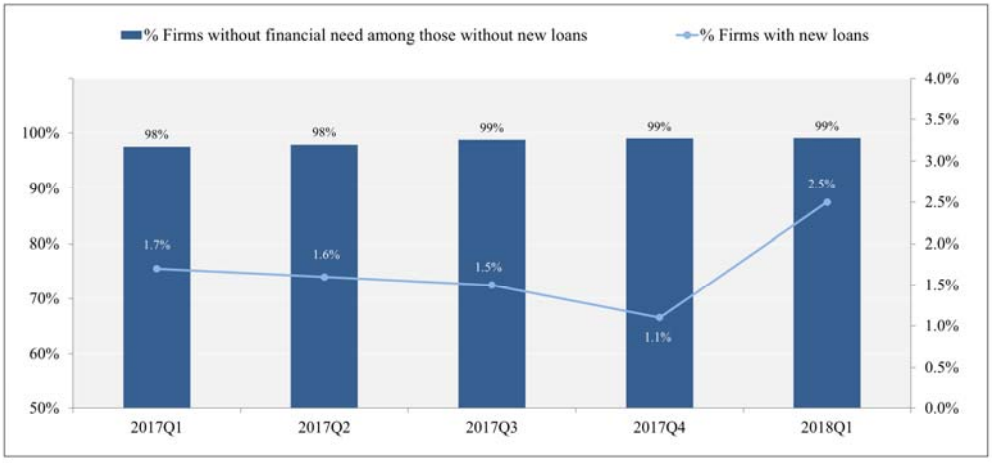

Figure 11C. Lending Attitude

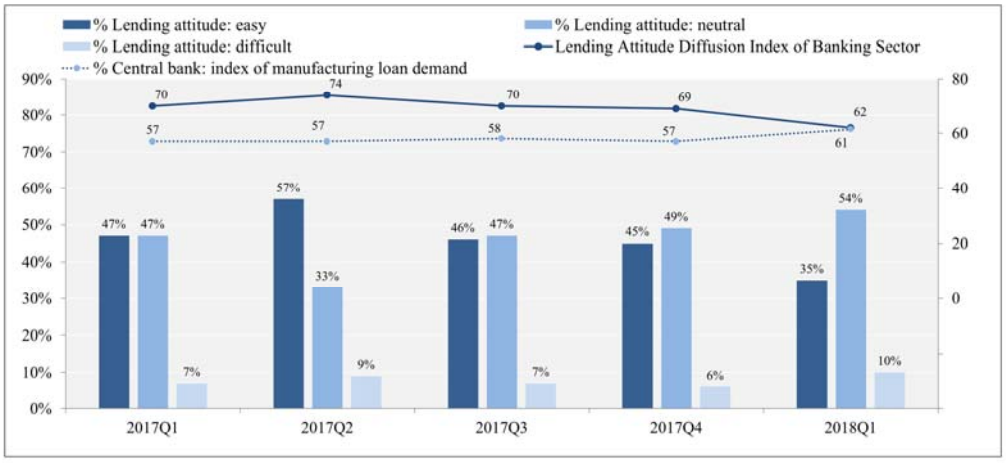

Table 1. Operating Conditions of Industrial Firms

Table 1.1

	Number of Firms		Business Sentiment Index		Diffusion Index - Operating Conditions		Diffusion Index - Expected Change in Operating Conditions		Diffusion Index - Good Timing for Investment	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	51	48	57	56	54	47	42	40
By Size										
Large	680	680	52	50	58	58	53	47	46	44
Medium	679	679	52	48	58	57	55	47	43	40
Small	679	680	49	46	54	54	55	47	37	37
By Ownership										
State-owned	110	100	61	57	75	75	60	50	46	46
Collectively-owned	23	29	51	47	61	55	54	52	37	33
Private	1,715	1,727	50	47	55	55	54	47	41	40
Foreign-owned	190	183	55	50	63	62	57	47	44	42
By Product Type										
Consumer Goods - Durable	335	282	50	48	56	56	52	48	42	40
Consumer Goods - Nondurable	674	732	52	50	60	60	55	49	42	40
Capital Goods	142	150	52	51	59	59	53	49	45	44
Intermediate Goods	887	875	50	46	54	53	55	45	41	39

Table 1.2

	% of Firms with Fixed Investment		% of Firms with Expansionary Investment		Diffusion Index - Production		Diffusion Index - Employment		Diffusion Index - Price	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	12	10	4	5	48	56	52	51	54	56
By Size										
Large	14	11	6	6	49	58	52	51	54	56
Medium	14	10	4	4	48	56	53	50	55	56
Small	10	9	3	4	46	55	51	51	54	57
By Ownership										
State-owned	15	12	5	4	50	51	52	51	52	53
Collectively-owned	26	3	9	3	48	59	50	48	43	59
Private	11	10	4	5	47	56	52	51	55	57
Foreign-owned	18	11	8	5	52	62	55	52	54	55
By Product Type										
Consumer Goods - Durable	11	6	4	3	49	56	52	51	56	56
Consumer Goods - Nondurable	13	12	4	6	50	60	52	51	55	58
Capital Goods	17	3	4	1	49	56	54	52	53	53
Intermediate Goods	11	11	5	5	45	53	51	50	54	56

Notes:

1. Diffusion Index (DI) 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.

2. Business Sentiment Index is the average of DIs for Operating Conditions, Expected Operating Conditions and Good Timing for Investment.

Table 2. Operating Conditions by Industry

Table 2.1 Operating Conditions of All Industries

	Number of Firms		Business Sentiment Index		Diffusion Index - Operating Conditions		Diffusion Index - Expected Change in Operating Conditions		% of Firms with Fixed Investment		Diffusion Index - Good Timing for Investment	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	51	48	57	56	54	47	12	10	42	40
Mining												
Coal Mining and Washing	17	16	55	40	50	47	65	25	6	6	50	47
Mining and Processing of Ferrous Metal Ores	10	8	38	42	30	25	35	50	0	13	50	50
Mining and Processing of Non-ferrous Metal	7	7	48	43	50	50	64	50	14	0	29	29
Mining and Processing of Nonmetal Ores	20	20	48	38	43	38	55	30	0	0	45	45
Production and Supply of Electricity, Heat, Gas and Water												
Power Production and Supply	60	65	62	57	71	72	64	49	20	11	50	50
Gas Production and Supply	12	7	63	62	92	86	46	50	8	14	50	50
Production and Supply of Water	21	22	63	59	90	86	55	50	19	14	45	41
Light Manufacturing												
Processing of Agricultural and Related Products	135	127	45	46	51	54	49	50	6	15	36	34
Manufacturing of Foods	69	60	54	53	62	62	53	52	9	7	46	46
Manufacturing of Beverage	43	41	53	48	62	62	53	40	2	5	43	41
Textiles	116	113	56	47	55	57	67	46	13	17	45	40
Textile Wearing and Apparel	59	69	55	50	58	57	62	46	14	7	45	46
Leather Related Products and Footwear	42	36	46	45	52	51	51	51	10	11	36	32
Processing of Wood Products	36	38	53	50	64	59	51	49	42	8	44	43
Manufacturing of Furniture	32	37	49	48	55	55	52	47	6	5	41	41
Paper and Paper Products	51	57	49	49	59	60	51	50	8	5	38	36
Printing, Reproduction of Recording Media	38	41	53	48	57	61	62	46	11	27	39	38
Cultural and Sports Products	42	39	51	51	56	59	51	50	5	3	46	44
Manufacturing of Medicines	74	79	56	56	67	68	50	49	28	11	51	51
Manufacturing of Others	8	8	42	42	44	44	44	44	0	0	38	38
Recycling and Disposal of Wastes	5	5	50	50	50	50	50	50	0	0	50	50
Chemical Industry												
Processing of Petroleum and Nuclear Fuel	13	15	49	46	54	53	46	37	0	13	46	47
Manufacturing of Chemical Products	118	123	50	48	52	50	52	49	3	7	46	44
Manufacturing of Chemical Fibers	10	9	50	46	50	44	55	50	10	0	45	44
Rubber and Plastic Products	100	105	50	46	53	53	57	49	17	10	39	36
Equipment Manufacturing												
General-purpose Machinery	112	106	50	49	54	54	51	50	9	6	45	44
Special-purpose Machinery	106	98	54	53	62	61	51	51	25	5	49	46
Manufacturing of Automotive	95	76	49	48	58	55	49	51	20	14	38	38
Manufacturing of Railways, Ships and Other Transportation	26	27	58	57	71	70	50	52	12	4	52	50
Electric Machinery and Apparatus	137	139	57	49	65	67	70	47	16	19	35	34
Computers, Communication and Electric Equipment	60	59	52	51	56	56	50	50	12	5	49	47
Manufacturing of Measuring Instruments	43	43	51	50	60	62	51	48	2	2	42	42
Repair of Metal Products, Machinery and Equipment	4	4	46	46	50	50	50	50	0	0	38	38
Other Heavy Manufacturing												
Non-metallic Mineral Products	98	119	43	36	39	40	55	35	5	5	34	34
Smelting and Pressing of Ferrous Metals	66	67	42	40	37	37	47	39	6	9	43	43
Smelting and Pressing of Non-ferrous Metals	35	37	47	44	54	53	46	39	6	8	41	41
Metal Products	118	116	47	44	57	56	53	49	20	16	30	27

Table 2.2 Industry Ranking of Operating Conditions

	Number of Firms		Business Sentiment Index		Diffusion Index - Operating Conditions		% of Firms with Fixed Investment		Diffusion Index - Good Timing for Investment	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	51	48	57	56	12	10	42	40
Top Five										
Gas Production and Supply	12	7	63	62	92	86	8	14	50	50
Production and Supply of Water	21	22	63	59	90	86	19	14	45	41
Power Production and Supply	60	65	62	57	71	72	20	11	50	50
Manufacturing of Railways, Ships and Other Transportation	26	27	58	57	71	70	12	4	52	50
Electric Machinery and Apparatus	137	139	57	49	65	67	16	19	35	34
Bottom Five										
Mining and Processing of Ferrous Metal Ores	10	8	38	42	30	25	0	13	50	50
Manufacturing of Others	8	8	42	42	44	44	0	0	38	38
Smelting and Pressing of Ferrous Metals	66	67	42	40	37	37	6	9	43	43
Non-metallic Mineral Products	98	119	43	36	39	40	5	5	34	34
Processing of Agricultural and Related Products	135	127	45	46	51	54	6	15	36	34

Notes:
1. Ranking includes industries with more than three firms.

Table 3. Operating Conditions by Region

Table 3.1 Operating Conditions of All Regions

	Number of Firms		Business Sentiment Index		Diffusion Index - Operating Conditions		Diffusion Index - Expected Operating Conditions		% of Firms with Fixed Investment		Diffusion Index - Good Timing for Investment	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	51	48	57	56	54	47	12	10	42	40
North China												
Beijing	30	31	51	41	53	47	58	40	7	3	40	37
Tianjin	46	46	50	46	58	57	51	45	11	11	40	36
Hebei	91	92	47	45	52	54	52	45	13	14	36	35
Northeast												
Liaoning	100	97	50	48	54	55	54	47	7	10	43	42
Jilin	31	24	49	51	58	63	50	50	16	17	39	40
Heilongjiang	25	26	48	44	52	50	56	50	24	8	36	31
Northwest												
Inner Mongolia	24	29	53	49	56	53	50	43	0	7	52	50
Shaanxi	29	29	51	45	53	53	59	41	7	14	41	40
Gansu	9	10	52	53	61	60	50	55	11	10	44	45
Qinghai	1	1	67	50	50	50	100	50	0	0	50	50
Ningxia	5	4	40	38	40	38	50	38	0	0	30	38
Xinjiang	9	5	54	47	50	50	61	40	0	0	50	50
Central North												
Shanxi	18	19	50	48	53	53	53	47	17	16	44	45
Shandong	218	221	52	48	59	58	55	46	13	9	44	41
Henan	88	83	50	47	57	56	53	47	10	12	40	37
Southwest												
Chongqing	33	35	48	47	52	53	50	46	9	0	42	41
Sichuan	63	67	50	46	52	51	54	43	6	7	44	43
Guizhou	12	12	57	49	58	58	67	42	0	8	46	46
Yunnan	26	27	51	48	56	54	52	46	19	15	44	43
East China												
Shanghai	65	62	52	47	61	60	57	46	17	3	39	35
Jiangsu	263	261	52	48	58	57	54	47	13	9	44	42
Zhejiang	239	243	52	48	58	57	56	49	18	12	41	39
South China												
Fujian	103	94	51	49	56	57	57	51	12	14	41	40
Guangdong	198	213	51	49	57	56	53	48	13	10	43	41
Guangxi	39	41	53	52	59	62	58	50	13	12	44	43
Hainan	1	1	50	50	100	100	50	50	0	0	0	0
Central South												
Anhui	88	86	50	49	55	56	53	49	9	10	43	42
Jiangxi	53	54	52	48	57	57	58	44	15	13	42	42
Hubei	69	73	50	48	56	57	52	50	10	7	41	38
Hunan	62	53	52	48	58	60	58	45	13	6	40	38

Table 3.2 Regional Ranking of Operating Conditions

	Number of Firms		Business Sentiment Index		Diffusion Index - Operating Conditions		% of Firms with Fixed Investment		Diffusion Index - Good Timing for Investment	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	51	48	57	56	12	10	42	40
Top Five										
Guizhou	12	12	57	49	58	58	0	8	46	46
Xinjiang	9	5	54	47	50	50	0	0	50	50
Guangxi	39	41	53	52	59	62	13	12	44	43
Inner Mongolia	24	29	53	49	56	53	0	7	52	50
Jiangxi	53	54	52	48	57	57	15	13	42	42
Bottom Five										
Ningxia	5	4	40	38	40	38	0	0	30	38
Hebei	91	92	47	45	52	54	13	14	36	35
Heilongjiang	25	26	48	44	52	50	24	8	36	31
Chongqing	33	35	48	47	52	53	9	0	42	41
Jilin	31	24	49	51	58	63	16	17	39	40

Notes:

1. Ranking includes regions with more than three firms.

Table 4. Oversupply

Table 4.1 Overall

	Number of Firms		Diffusion Index for Oversupply in Domestic Markets		Diffusion Index for Oversupply in Overseas Markets		Diffusion Index for Finished Goods	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	81	81	74	72	50	50
By Size								
Large	680	680	79	78	72	70	49	49
Medium	679	679	81	82	74	74	51	50
Small	679	680	84	83	75	73	49	49
By Ownership								
State-owned	110	100	62	63	63	59	54	50
Collectively-owned	23	29	82	81	63	70	46	44
Private	1,715	1,727	83	82	74	73	50	49
Foreign -owned	190	183	80	79	73	71	50	52
By Product Type								
Consumer Goods - Durable	335	282	77	76	68	66	53	52
Consumer Goods - Nondurable	674	732	76	77	72	71	48	50
Capital Goods	142	150	79	76	71	66	50	49
Intermediate Goods	887	875	87	86	79	78	50	48

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
Mining and Processing of Ferrous Metal Ores	10	80	80
Processing of Petroleum and Nuclear Fuel	13	46	46
Non-metallic Mineral Products	98	46	54
Mining and Processing of Nonmetal Ores	20	45	50
Smelting and Pressing of Ferrous Metals	66	32	42
Processing of Wood Products	36	25	50
Metal Products	118	18	54
Manufacturing of Furniture	32	16	22
Smelting and Pressing of Non-ferrous Metals	35	14	23
Textile Wearing and Apparel	59	14	32
Electric Machinery and Apparatus	137	13	36
Manufacturing of Foods	69	13	28
Manufacturing of Others	8	13	38
Manufacturing of Medicines	74	12	20
Leather Related Products and Footwear	42	12	36
Coal Mining and Washing	17	12	53
Paper and Paper Products	51	12	35

Notes:

1. This table reports industries that have at least 10% of firms with 20% or above excess capacity.

2. This table includes industries with more than three firms.

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
Shanxi	18	28	39
Hebei	91	24	51
Sichuan	63	22	37
Shaanxi	29	21	34
Ningxia	5	20	40
Beijing	30	20	33
Inner Mongolia	24	17	38
Liaoning	100	16	34
Heilongjiang	25	16	24
Chongqing	33	15	24
Shandong	218	15	31
Henan	88	14	30
Jiangxi	53	13	36
Jilin	31	13	29
Hunan	62	11	34
Xinjiang	9	11	33
Jiangsu	263	10	30

Notes:
1. This table reports regions that have at least 10% of firms with 20% or above excess capacity.
2. This table includes regions with more than three firms.

Table 5. Cost and Price

Table 5.1 Overall

	Number of Firms		Diffusion Indices							
			Unit Cost Index		Labor Cost Index		Raw Material Cost Index		Price Index	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	69	71	58	55	68	72	54	56
By Size										
Large	680	680	68	71	57	56	67	73	54	56
Medium	679	679	67	70	58	55	67	71	55	56
Small	679	680	71	72	58	56	68	73	54	57
By Ownership										
State-owned	110	100	56	60	55	54	58	65	52	53
Collectively-owned	23	29	67	72	74	59	67	71	43	59
Private	1715	1727	70	72	57	56	68	73	55	57
Foreign -owned	190	183	66	69	62	55	64	72	54	55
By Product Type										
Consumer Goods - Durable	335	282	77	71	63	57	75	75	56	56
Consumer Goods - Nondurable	674	732	69	69	57	56	68	73	55	58
Capital Goods	142	150	68	76	66	57	67	75	53	53
Intermediate Goods	887	875	66	71	55	54	65	71	54	56

Table 5.2 Industries with Unit Cost Increase More Significant than National Average

		Diffusion Indices			
	Number of Firms	Unit Cost Index	Labor Cost Index	Raw Material Cost Index	Price Index
Nation	2,038	69	58	68	54
Manufacturing of Foods	69	95	59	91	60
Leather Related Products and Footwear	42	86	65	85	57
Printing, Reproduction of Recording Media	38	84	70	83	58
Manufacturing of Furniture	32	83	50	81	63
Manufacturing of Others	8	81	56	94	50
Manufacturing of Automotive	95	81	75	81	51
Manufacturing of Chemical Fibers	10	80	50	75	60
Processing of Agricultural and Related Products	135	76	57	65	55
Repair of Metal Products, Machinery and Equipment	4	75	75	75	50
Cultural and Sports Products	42	75	54	73	61
Paper and Paper Products	51	74	80	74	52
Special-purpose Machinery	106	73	78	73	51
Electric Machinery and Apparatus	137	73	55	73	59
Non-metallic Mineral Products	98	72	52	69	58
Mining and Processing of Non-ferrous Metal	7	71	64	71	50
Smelting and Pressing of Non-ferrous Metals	35	71	56	66	49
Manufacturing of Beverage	43	70	52	65	62

Notes:
1. Industries are sorted by Diffusion Index for Unit Cost in descending order.

Table 5.3 Regions with Unit Cost Increase More Significant than National Average

		Diffusion Indices			
	Number of Firms	Unit Cost Index	Labor Cost Index	Raw Material Cost Index	Price Index
Nation	2,038	69	58	68	54
Henan	88	73	57	72	59
Beijing	30	73	68	73	53
Xinjiang	9	72	61	72	61
Fujian	103	72	58	72	60
Hunan	62	71	58	72	52
Guangxi	39	71	54	68	55
Sichuan	63	71	56	73	56
Jiangxi	53	71	56	69	57
Chongqing	33	71	58	70	50
Shanghai	65	70	61	69	55
Heilongjiang	25	70	58	60	52
Zhejiang	239	70	58	71	56
Hubei	69	70	58	68	51
Yunnan	26	69	58	74	54
Hebei	91	69	56	65	54

Notes:
1. Provinces are sorted by Diffusion Index for Unit Cost in descending order.
The table includes provinces with more than three firms.

Table 6. Financing Environment
Table 6.1 Overall

	Number of Firms		% Firms with Loans		% Firms with New Loans		Diffusion Index - Lending Attitude		Diffusion Index - Interest Rate	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	25	23	2	1	62	69	50	50
With or Without Investment										
Firms with Investment	253	204	33	30	5	4	64	67	50	50
Firms without Investment	1,785	1,835	24	23	2	1	62	70	50	50
By Size										
Large	680	680	25	22	2	1	63	63	50	50
Medium	679	679	25	25	3	1	62	74	50	50
Small	679	680	24	24	2	1	61	70	50	50
By Ownership										
State-owned	110	100	20	19	1	1	50	57	50	50
Collectively-owned	23	29	13	14	0	0	NA	NA	NA	NA
Private	1,715	1,727	25	24	3	1	64	71	50	50
Foreign -owned	190	183	24	18	3	1	59	63	50	50
By Product Type										
Consumer Goods - Durable	335	282	26	20	3	1	74	71	50	50
Consumer Goods - Nondurable	674	732	27	25	3	1	53	59	50	50
Capital Goods	142	150	36	40	2	3	33	58	50	50
Intermediate Goods	887	875	21	20	2	1	69	81	50	50

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 6.2 Sources of Financing

The most important source of financing

Sources	Number of Firms	% of Firms
Internal Funds	1964	96
Founder	81	4
Relatives and friends	0	0
Bank	5	0
Stock market	1	0
Non-official finance institution	0	0
Others	0	0

The second most important source of financing

Sources	Number of Firms	% of Firms
Bank	498	65
Founder	259	34
Internal Funds	3	0
Non-official finance institution	1	0
Others	1	0
Relatives and friends	1	0
Stock market	1	0

Appendix 1. Industry and Regional Ranking of Excess Capacity

Table A1.1 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	
	Q1	Q4	Q1	Q4	Q1	Q4
Mining and Processing of Ferrous Metal Ores	10	8	80	63	80	63
Processing of Petroleum and Nuclear Fuel	13	15	46	53	46	53
Non-metallic Mineral Products	98	119	46	41	54	55
Mining and Processing of Nonmetal Ores	20	20	45	50	50	60
Smelting and Pressing of Ferrous Metals	66	67	32	36	42	43
Processing of Wood Products	36	38	25	39	50	53
Metal Products	118	116	18	23	54	58
Manufacturing of Furniture	32	37	16	19	22	24
Smelting and Pressing of Non-ferrous Metals	35	37	14	19	23	24
Textile Wearing and Apparel	59	69	14	16	32	33
Electric Machinery and Apparatus	137	139	13	16	36	42
Manufacturing of Foods	69	60	13	17	28	22
Manufacturing of Others	8	8	13	13	38	38
Manufacturing of Medicines	74	79	12	11	20	22
Leather Related Products and Footwear	42	36	12	22	36	39
Coal Mining and Washing	17	16	12	13	53	63
Paper and Paper Products	51	57	12	14	35	40
Manufacturing of Beverage	43	41	9	15	21	32
Manufacturing of Measuring Instruments	43	43	9	9	12	12
General-purpose Machinery	112	106	6	6	41	35
Rubber and Plastic Products	100	105	6	9	43	48
Special-purpose Machinery	106	98	6	10	12	21
Printing, Reproduction of Recording Media	38	41	5	7	24	34
Manufacturing of Automotive	95	76	4	4	24	33
Manufacturing of Railways, Ships and Other Transportation	26	27	4	7	19	26
Textiles	116	113	3	4	24	32
Computers, Communication and Electric Equipment	60	59	3	2	30	29
Power Production and Supply	60	65	3	5	3	5
Processing of Agricultural and Related Products	135	127	3	2	21	14
Manufacturing of Chemical Products	118	123	3	2	36	39
Cultural and Sports Products	42	39	2	3	10	13
Manufacturing of Chemical Fibers	10	9	0	0	40	44
Repair of Metal Products, Machinery and Equipment	4	4	0	0	25	25
Mining and Processing of Non-ferrous Metal	7	7	0	0	14	29
Production and Supply of Water	21	22	0	0	0	0
Gas Production and Supply	12	7	0	0	0	0
Recycling and Disposal of Wastes	5	5	0	0	0	0

Notes:

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

Table A1.2 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	
	Q1	Q4	Q1	Q4	Q1	Q4
Shanxi	18	19	28	26	39	42
Hebei	91	92	24	27	51	53
Sichuan	63	67	22	22	37	45
Shaanxi	29	29	21	17	34	38
Ningxia	5	4	20	0	40	25
Beijing	30	31	20	26	33	42
Inner Mongolia	24	29	17	17	38	38
Liaoning	100	97	16	16	34	39
Heilongjiang	25	26	16	23	24	35
Chongqing	33	35	15	11	24	31
Shandong	218	221	15	18	31	34
Henan	88	83	14	17	30	37
Jiangxi	53	54	13	15	36	43
Jilin	31	24	13	8	29	21
Hunan	62	53	11	11	34	34
Xinjiang	9	5	11	20	33	40
Jiangsu	263	261	10	13	30	33
Fujian	103	94	10	11	31	30
Anhui	88	86	9	10	33	33
Hubei	69	73	9	7	23	19
Guizhou	12	12	8	17	33	33
Guangdong	198	213	8	11	26	27
Shanghai	65	62	8	11	26	32
Yunnan	26	27	8	7	19	26
Tianjin	46	46	7	22	37	46
Guangxi	39	41	5	12	31	37
Zhejiang	239	243	4	6	27	31
Gansu	9	10	0	10	22	20

Notes:

Provinces are sorted based on the percentage of firms with over 20% excess capacity in descending order.

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

Table A2.1 Industry Diffusion Index for Cost and Price

	Diffusion Indices									
	Number of Firms		Unit Cost Index		Labor Cost Index		Raw Material Cost Index		Price Index	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2038	2039	69	71	58	55	68	72	54	56
Mining										
Coal Mining and Washing	17	16	41	63	56	56	41	63	41	50
Mining and Processing of Ferrous Metal Ores	10	8	55	56	50	50	55	50	35	50
Mining and Processing of Non-ferrous Metal	7	7	71	86	64	71	71	79	50	64
Mining and Processing of Nonmetal Ores	20	20	53	60	50	53	53	58	55	50
Production and Supply of Electricity, Heat, Gas and Water										
Power Production and Supply	60	65	50	50	50	50	50	50	50	50
Gas Production and Supply	12	7	50	50	50	50	NA	NA	50	50
Production and Supply of Water	21	22	50	50	50	50	NA	NA	50	50
Light Manufacturing										
Processing of Agricultural and Related Products	135	127	76	63	57	62	65	68	55	67
Manufacturing of Foods	69	60	95	78	59	58	91	83	60	58
Manufacturing of Beverage	43	41	70	72	52	52	65	63	62	57
Textiles	116	113	68	88	54	60	67	86	54	60
Textile Wearing and Apparel	59	69	60	62	52	54	61	63	52	55
Leather Related Products and Footwear	42	36	86	67	65	58	85	82	57	57
Processing of Wood Products	36	38	53	50	51	53	53	50	53	51
Manufacturing of Furniture	32	37	83	85	50	53	81	81	63	53
Paper and Paper Products	51	57	74	80	80	55	74	79	52	53

Table A2.1 Industry Diffusion Index for Cost and Price（Continued）

	Diffusion Indices									
	Number of Firms		Unit Cost Index		Labor Cost Index		Raw Material Cost Index		Price Index	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Printing, Reproduction of Recording Media	38	41	84	93	70	68	83	90	58	66
Cultural and Sports Products	42	39	75	72	54	63	73	77	61	53
Manufacturing of Medicines	74	79	60	59	52	53	59	55	55	53
Manufacturing of Others	8	8	81	63	56	56	94	94	50	50
Recycling and Disposal of Wastes	5	5	60	60	50	50	60	60	50	50
Chemical Industry										
Processing of Petroleum and Nuclear Fuel	13	15	65	63	50	50	62	63	42	50
Manufacturing of Chemical Products	118	123	68	65	53	52	64	64	57	55
Manufacturing of Chemical Fibers	10	9	80	72	50	50	75	67	60	56
Rubber and Plastic Products	100	105	67	84	65	54	66	88	55	59
Equipment Manufacturing										
General-purpose Machinery	112	106	63	66	54	54	60	63	55	55
Special-purpose Machinery	106	98	73	78	78	55	73	78	51	51
Manufacturing of Automotive	95	76	81	76	75	68	81	88	51	55
Manufacturing of Railways, Ships and Other Transportation	26	27	65	80	81	69	65	81	50	54
Electric Machinery and Apparatus	137	139	73	84	55	55	73	84	59	65
Computers, Communication and Electric Equipment	60	59	61	59	50	53	61	59	52	53
Manufacturing of Measuring Instruments	43	43	67	67	52	51	67	67	49	55
Repair of Metal Products, Machinery and Equipment	4	4	75	63	75	50	75	63	50	50
Other Heavy Manufacturing										
Non-metallic Mineral Products	98	119	72	75	52	52	69	74	58	59
Smelting and Pressing of Ferrous Metals	66	67	65	78	52	51	62	76	52	58
Smelting and Pressing of Non-ferrous Metals	35	37	71	74	56	57	66	70	49	54
Metal Products	118	116	56	58	51	51	56	58	52	52

Notes: The table includes industries with more than three firms.

Table A2.2 Regional Diffusion Index for Cost and Price

	Diffusion Indices									
	Number of Firms		Unit Cost Index		Labor Cost Index		Raw Material Cost Index		Price Index	
	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4	Q1	Q4
Nation	2,038	2,039	69	71	58	55	68	72	54	56
North China										
Beijing	30	31	73	73	68	58	73	73	53	55
Tianjin	46	46	65	71	55	52	64	74	53	58
Hebei	91	92	69	73	56	58	65	72	54	54
Northeast										
Liaoning	100	97	68	68	56	54	65	63	52	56
Jilin	31	24	65	56	60	54	62	57	50	52
Heilongjiang	25	26	70	69	58	54	60	58	52	58
Northwest										
Inner Mongolia	24	29	60	64	58	55	60	63	52	55
Shaanxi	29	29	64	67	57	55	59	71	48	50
Gansu	9	10	61	65	50	50	64	69	56	55
Ningxia	5	4	50	63	50	63	50	63	40	50
Xinjiang	9	5	72	60	61	50	72	70	61	60
Central North										
Shanxi	18	19	67	76	56	50	64	74	53	55
Shandong	218	221	68	74	59	58	67	75	56	58
Henan	88	83	73	71	57	57	72	74	59	57
Southwest										
Chongqing	33	35	71	66	58	54	70	74	50	51
Sichuan	63	67	71	66	56	53	73	69	56	57
Guizhou	12	12	67	58	50	54	64	59	54	54
Yunnan	26	27	69	65	58	56	74	72	54	56
East China										
Shanghai	65	62	70	73	61	56	69	76	55	56
Jiangsu	263	261	67	71	58	55	65	73	53	56
Zhejiang	239	243	70	74	58	56	71	76	56	58
South China										
Fujian	103	94	72	71	58	56	72	75	60	57
Guangdong	198	213	68	72	59	56	69	74	56	57
Guangxi	39	41	71	72	54	55	68	75	55	57
Central South										
Anhui	88	86	67	72	59	53	62	73	49	59
Jiangxi	53	54	71	69	56	55	69	69	57	57
Hubei	69	73	70	71	58	56	68	70	51	51
Hunan	62	53	71	70	58	53	72	74	52	56

Notes:

The table includes provinces with more than three firms.

Appendix 3. Sampling Procedure

3.1 The Population

Staring from 2017Q2, we have included firms in the 2013 Industrial Enterprises database in our sampling. This is the most complete and reliable economic census data available.

Although the 2013 Industrial Enterprises database is our best option, it was still compiled four years ago. A firm's core characteristics, such as industry, might have changed significantly in that time. Thus, we also surveyed firms about their main products and product types.

3.2 Sampling Procedure

Previously, our sampling was based on the population of sizable industrial firms (with sales above 5 million RMB) in the 2008 Economic Census. In order to ensure the comparability of this quarter's survey with those in the previous quarters, we used a sampling procedure as described below:

1. We started from the 2039 firms in our last response sample, which was the result of a random sampling stratified by industry, region and size (see our previous reports for details). Of those, we obtained responses from 1722 firms. Steps 2-3 below describe how we obtain a supplement sample of 1390 firms from the 2013 Industrial Enterprise database, which, assuming a 20% response rate, would yield an additional 278 firms so that the total size of the survey sample is 2,000 firms.

2. We stratified by three size categories, 41 industries and 31 provinces to obtain 3,813 strata in both the 2008 Economic Census and 2013 Industrial Enterprises database populations. Then we compute, in each stratum, the percentage of new firms founded after 2008.

3. Assuming random responses across the above 3,813 strata, we compute the number of firms across strata and the proportion of new firms (founded after 2008) in each stratum, so that the final response sample could match (or approach) the population in terms of industry, region and size, as well as the proportion of new firms. Out of the 1390 firms in our supplementary sample, we obtained 316 responses, resulting in a total of 2038 firms in our final survey sample.

However, we note that to ensure a smooth transition across quarters, this quarter's sample does not match well with the 2013 Industrial Enterprise database population in two dimensions. First, the weight of new firms founded after 2008 is lower. Second, given that the National Bureau of Statistics changed its definition of sizable firms between 2008 and 2013, from sales totaling 5 million RMB up to 20 million RMB, the average firm size is between the two databases. We will resolve these discrepancies gradually in the coming surveys. Moreover, in our data analysis, we have cross-checked that the results relative to those of the last quarter have not been driven by the new sample.

3.3 Survey Process

The survey is conducted through phone interviews. Figure A1 reports the distribution of the number of phone calls, duration of the calls and the interviewees' positions in their companies.

3.4. Sample Representativeness

Tables A3.1-A3.3 show the distribution of the population and the Q1 response sample, as well as the 1722 firms that were also in the Q4 sample, in terms of industry, region and size. Note that as we are sampling 2.1% of the population, some small strata may not be sampled. Specifically, Tibet is a region that has not been sampled, while Mining of other Ores, Extraction of Petroleum & Natural Gas and Manufacture of Tobacco are three industries not sampled. Overall, however, we feel our response sample represents the population quite well.

3.5 Seasonality

Theoretically, there are no obvious ways to adjust for seasonality, especially given the relatively small number of surveys we have conducted. We deal with this issue by directly asking the firms about seasonality and its impact. As shown in Figure A1.4, the majority of firms (86%) reported no seasonality, while for 6% of the firms, the seasonality impact was below 5%. Most importantly, the impact of seasonality is roughly distributed symmetrically. Thus, in aggregate, seasonality is not likely to bias our results and we do not adjust for seasonality.

Figure A1. Phone Interviews – number of calls, duration and interviewees

Figure A1.1 Number of Calls

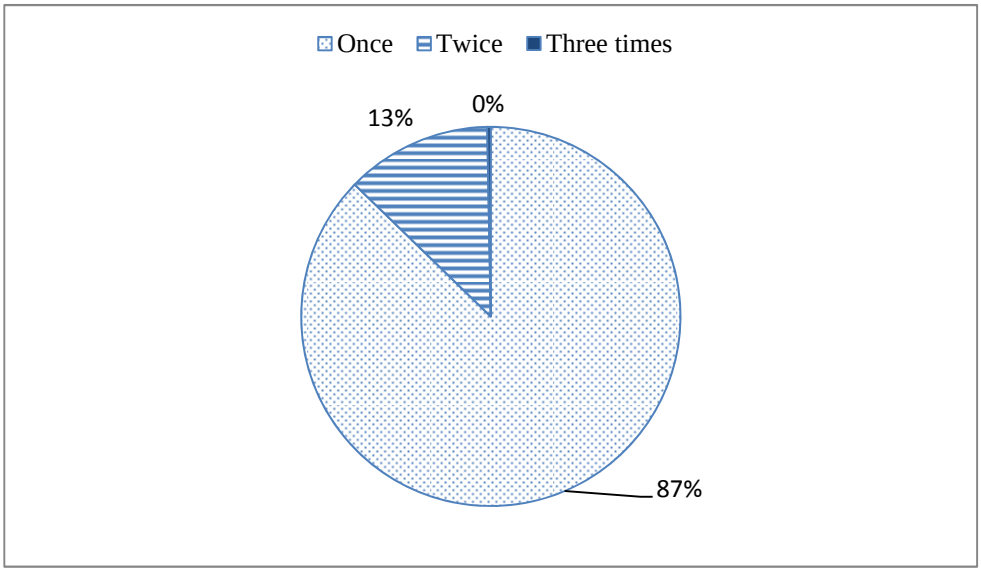

Figure A1.2 Duration of Calls

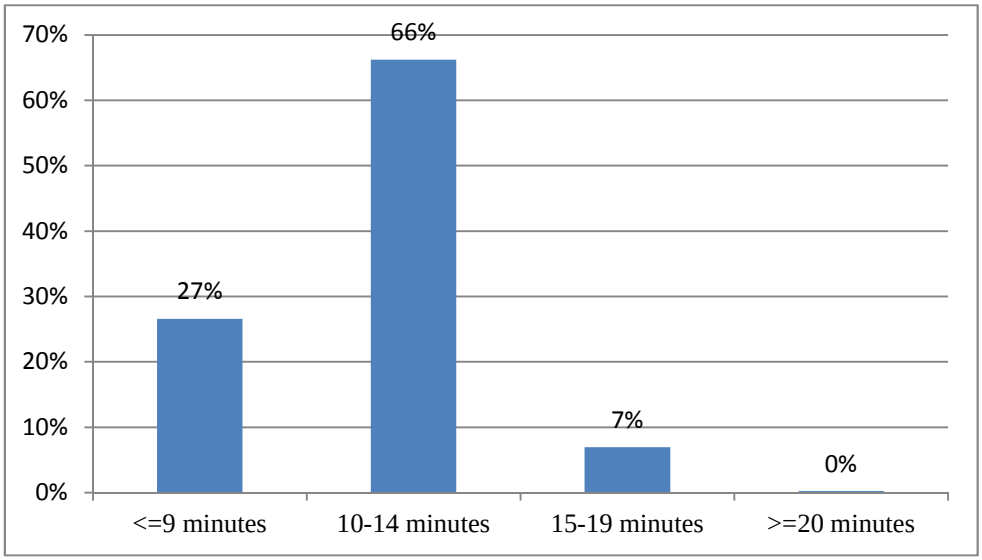

Figure A1.3 Interviewees' Positions

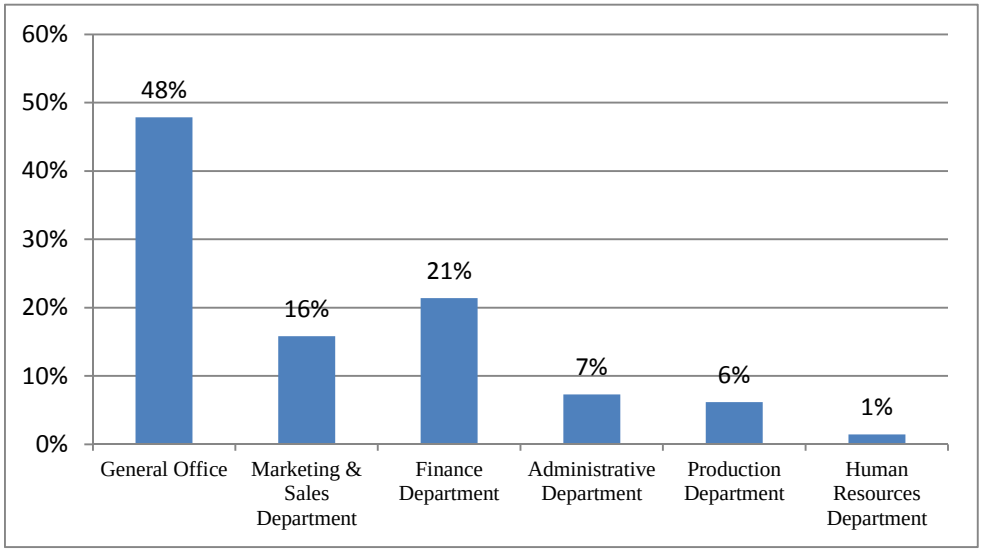

Figure A1.4 Seasonality

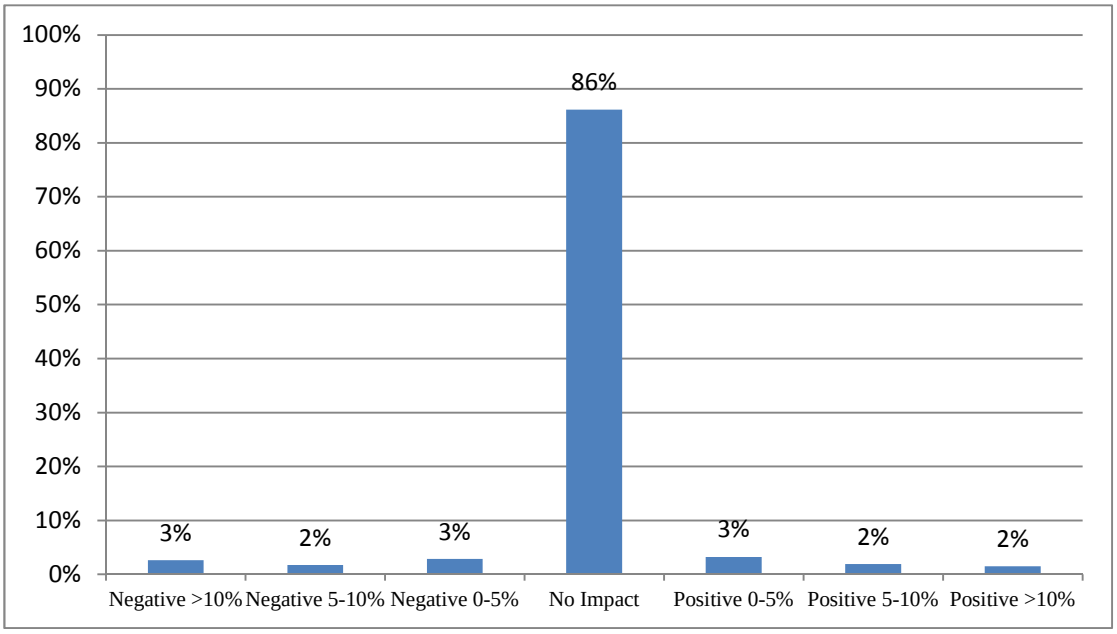

Table A3. Comparisons between Survey Sample and the Population

Table A3.1 Industry Distribution

Industry	Population		1722 Firms From Q4 Survey		Final Q1 Response Sample	
	Number of Firms	Percent	Number of Firms	Percent	Number of Firms	Percent
Power Production and Supply	5,701	1.7	50	2.9	60	2.9
Electric Machinery and Apparatus	21,012	6.2	125	7.3	137	6.7
Textile Wearing and Apparel	14,147	4.2	55	3.2	59	2.9
Textiles	19,591	5.8	81	4.7	116	5.7
Mining and Processing of Nonmetal Ores	3,363	1.0	17	1.0	20	1.0
Non-metallic Mineral Products	29,429	8.7	88	5.1	98	4.8
Recycling and Disposal of Wastes	1,256	0.4	4	0.2	5	0.3
Mining and Processing of Ferrous Metal Ores	3,100	0.9	8	0.5	10	0.5
Smelting and Pressing of Ferrous Metals	10,190	3.0	59	3.4	66	3.2
Manufacturing of Chemical Fibers	1,859	0.6	8	0.5	10	0.5
Manufacturing of Chemical Products	23,402	6.9	93	5.4	118	5.8
Computers, Communication and Electric Equipment	12,540	3.7	48	2.8	60	2.9
Manufacturing of Furniture	4,656	1.4	28	1.6	32	1.6
Repair of Metal Products, Machinery and Equipment	381	0.1	4	0.2	4	0.2
Metal Products	18,498	5.5	102	5.9	118	5.8
Manufacturing of Beverage	5,496	1.6	39	2.3	43	2.1
Other Ancillary Activities of Mining	153	0.1	0	0.0	0	0.0
Coal Mining and Washing	6,680	2.0	13	0.8	17	0.8
Processing of Wood Products	8,154	2.4	31	1.8	36	1.8
Processing of Agricultural and Related Products	22,485	6.7	118	6.9	135	6.6
Leather Related Products and Footwear	7,714	2.3	29	1.7	42	2.1
Mining of other Ores	17	0.0	0	0.0	0	0.0
Manufacturing of Others	1,527	0.5	8	0.5	8	0.4
Manufacturing of Automotive	11,733	3.5	69	4.0	95	4.7
Gas Production and Supply	1,095	0.3	7	0.4	12	0.6
Extraction of Petroleum and Natural Gas	135	0.0	0	0.0	0	0.0
Processing of Petroleum and Nuclear Fuel	1,941	0.6	12	0.7	13	0.6
Manufacturing of Foods	7,388	2.2	58	3.4	69	3.4
Production and Supply of Water	1,310	0.4	18	1.1	21	1.0
Manufacturing of Railways, Ships and Other Transportation	4,277	1.3	26	1.5	26	1.3
General-purpose Machinery	22,163	6.6	89	5.2	112	5.5
Cultural and Sports Products	7,513	2.2	35	2.0	42	2.1
Rubber and Plastic Products	16,327	4.8	90	5.2	100	4.9
Manufacture of Tobacco	122	0.0	0	0.0	0	0.0
Manufacturing of Medicines	6,483	1.9	67	3.9	74	3.6
Manufacturing of Measuring Instruments	3,805	1.1	41	2.4	43	2.1
Printing, Reproduction of Recording Media	4,734	1.4	33	1.9	38	1.9
Mining and Processing of Non-ferrous Metal	1,552	0.5	7	0.4	7	0.3
Smelting and Pressing of Non-ferrous Metals	3,728	1.1	33	1.9	35	1.7
Paper and Paper Products	6,580	2.0	51	3.0	51	2.5
Special-purpose Machinery	15,443	4.6	78	4.5	106	5.2
Total	337,680	100	1,722	100	2,038	100

Table A3.2 Regional Distribution

Province	Population		1722 Firms From Q4 Survey		Final Q1 Response Sample	
	Number of Firms	Percent	Number of Firms	Percent	Number of Firms	Percent
Anhui	14,533	4.3	75	4.4	88	4.3
Beijing	3,506	1.0	25	1.5	30	1.5
Fujian	15,206	4.5	84	4.9	103	5.1
Gansu	1,723	0.5	9	0.5	9	0.4
Guangdong	37,831	11.2	170	9.9	198	9.7
Guangxi	4,919	1.5	33	1.9	39	1.9
Guizhou	2,901	0.9	10	0.6	12	0.6
Hainan	358	0.1	1	0.1	1	0.1
Hebei	12,818	3.8	77	4.5	91	4.5
Henan	18,410	5.5	73	4.2	88	4.3
Heilongjiang	3,882	1.2	22	1.3	25	1.2
Hubei	13,520	4.0	58	3.4	69	3.4
Hunan	12,170	3.6	48	2.8	62	3.0
Jilin	5,136	1.5	23	1.3	31	1.5
Jiangsu	45,138	13.4	227	13.2	263	12.9
Jiangxi	7,424	2.2	46	2.7	53	2.6
Liaoning	15,591	4.6	82	4.8	100	4.9
Inner Mongolia	3,975	1.2	22	1.3	24	1.2
Ningxia	940	0.3	4	0.2	5	0.3
Qinghai	448	0.1	0	0.0	1	0.1
Shandong	37,272	11.0	191	11.1	218	10.7
Shanxi	3,433	1.0	17	1.0	18	0.9
Shaanxi	4,103	1.2	23	1.3	29	1.4
Shanghai	9,101	2.7	51	3.0	65	3.2
Sichuan	11,753	3.5	57	3.3	63	3.1
Tianjin	4,972	1.5	38	2.2	46	2.3
Tibet	54	0.0	0	0.0	0	0.0
Xinjiang	2,031	0.6	5	0.3	9	0.4
Yunnan	3,147	0.9	23	1.3	26	1.3
Zhejiang	36,363	10.8	200	11.6	239	11.7
Chongqing	5,022	1.5	28	1.6	33	1.6
Total	337,680	100	1,722	100.02	2,038	100

Table A3.3 Comparison of Company Characteristics

	Population 2008		Population 2013		1722 Firms From Q4 Survey		Final Q1 Response Sample	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Assets	90,050	12,920	243,118	45,165	288,183	57,191	273,985	54,812
Sales	104,697	20,072	295,142	85,344	291,119	68,285	279,460	69,858
Total	488,017		337,680		1,722		2,038	