# Chapter 11

# Small and Medium Enterprises' Access to Finance in China

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# CHAPTER 11

# Small and Medium Sized Enterprises' Access to Finance in China


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*Small and medium enterprises (SMEs) have been suffering from financing difficulty even while China has experienced a lending spree. The future tightening of monetary policy will worsen the financing situation of SMEs. A proper policy response to the financing predicament of SMEs is imperative, and should be based on a good understanding of the reasons for their financing difficulty, to which this survey study is designed to contribute. The survey reveals that financial institutions are quite selective in responding to the financing requests of SMEs. Basically, the financial institutions give preference to older, larger and faster-growing SMEs, in specific types of business. The backgrounds of the SMEs' owners is also important. An experienced, wealthier and older SME owner is more trusted by financial institutions. Other factors matter, too, for instance, if the SMEs have collateral, or participate international production networks, their chances of getting financing would be improved. The financial institutions also favor an SME with strong innovation potential and business capability, and good performance. In China's situation, a number of policy areas are of particular importance.*



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# 1. Introduction

## 1.1. Overview

In past two years, China has experienced a lending spree arising from the exceptional efforts of the government to shield the economy from the impacts of an international financial crisis of a severity unseen since the great depression. The lion's share of a 4 trillion RMB (586 billion U.S. Dollars) stimulus package was financed by bank loans. As a result, the total of new loans in 2009 was as high as 10 trillion RMB (1.5 trillion U.S. Dollars), doubling its 2008 level. Loans grew at a slower pace in 2010, but still added another 8 trillion RMB (1.2 trillion U.S. Dollars) to the total outstanding. SME financing, however, did not improve very much in this period. Although systematic statistics are lacking, anecdotal evidence shows that, around the country, SMEs still suffered financing difficulties. Most loans went to local-government-sponsored financing vehicles for infrastructure projects, or state-owned big business that expanded rapidly. As inflation is looming larger, China has now begun a cycle of policy tightening. The People's bank of China (PBOC), the Chinese central bank, has raised the interest and reserve ratio several times. The PBOC also scrapped the practice of setting a loan growth target. Instead, a dynamic monitoring and adjustment mechanism has been put in place so that any bank that issues excessive loans would be subject to a higher reserve requirement. The tightening credit environment will inevitably make SME access to finance ever more difficult. Policy is badly needed to address the predicament of SMEs. With better access to finance, SMEs could play a more active role in sustaining the recovery, as stimulus policy comes to an end. This study is intended to shed light on factors that have impeded SME financing and to put forward recommendations on how to overcome them.

## 1.2. Literature Review

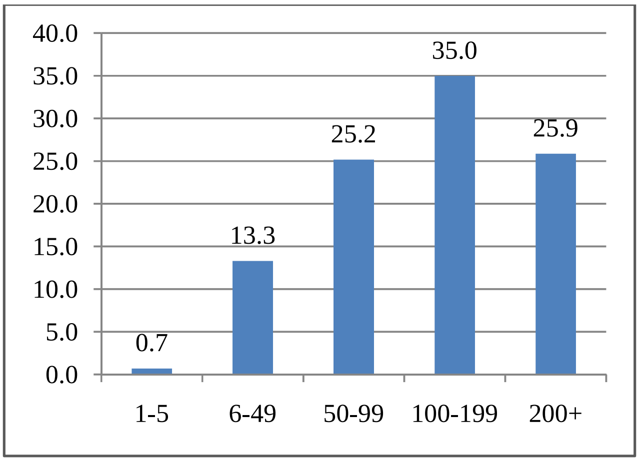
Despite a lack official statistics, SMEs' difficulty in accessing finance has been long recognized in China. There is quite a big body of literature devoted to explaining this situation. One school of studies follows the classical model developed by international scholars. Justin Yifu Lin (2001) cited asymmetric information, especially lack of “soft” information, as a major factor leading to SME financing difficulties. Yang Fenglai *et.al.*, (2006) argued that the governance of SMEs, often run by their owners, exacerbates the moral hazard problem, because there is no check and balance mechanism between the professional manager and the owner. Zhang Jie (2000) showed that the “Pecking-Order Hypothesis” was true in China. As a result, the start-ups would seek internal financing first. At the macro level, external financing, such as loans to SMEs, would be disproportionately low. Some researchers, on the other hand, tried to identify idiosyncratic factors behind the financing difficulties of China’s SMEs. Lee Zhiyun (2002) pointed out that China’s big–bank-dominated banking structure makes SME financing more difficult, because of the higher transaction costs when a big bank deals with an SME. Related to this argument, Zhang Jie (2002) believed the transfer of loan decision power from a bank’s local office to a branch or even to its headquarters, a measure to control financial risk adopted by Government after the Asian financial crisis, contributed to SMEs’ financing predicament as the asymmetric problem became ever more severe. Empirical studies in China are relatively few. Zhang Jie and Wang Xiao (2002) found, in their visiting-based survey, that the life cycle of an SME was closely related to its access to finance. They also tested the ownership discrimination hypothesis, which states that the lack of access to finance of SMEs is the result of discrimination against the private sector by the state-owned banking sector. However, the survey did not prove this argument. Li Yong *et al.*, (2004) conducted a questionnaire survey in Wenzhou, Zhejiang Province, a city famous for its booming private sector. They found that banks are increasingly displacing informal financing as the major channel of SME financing. The city has a long history of informal financing. The proportion of SMEs seeking bank loans was 78.9%, while the proportions of those who sought financing from relatives and from internal reserves were 68.6% and 45.7% respectively. Lin Xiankun (2009) did a field survey on SME financing in Dongping County, Shandong province. He concluded that the major barriers to SME access to finance were 1) unreliable SME financial information, due to poor book keeping; 2)lack of collateral, as many SMEs operated with rented equipment and property; 3) high cost associated with bank loans especially when asset assessment, insurance and guarantees were involved; 4) poor track record of credibility.

## 2. SME Access to Finance: Empirical Analysis

### 2. 1. Description of the Survey

The survey was conducted in three locations to ensure that it was representative. They were Changxing county, Zhejiang province, Dalian, Liaoning province, and Tianjing. Changxing is on the Yangzi Delta and close to Shanghai. Changxing has a booming SME sector, and traditionally a private-sector-dominated economy. Dalian, a harbor city and the most developed in the northeast region, has a strong manufacturing sector and is moving quickly towards the high-tech sector. Tianjing, together with Beijing, Shanghai and Chongqing is one of four municipalities directly administered by central government. It is also an important port and has emerged in recent years as a hub of high-end manufacturing of China. The survey was conducted by local partners in three locations and data were collected from 151 SMEs and 10 financial institutions. The basic characteristics of the sample were as follows. The size distribution of SME in the sample is consistent with the first survey. There was only one micro enterprise., SMEs with 100-199 employee had biggest share in the sample, accounting for 35%, followed by SMEs with 200+ and 50-99 employees, 25% of the total respectively. SMEs with 6-49 employees accounted for 13%. The survey once again demonstrated that the size of China's SMEs measured by number of employees is consistently larger than their foreign counterparts.

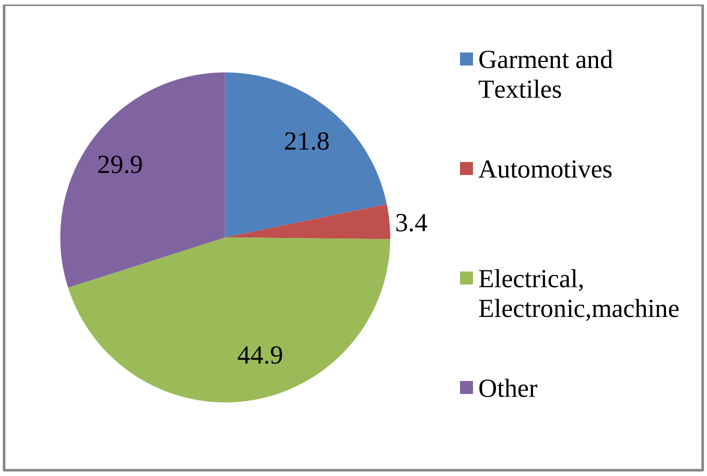
**Figure 1. Distribution of SMEs by Size (%)**




*Source:* Authors' calculation based on the survey data.

Industry distribution of SMEs was as follows; 70% of SMEs were in the targeted industries of this survey, namely garment and textiles, automobile and parts and electronics, electrical and machinery, which account for 21.8%, 3.4% and 44.9% respectively. Clearly, quite a large number of SMEs are concentrated in the electrical, electronics and machinery sectors, consistent with the industrial structure of China's economy. The remaining 30% were mostly in the service and building materials sectors (see Figure 2).

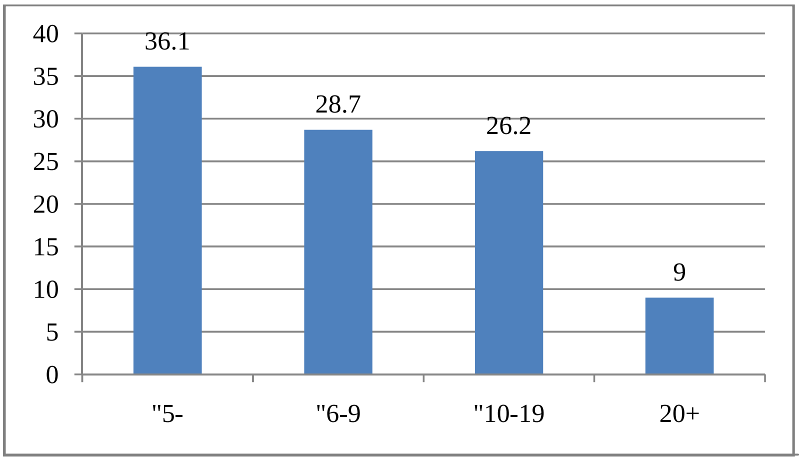
**Figure 2. Industry Distribution of SMEs**




*Source:* Authors' calculation based on the survey data.

In the sample, 36.1% of SMEs were less than 5 years old, 28.7% were aged between 6-9 years, and those older than 10 years accounted for 35.2%. So, almost two thirds of the SMEs were younger than 10 years. And the smaller the SME, the younger the SME. The average age of SMEs with less than 50 employees was about 6 years, while the average age of those with more than 50 employees was 11 years.

**Figure 3. Distribution of SMEs by Age**




*Source:* Authors' calculation based on the survey data.

Most SMEs in the sample were domestically owned, while 17% were wholly or partially owned by foreign investors. Government ownership was rare; only two cases in the sample had government equity.

## 2. 2. Economic Model and Regression Analysis

In this section, we will reveal the source of SME financing, and explore the major factors or the characteristics of SMEs that the financial institutions weigh most in their financing decisions. We will first use the descriptive statistics to tentatively identify the important factors or characteristics, then employ a logit regression to test the conclusion again where applicable.

### *2.2.1. Sources of SME Financing*

The survey shows that the commercial loan is the single most important source of SME financing. 47.8% of SMEs reported they had used commercial or personal loans and lines of credit from financial institution, at some time in the past. Retained earnings were second in importance to commercial loans, with 31% of SME having used them. Less than 20% of SMEs used sources of financing other than commercial loans and retained earnings. Among them, the relatively important ones are credit from government lending agencies, or grants, personal savings of business owners, loans from individuals unrelated to the firm, and micro-credit. More than 10% of SMEs had used each of these sources. Lease financing, trade credit owing to suppliers and loans from employees are uncommon in China, and less than 10% of SMEs had used each of them. There are different reasons in different cases. Leasing financing usually involves heavy equipment and large scale installations that SME don’t very often use. The weak market power of SMEs may explain the low use of supplier’s credit in China. Loans from employees, however, may be not as low as the data indicates. In China, arrears of employee’s wages are widely reported, and this can be seen as a hidden form of loan from employees. In general, our findings are consistent with the earlier studies. They once again demonstrate that banks remain the primary financing source of SMEs, despite the fact that the SME has many difficulties in dealing with banks. Internal and informal financing are still important, and these are part of a wide social resource that SMEs cannot afford to ignore.

**Table 1. The Sources of Financing for Operations of SMEs**

| Sources of Financing used by SME | Percentage (%) |
|---|---|
| Commercial or personal loans and lines of credit from financial institution | 47.8 |
| Credit from government lending agencies or government grants | 18.6 |
| Retained earnings | 31.0 |
| Trade credit owing to suppliers | 8.9 |
| Leasing | 3.5 |
| Loans from employees | 8.0 |
| Personal savings of business owner(s) | 15.9 |
| Loans from individuals unrelated to the firm or its owner ("angels") | 11.5 |
| Micro-credit | 11.5 |
| Other sources of financing | 3.8 |

*Source:* Authors’ calculation based on the survey data.

For financing when starting up a business, there are some differences from financing for operations. In our sample, 82 out of 150 businesses had been created by their owner, of which 72 answered the question about the source of start-up finance. Although commercial loans were still an important source of financing, evidenced by the fact that 44.4% of SMEs had used it, the most important source was the personal savings of the business owner, reported by 50% of SMEs. Retained earning and loans from friends and relatives are also significant; each was used by more than 20% of SMEs. And the government lending agency plays a bigger role than private “angels” funds. The proportion of SMEs who used credit from the government lending agency was 15.3%, higher than the 9.7% for private “angels” funds.

**Table 2. The Sources of Financing for Start-up SMEs**

| Sources of Financing used by SME | Percentage (%) |
|---|---|
| Commercial or personal loans and lines of credit from financial institution including credit cards. | 44.4 |
| Credit from government lending agencies or government grants | 15.3 |
| Retained earnings | 23.6 |
| Trade credit owing to suppliers | 4.2 |
| Leasing | 8.3 |
| Personal savings of business owner(s) | 50.0 |
| Loans from friends or relatives of business owner(s) | 20.8 |
| Loans from individuals unrelated to the firm or its owner ("angels") | 9.7 |
| Micro-credit | 2.8 |
| Other sources of financing | 0.0 |

*Source:* Authors’ calculation based on the survey data.

### *2.2.2. What Matters for the Approval/ Refusal Decision of Financial Institutions?*

What factors or characteristics of SMEs are crucial for the result of their financing request? This section is devoted to identifying these factors and characteristics. There is a long list of potential characteristics or factors that matter, and we aimed to test age, size, type, costs of finance, collateral, firm life-cycle, growth of sales, owner’s net worth and gender, management experience, labor productivity and innovation capability.

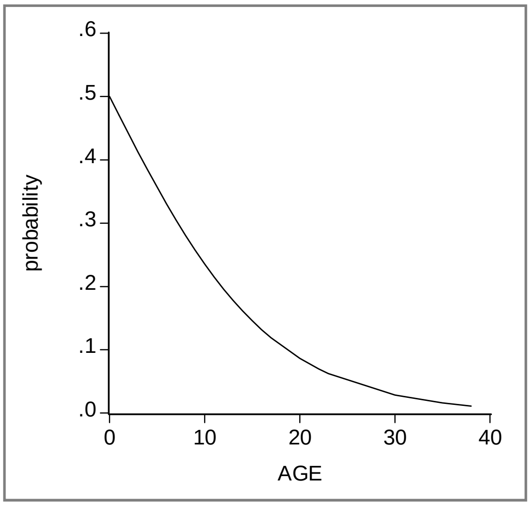
Age and life cycle of SME. It is expected that the younger the SME, the more likely it is to be refused by a financial institution due to lack of a record of credibility, and proven performance. The data seem to support this argument. The average age of SME who had ever been declined by a financial institution was 7.5 years, younger than the average age of 9 of those had not. However, the difference is only 1.5 years, which is not substantial. Comparing the average ages of those who had never made financing requests and those who had leads to similar conclusions, they are 7.8 and 8.5 respectively. The result from the logit model confirms that the age of an SME is a factor that affects the likelihood of its access to financing, as the probability of being refused by a financial institution decreases when the age of the SME increases.

**Table 3. The average age of SMEs which approach financial institutions and results of their requests**

| | Mean age | Freq. |
|---|---|---|
| Not refused | 9.0 | 37 |
| Refused | 7.5 | 13 |
| Don't know | 9.8 | 16 |
| Total | 8.9 | 66 |

*Source:* Authors' calculation based on the survey data.

**Figure 4. Probability of being refused financing, by the age of SME**




*Source:* Authors' calculation based on the survey data.

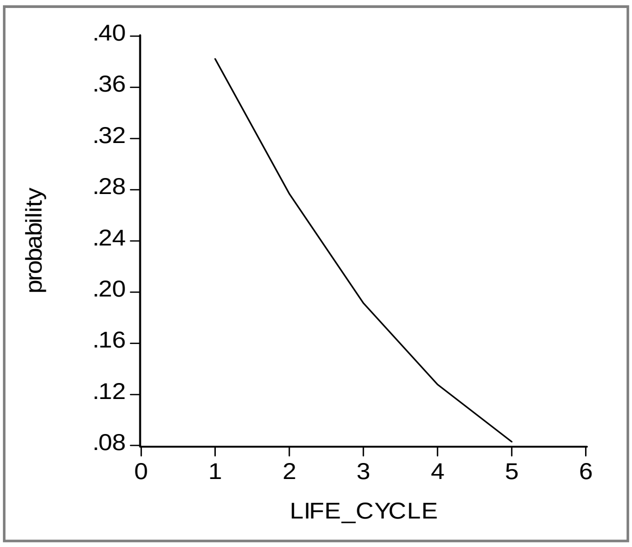
The life cycle of an SME is related to its age, but not necessarily in a linear way. In our sample, each SME could identify itself only in 3 out of 5 stages of a life cycle; say, fast growth, slow growth and maturity. The statistics show the mature SME enjoyed the best financing probability, with the lowest proportion being refused and the highest proportion getting fully authorized financing. SMEs in the slow growth stage suffered most in getting financing, with the highest proportion being refused and the lowest proportion obtaining fully authorized financing. SMEs in fast growth were in between. The result of the logit model also suggests that the life-cycle of an SME is a strong factor in SME financing. This conclusion is consistent with earlier studies.

**Table 4 . The Life Cycle of SMEs, and Financing**

| | Proportion of refused | Proportion of fully authorized |
|---|---|---|
| Fast growth | 14.3 | 74.4 |
| Slow growth | 27.8 | 68.8 |
| Maturity | 8.3 | 83.3 |

*Source:* Authors' calculation based on the survey data.

**Figure 5. Probability of being refused financing, by life cycle of SME**




*Source:* Authors' calculation based on the survey data.

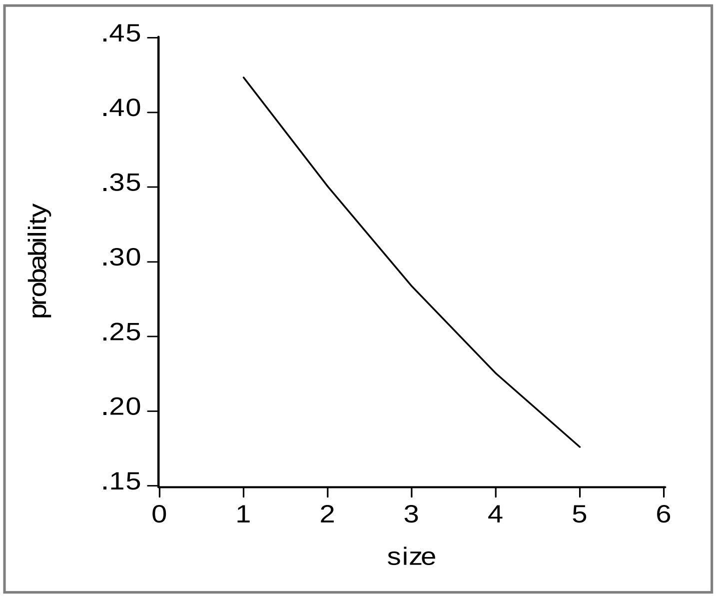
*Size of SME*. It is reasonable to assume that the size of an SME would matter significantly for access to financing. Not surprisingly, our survey data shows this. For SMEs with less than 200 employees, the proportion of SMEs who had been refused by financing institutions was 20-33%. This proportion declined to 15% if the enterprise had more than 200 employees. For those "discouraged" SMEs, defined as those who never made a financing request, size matters even more. The proportions of discouraged SMEs declines significantly with growing size. One third of SMEs with 50 and fewer employees had never made a financing request, while only one tenth of enterprises with 200 and more employees had never made a financing request. The result from the logit regression also shows that the probability that an SME is refused financing decreases as its size gets larger. The survey of financial institution confirms that SME size matters for its ability to access financing. 6 out 10 banks asked business clients to provide their number of employees or an employment size.

**Table 5. The proportion of SMEs who are refused or never make financing request, by size**

| Size | Proportion of refused | Proportion of no request |
|---|---|---|
| 1-5 | n. a | n. a |
| 6-49 | 33.3 | 35.7 |
| 50-99 | 20.0 | 23.3 |
| 100-199 | 30.4 | 16.2 |
| more than 200 | 14.3 | 10.3 |
| Average | 23.1 | 19.8 |

*Source:* Authors' calculation based on the survey data.

**Figure 6. Probability of being refused Financing, by Size of SME**




*Source:* Authors' calculation based on the survey data.

*Ownership*. The literature reports that ownership discrimination is a factor responsible for SME financing difficulty. In general the private SME is said to be discriminated against by the state-owned bank sector. Because there are too few government-owned enterprises in our sample, we cannot test this statement directly. However, the sample allows us to do a similar comparison between foreign ownership and domestic ownership. The data shows that having foreign ownership very much improved an SME's probability of obtaining external financing. The proportion of SMEs with foreign ownership which had not been refused was 81.8%, while domestic counterpart's probability was only 56.7%. The chance of a foreign owned firm was 0, but for domestic ownership was 20.9%. The proportion of SMEs whose loan requests were fully authorized tells the same story. 90% of foreign funded SMEs obtained full authorization of their financing requests, while only 65.3% of the domestic firms received full authorization. The difference is telling. The logit model confirms that foreign ownership would reduce the possibility of being denied access to financing. In conclusion, we may not be able to prove that the private SME was discriminated against, but clearly, foreign ownership is favored by the financial institutions.

**Table 6. The Ownership of SMEs, and Financing**

| Ownership | Not refused | Refused | Don't know | Total |
|---|---|---|---|---|
| Foreign funded | 81.8 | 0.0 | 18.2 | 100 |
| Domestic | 56.7 | 20.9 | 22.4 | 100 |
| Total | 60.3 | 17.9 | 21.8 | 100 |

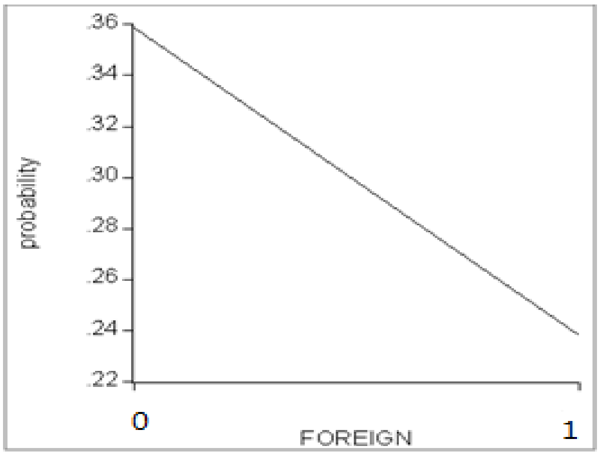
*Source:* Authors' calculation based on the survey data.

**Table 7. The Proportion of SMEs, by Result of Financing Requests and Ownership**

| Ownership | The full amount was authorized | A partial amount was authorized | The request was turned down | Application was withdrawn |
|---|---|---|---|---|
| Foreign funded | 90.0 | 0.0 | 0.0 | 10.0 |
| Domestic | 65.3 | 33.3 | 1.4 | 0.0 |
| Total | 68.3 | 29.3 | 1.2 | 1.2 |

*Source:* Authors' calculation based on the survey data.

**Figure 7. The Probability Distribution of being refused Financing, by Ownership**




*Source:* Authors' calculation based on the survey data.

*Type of business*. The earlier studies found that different industries suffered different financing gaps. Looking the proportions of SMEs who were refused recent financing request, we cannot find a significant industry difference; all industries were close to the average level. Looking at the SMEs who had never made a financing request, however, electrical, electronic and machinery show an outstandingly higher proportion than other industries. One third of SMEs from the electrical, electronic and machinery industries had never made a financing request, contrasting to one tenth and even fewer in the garment and textiles and other industries. The financing difficulty of firms in the electrical, electronic and machinery industry is also demonstrated by data on the results on authorization of their latest financing request. Because most of the latest financing request were authorized to some extent, we compare those fully authorized to those partially authorized. From table 8, we can see that the electrical, electronic and machinery industry has the lowest proportion of fully authorized financing requests and highest proportion of partially authorized. So the survey data tends to suggest that type of business is a factor that matters for SME financing.

**Table 8. The Proportion of SMEs who are refused or never make Financing Request, by Type**

| Type of business | Proportion of refused | Proportion of no request |
|---|---|---|
| Garment and Textiles | 20.8 | 3.8 |
| Parts, Components, and Automotives | n.a | n.a |
| Electrical, Electronic and machinery | 16.1 | 34.0 |
| Other, | 18.5 | 10.8 |
| Average | 17.6 | 19.3 |

*Source:* Authors' calculation based on the survey data.

**Table 9. The Proportion of SMEs, by Result of Financing Request and Type of Business**

| Type of business | The full amount was authorized | A partial amount was authorized | The request was turned down | Application was withdrawn |
|---|---|---|---|---|
| Garment and Textiles | 73.9 | 26.1 | 0.0 | 0.0 |
| Parts, Components, and Automotives | n. a | n. a | n. a | n. a |
| Electrical, Electronic, parts and machinery | 65.7 | 31.4 | 0.0 | 2.9 |
| Other, | 75.0 | 21.4 | 3.6 | 0.0 |
| Average | 70.5 | 27.3 | 1.1 | 1.1 |

*Source:* Authors' calculation based on the survey data.

International production network (IPN). In the last study, we found that being or not being in an international production network would make a big difference to the performance of an SME. Here we can test if being in an IPN impacts the chance of financing for an SME. The descriptive statistics seem to suggest that firms in an IPN are on par with those not in an IPN, in terms of financing probability This is evidenced by the observation that the frequencies of different financing situations for those in an IPN and those not in an IPN are roughly the same. However, the logit regression suggests that being part of an IPN may help an SME's financing probability. The conclusion is not very reliable, however, as it is only significant at the 90% confidence level.

**Table 10. The IPN and Financing**

| Ownership | Not refused | Refused | Don't know | Total |
|---|---|---|---|---|
| Not in IPN | 58.5 | 16.9 | 24.6 | 100 |
| In IPN | 65.0 | 20.0 | 15.0 | 100 |
| Total | 60.0 | 17.6 | 22.4 | 100 |

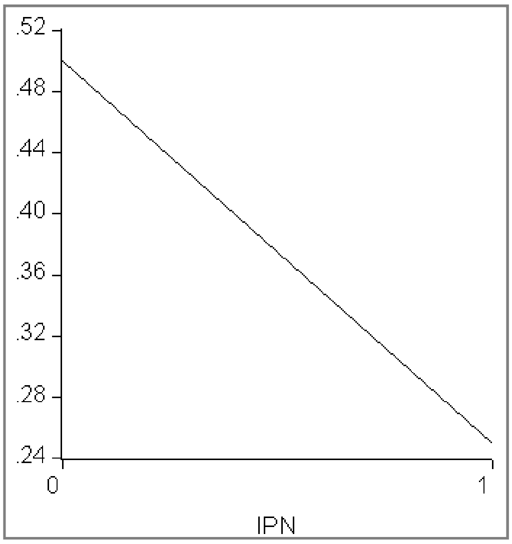
*Source:* Authors' calculation based on the survey data.

**Table 11. The Proportion of SMEs, by Result of Financing Request and IPN**

| Ownership | The full amount was authorized | A partial amount was authorized | The request was turned down | Application was withdrawn |
|---|---|---|---|---|
| Not in IPN | 71.4 | 28.6 | 0.0 | 10.0 |
| In IPN | 66.7 | 22.2 | 5.6 | 5.6 |
| Total | 70.5 | 27.3 | 1.1 | 1.1 |

*Source:* Authors' calculation based on the survey data.

**Figure 8. Probability Distribution of being refused Financing, by IPN Status**




*Source:* Authors' calculation based on the survey data.

*Collateral*. Both theory and empirical evidence show that collateral is very important for SME financing. Our survey result agrees with this. 77.8% of the SMEs who made a financing request were asked to provide collateral, much higher than the proportions of SMEs asked to provide a guarantee or co-signature, which were 14.1% and 40.5% respectively. The importance of collateral can also be shown by analysis of the reasons given for turning down a financing request. The reasons cited by SMEs were insufficient sales, income or cash flow, insufficient collateral, inadequate business plan, and poor credit history. Among them, insufficient collateral was mentioned far more often than any other reasons. From the perspective of the banks however, there was little difference in the importance of collateral. The data from the financial institution survey show that the banks see insufficient sales, income and poor credit history as more important reasons than insufficient collateral for turning down an SME's financing request.

**Table 12. The Requirements of Credit Suppliers**

| Requirement of Credit Supplier | Proportion |
|---|---|
| Guaranteed by a Government | 14.1 |
| Provide Collateral | 77.8 |
| Co-signatures from Non-business Owners | 40.5 |

*Source:* Authors' calculation based on the survey data.

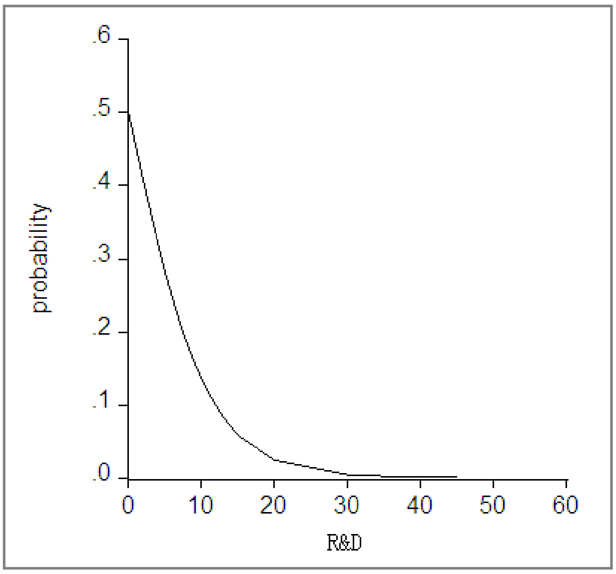
*Innovation Capability*. When technology capability is measured by R&D spending and number of patents, its relationship with financing probability is not clear. Although SMEs which were not refused by a financial institution have higher R&D spending relative to their sales, SMEs with fully authorized financing had a lower percentage of R&D spending. This inconsistency is also found in the relationship of the number of patents and financing probabilities. The logit model result suggests that R&D spending tends to positively correlate with the probability of getting financing, while the number of patents does not. The reason for this may be that the quality of patents themselves is not high. In China, the majority of patents are reportedly awarded to applications that make changes to a product's appearance, rather than to its function.

**Table 13.  R&D Spending, and Financing**

| Financing Request | R&D as % of Sale | Financing Request | R&D as % of Sale |
|---|---|---|---|
| Fully Authorized | 6.6 | not refused | 5.5 |
| Partially Authorized | 7.5 | Refused | 3.7 |

*Source:* Authors' calculation based on the survey data.

**Figure 9. Probability Distribution of being refused Financing, by R&D Spending**




*Source:* Authors' calculation based on the survey data.

**Table 14. The Number of Patents, and Financing**

| | No. of Patent | | No. of Patent |
|---|---|---|---|
| Fully Authorized | 3.7 | Not Refused | 5.2 |
| Partially Authorized | 0.1 | Refused | 6.4 |

*Source:* Authors' calculation based on the survey data.

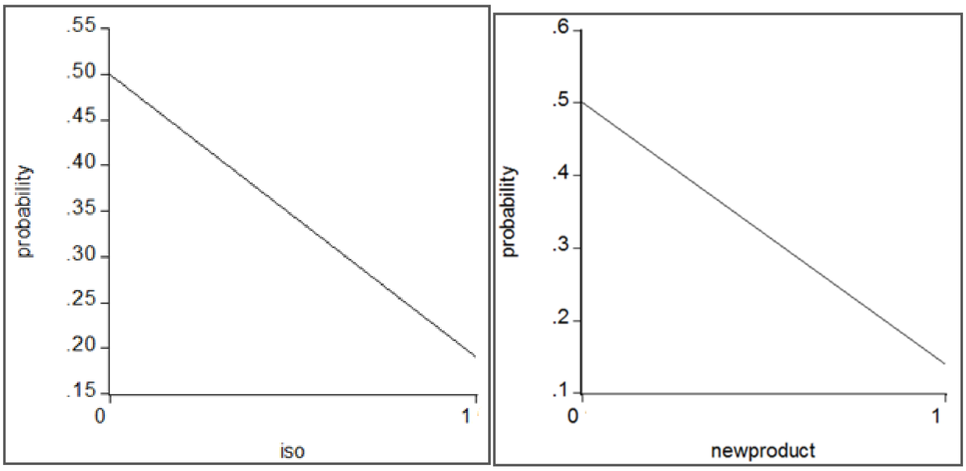
*Activities which Improve Business Capability*. Do activities which improve business capability help an SME's financing chances? The data show that it depends on what kind of activities the SME has adopted. The activities that help are meeting an international standard, establishing new divisions or a new plant, introducing new know-how in production methods and introducing new products or services. The SMEs carrying out these activities have a much lower proportion of refusal by financial institutions than those not doing so. The biggest difference was found in new products or service introduction. For those SMEs introducing new products or services, the proportion of refusal was 10.7%, compared to 35.3% for those not doing so. Activities such as introducing ICT, buying new machines, or facilities, with new functions in the operation, or improving existing machines, equipment or facilities do not reduce the SME's probability of being refused financing. These activities seem too common to serve as a signal of excellence. The logit model also confirms this conclusion, as shown in figure 10.

**Table 15. Activities to Improve Business Capability, and Financing Chance**

| Activities to Improve Business Capability | Adopted or not | Proportion of being refused to financing |
|---|---|---|
| Met an international standard (ISO or others)? | No | 25.9 |
| | Yes | 14.5 |
| Introduced ICT (information and communication technologies) | No | 14.3 |
| | Yes | 19.7 |
| Established new divisions or new plants? | No | 21.4 |
| | Yes | 11.5 |
| Bought new machines or facilities with new functions to operation | No | 15.4 |
| | Yes | 19.4 |
| Improved existing machines, equipment, or facilities | No | 17.6 |
| | Yes | 19.0 |
| Introduced new know-how on production methods | No | 27.0 |
| | Yes | 11.6 |
| Introduced new products or services | No | 35.3 |
| | Yes | 10.7 |

*Source:* Authors' calculation based on the survey data.

**Figure 10. Probability of being refused Financing, by Adopting Improvement Activities or Not**




*Source:* Authors' calculation based on the survey data.

*Sales and Sales Growth*. Sales and sales growth are important indicators of an SME's performance. However, the data suggest that they have quite different impacts on the SME's financing. Sales seems not play an important role in the financial institutions' decision making. The 2008 data consistently suggest that SMEs with low sales are more likely to get financing. The 2009 data, however, present a contradictory relationship. While those who received full authorization have higher sales than those receiving only partial authorization, those who had never been refused by a financial institution had lower sales than those who had been refused. The logit regression, however, fails to find significant relationships between the probability of financing and sales in both 2008 and 2009. We tend to believe that sales is not an important factor of concern for financial institutions.

**Table 16. The Sales of SMEs, and Financing**

| Loan Authorized | Sale Million Dollar | | Financing Request | Sale million dollar |
|---|---|---|---|---|
| | 2008 | 2009 | | 2008 |
| The full amount | 13.7 | 20.1 | not refused | 13.8 |
| A partial amount | 28.8 | 17.9 | Refused | 44.1 |

*Source:* Authors' calculation based on the survey data.

But sales growth is a different story. In both 2008 and 2009, and for both full and partial loan authorization, the data consistently suggest the financial institutions prefer high growth SMEs. The differences in average sales growth are notably large.

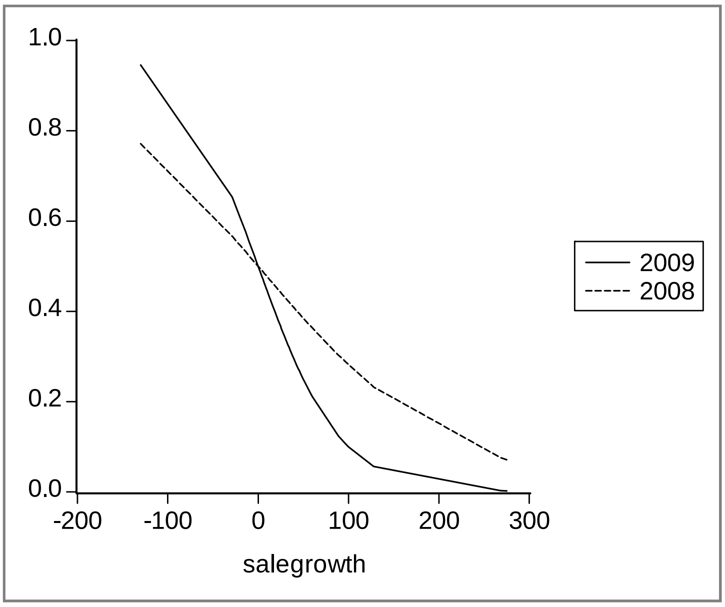
**Table 17. Sales Growth, and Financing**

| | Sale Growth % | | | Sale Growth % |
|---|---|---|---|---|
| Loan Authorized | 2008 | 2009 | Financing Request | 2008 |
| The Full Amount | 37.3 | 23.8 | not refused | 35.0 |
| A Partial Amount | 12.1 | 15.8 | Refused | 18.9 |

*Source:* Authors' calculation based on the survey data.

The logit model confirmed the significance of sales growth in loan decision- making. As shown in the Figure 11, the probability of being refused by financial institution decreases as sales growth increases.

**Figure 11. Probability of being refused by Financial Institutions, by Sales Growth**




*Source:* Authors' calculation based on the survey data.

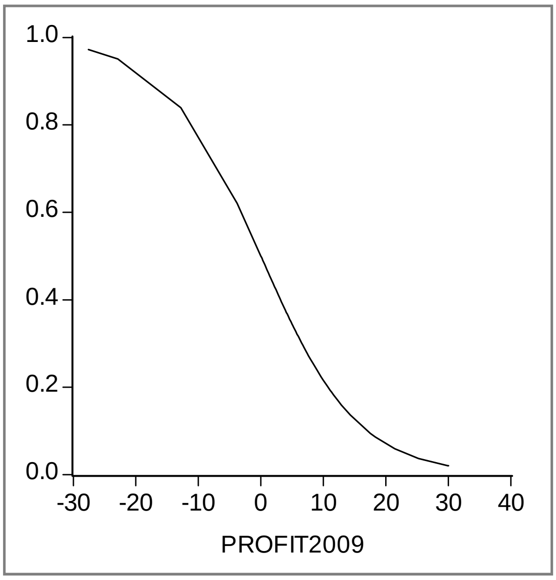
*Profit.* Its profit is a very important gauge of a firm's performance. We tested the relationship between the accessibility of financing to an SME and its profit as percentage of sales. The descriptive statistics indicate that the chance of access to financing of an SME is more related to recent profit performance than to the more distant past. The profits of 2009 of those not refused financing, and those with full authorization, are consistently higher than the profits of those refused or with limited access to financing. However, their 2008 profit does not signal well their chance of financing. Those with full authorization did have lower profits than those with partial authorization. The logit regression also finds that the profit of 2009 was a significant factor in explaining the probability of being refused financing. So, we tend to accept that the latest profit is the factor that financial institutions give weight to.

**Table 18. Profit, and Financing**

| | Profit % | | | Profit % |
|---|---|---|---|---|
| Loan Authorized | 2008 | 2009 | Financing Request | 2008 |
| The Full Amount | 2.8 | 5.5 | Not Refused | 3.1 |
| A Partial Amount | 3.0 | 2.8 | Refused | 1.9 |

*Source:* Authors' calculation based on the survey data.

**Figure 12. Probability of being refused Financing, by Profit as Percentage of Sales in 2009**




*Source:* Authors' calculation based on the survey data.

*Productivity.* Here we measure productivity in terms of sales per employee. The SMEs with the full amount of their loan requests authorized, or at least not refused, had much higher productivity than those with partial authorization or outright refusal. This may suggest that productivity is an important factor in SME financing. However, the results from the logit model reject this hypothesis. The pronounced differences of productivity were due to outliers. Productivity growth also proved not to be a critical factor in deciding the probability of getting financing.

**Table 19. The Productivity of SMEs, and Access to Financing**

| Loan Authorized | Productivity | Financing Request | Productivity |
|---|---|---|---|
| The Full Amount | .98 | Not Refused | 0.75 |
| A Partial Amount | 0.1 | Refused | 0.11 |

*Source:* Authors' calculation based on the survey data.

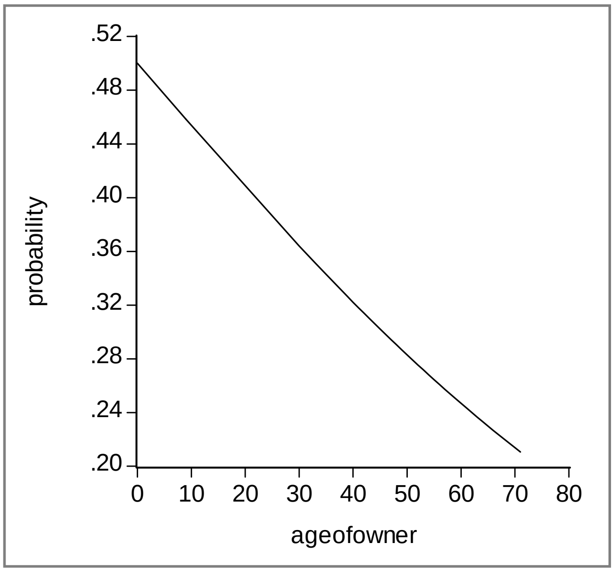
*Age and Sex of Owner*. While the average age of owners receiving full authorization was higher than those who got partial authorization, the average age of owners whose financing requests were not refused was lower than those refused. In both cases, the age differences were small, however. So, the results of the descriptive statistics were inconclusive. However, the logit regression result tends to indicate that the age of owner plays a role in the decision-making of financial institution. In terms of gender, it looks as if the female owner is slightly favored by financial institutions. However, due to the small number of female owners in the sample, (only 11), the result is not reliable. We tend to think the sex does not play a significant role in the financing decisions of financial institutions or at least that females are not discriminated against.

**Table 20. The Age of Owner, and Financing**

| | **Average Age** | | **Average Age** |
|---|---|---|---|
| Fully Authorized | 49.1 | Not Refused | 48.4 |
| Partially Authorized | 47.7 | Refused | 52.9 |

*Source:* Authors' calculation based on the survey data.

**Figure 13. Probability of being refused Financing, by Age of Owner**




*Source:* Authors' calculation based on the survey data.

**Table 21. Distribution of SMEs, by result of Financing Request and Sex**

| | Male | Female |
|---|---|---|
| Fully Authorized | 69.4 | 80.0 |
| Partially Authorized | 27.8 | 20.0 |
| Turndown | 1.4 | 0.0 |
| Withdraw | 1.4 | 0.0 |

*Source:* Authors' calculation based on the survey data.

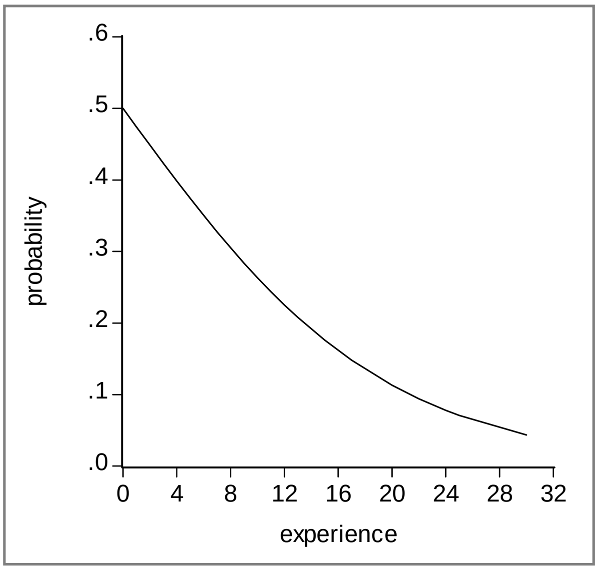
*Management Experience of Owner*. The data consistently suggest that the owners of SMEs who get full authorization, or at lease are not refused by financial institutions, have longer management experience. The difference is quite small however,. The result of the logit regression also supports the conclusion reached from the descriptive statistics. The management experience of the owner may therefore play a role in the financing decision.

**Table 22. Management experience of Owners**

| | Management Experience | | Management Experience |
|---|---|---|---|
| Fully Authorized | 9 years | Not Refused | 8.9 years |
| Partially Authorized | 7.4 years | Refused | 8.5 years |

*Source:* Authors' calculation based on the survey data.

**Figure 14. Probability of being refused Financing, by Management Experience of Owner**




*Source:* Authors' calculation based on the survey data.

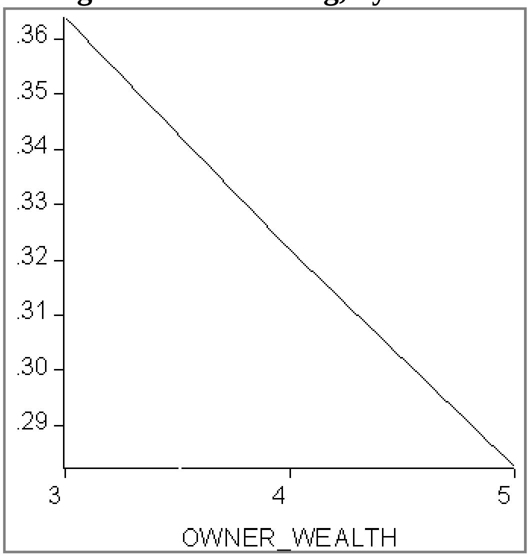
*Personal Wealth*. The proportion of those refused financing was 40% among SME owners with less than $1 million personal wealth, and 19% among those with more than $1 million. And the proportion of fully authorized financing was 53.8% among SME owners with less than $1 million personal wealth, and 65% among those with more than $1 million. These distinctive differences tend to suggest that personal wealth is an important factor for accessibility of financing to the SME. The result from the logit regression agrees with this conclusion.

**Table 23. Personal Wealth, and Financing**

| | Proportion of being Refused | Proportion of Fully Authorized |
|---|---|---|
| Below $1 million | 40.0 | 53.8 |
| Over $1 million | 19.0 | 65.0 |

*Source:* Authors' calculation based on the survey data.

**Figure 15. Probability of being refused Financing, by Wealth of Owner**




*Source:* Authors' calculation based on the survey data.

**Table 24.  Summary of Logit Regression Result**

Dependent variable: if financing request of SME is refused

| Independent Variable | Coefficient | z-Statistic probability | Log likelihood | Sum squared resid |
|---|---|---|---|---|
| Size | -0.309 | 0.00*** | -35.34 | 11.59 |
| Age | -0.12 | 0.00*** | -27.88 | 9.38 |
| Type of business | -0.39 | 0.00*** | -36.45 | 12.03 |
| Lifecycle | -0.48 | 0.00*** | -28.43 | 9.24 |
| Foreign ownership | -0.58 | 0.00*** | -34.42 | 11.44 |
| Ipn | -1.09 | 0.05** | -43.65 | 15.5 |
| Iso | -1.447 | 0.00*** | -37.09 | 12.48 |
| New product | -1.819 | 0.00*** | -27.08 | 8.66 |
| Sales 2008 | 0.000 | 0.99 | -41.59 | 14.99 |
| Sales 2009 | 0.000 | 0.35 | -45.89 | 16.46 |
| Sale growth | -0.009 | 0.02** | -29.99 | 10.2 |
| Patent | -0.022 | 0.31 | -33.95 | 12.15 |
| R&D | -0.185 | 0.03** | -24.13 | 7.67 |
| Productivity 2009 | 0.00 | 0.33 | -43.12 | 15.43 |
| Productivity 2008 | 0.00 | 0.59 | -33.20 | 11.95 |
| Profit 2009 | -0.13 | 0.01*** | -29.71 | 10.14 |
| Profit 2008 | -0.06 | 0.13 | -35.32 | 12.29 |
| Experience | -0.10 | 0.00*** | -32.29 | 11.06 |
| Age of owner | -0.02 | 0.00*** | -32.08 | 10.86 |
| Owner wealth | -0.186 | 0.04** | -15.85 | 5.46 |

*Source:* Authors' calculation based on the survey data.

*Note*: *** is statistically significant at 1 percent critical value,

** is statistically significant at 5 percent critical value,

*is statistically significant at 10 percent critical value.

## 2. 3.  Discussion of the Result

The survey shows that commercial loans are the single most important financing source for SME operations. And that the owner's personal saving is the most frequently used source for the startup of an SME. This conclusion is generally in line with earlier surveys. Most financing is intended for use as working capital, followed by growth of the business and purchase of machinery and equipment. The financing is also used for R&D expenditure, which ranked fourth. In China's case, the financing is seldom used for purchase of vehicles, debt consolidation or purchasing a business (see table 25). SMEs frequently need financing, evidenced by the fact that 80% of SMEs had ever made a financing request, but only 58.7% of SMEs had used just one kind of external financing.

The difference shows that there is still a financing gap for SMEs. And the survey confirmed again that lack of financing is a serious problem for the growth of SMEs in China. Obtaining financing ranked fourth in Table 26. However, if we consider the fact that some obstacles listed here are either an integral part of a market economy, such as competition, or are rather short term problems, such as rising business costs, the financing difficulty is second only to lack of qualified labor in terms of seriousnessness.

**Table 25. Which of the Following Obstacles are Serious Problems for the Growth of your Business?**

| Obstacles | Frequency |
|---|---|
| Finding qualified labour | 38 |
| Instability of consumer demand | 23 |
| Obtaining financing | 36 |
| Government regulations | 12 |
| Management capacity | 18 |
| Environmental regulations/ compliance | 18 |
| Rising business cost | 63 |
| Increasing competition | 52 |
| Insurance premiums | 7 |

*Source:* Authors' calculation based on the survey data.

**Table 26. How did The Business intend to use The Financing that was requested?**

| The use of financing | Frequency |
|---|---|
| Land and buildings? | 14 |
| Vehicles/ rolling stock & | 0 |
| Computer hardware and software | 3 |
| Other Machinery and equipment? | 28 |
| Working capital/ operating capital, | 60 |
| Research and development? | 25 |
| Debt consolidations? | 0 |
| Intangibles? | 3 |
| Purchase a business? | 0 |
| To grow the business? | 46 |
| Other purpose | 1 |

*Source:* Authors' calculation based on the survey data.

The empirical studies reveal that financial institutions favor SMEs with certain specific characteristics, which then have more chance of access to financing. The characteristics that matter include size, age, ownership, life-cycle, type of business, collateral, and whether the firm is in or not in an international production network. Certain characteristics of the owners of SMEs, such as age, personal wealth and management experience are also related to the probability of financing. The capabilities of SMEs are taken into account by financial institutions. The survey shows that the SMEs which spend more on R&D, have met an international standard, have established new divisions or new plant, have introduced new know-how in production methods and introduces new products or services are more likely to gain access to financing. In theory, performance should be an important factor that financial institutions look for most. The survey does find the sales growth and latest profit strongly affect the chance of getting financing. However, other performance indicators, such as sales and productivity, are not found helpful for SME financing.

# 3. SMEs Policy Support

## 3.1. General

In the past ten years, SME policy has gradually taken front seat in the government agenda. As SME Promotion Act was promulgated in 2002 and several other major policy initiatives have been announced, China has established a policy framework to support SME development. The major items of China's SME policy include:

*Creating an enabling environment in which SMEs can fairly compete with big business and be treated equally.* The discrimination against SMEs should be eliminated. The accesses of SMEs to sectors previously open only to state-owned business is to be expanded.

*Mitigating the difficulties of SMEs' access to financing.* Incentives have been established to encourage the financial institutions to increase their SME financing.

Reorganization of the banking sector has been carried out to allow small community-based banks to grow. And an SME board in the stock market has been established to expand SMEs' access to equity financing. A government guarantee program has been launched to reduce the exposure of banks when making loans to SMEs. The credibility of information systems has been strengthened to help the banking sector better identify SME risks.

*Increasing fiscal support to SMEs.* Both central and local government have established SME development funds in order to support innovation, restructuring and employment by SMEs. SMEs are entitled to more tax reductions in economic hard times. The fees and levies collected from SMEs have been rechecked and reduced to ease the burden on SMEs. SMEs should also enjoy preference in the government procurement market and a grace period for contribution to the Social Security Fund.

*Speeding up the technological progress and restructuring of SMEs.* The SMEs' R&D activities are to be encouraged. Upgrading of technology and the introduction of new methods of production and new products may be partly financed by government programs. Accelerated depreciation is allowed to support the use of new equipment. Cooperation between big and small enterprises and the clustering of SMEs are encouraged.

*Expanding market access for SMEs.* SMEs' expenses for participating in trade fairs can be partly reimbursed by government. SMEs' use of export credit has been increased to expand their access to the international market. The use of the e-commerce is being encouraged to help SMEs access a wider market with lower costs.

*Strengthening and improving service to SMEs*. The government encourages the development of the institutions and networks that provide professional services to SMEs. Infrastructure such as public platforms for testing, quality inspection, incubators, and information network will be improved for better service to SMEs. The regulatory system will be examined to reduce red tape.

*Improving the management of SMEs.* The consultancy service for management of SMEs will be strengthened. A government-sponsored training program has been launched to improve the policy and regulation literacy, and the skills of marketing, client service and management. The program plans to train 1 million managers of high growth SMEs in three years.

*Promoting the use of IT.* A program to promote the use of IT by SMEs has been implemented on a pilot basis. The introduction of IT is expected to improve the R&D, management, manufacturing and services of SMEs. The IT sector is encouraged to provide platforms and solutions for SMEs, equipping the SMEs with hardware and software, outsourcing and other services.

*Strengthening policy coordination.* A state council leading group for SMEs has been created to strengthen policy planning and coordination. Statistics relating to SMEs will be improved to better serve policy-making. And a monitoring, risk prevention and pre-warning system will be put into place to ensure that policy can promptly respond to changing situations.

Compared to the policy index developed by the OECD, we find that China's SME policy covers all important areas. In most policy items China scores 3 or above, showing that a sound policy framework has taken shape. However, in the field of entrepreneurship education, on-line access and top-class small business support, China's policy is still weak. And another big problem of China's SME policy is enforcement. It remains the case that many policies remain on paper, and are not delivered on the ground.

**Table 27. Policy Items and Scores**

| Policy items | Score |
|---|---|
| Entrepreneurship Education And Training | 2.0 |
| Cheaper And Faster Start-Up | 3.5 |
| Better Legislation And Regulation | 3.3 |
| Availability Of Skills | 4.0 |
| Improving On-Line Access | 2.5 |
| More Out Of The Single Market | 3.3 |
| Taxation And Financial Matters | 2.8 |
| Strengthening The Technological Capacity | 3.0 |
| Successful E-Business Models And Top Class Small Business Support | 2.5 |
| Average | 3.0 |

*Source:* Authors' calculation based on the survey data.

### 3.2. Access to the Finance

Policy to mitigate the financing difficulties of SMEs has long been central to government SME policy. The major policy initiatives on SME financing include:

*Motivating the financial institutions to make more loans to SMEs.* A risk compensation fund has been created to subsidize the SME business of financial institutions and to make up part of any losses from non-performing loans (NPL). The regulations on bad loans have also changed to allow the financial institutions easily to `write off NPLs and not to hold bank staff personally to account if he or she proves due diligence.

Reorganization of the banking sector has been carried out to allow small community based banks to grow. The private sector can launch or sponsor small financial institutions, such as village and town banks, credit companies, etc. The participation of the private sector in restructuring rural and urban credit unions is now encouraged. The big banks are required to set up departments dedicated to SME financing.

*Developing financing products tailor to the needs of SMEs.* The problem of lack of collateral should be properly addressed. The range of assets qualified as collateral needs to be expanded to include property, receivables, equity, intellectual property, inventory, etc.

*Increasing SME access to direct financing.* The SME board of the stock market was established to expand SME access to equity financing. The number of SMEs listed in the stock market will be increased. The development of venture capital, leasing financing, pledge financing, and trust financing is also encouraged. The issuance of SME corporate bonds will be increased.

*Improving the credit guarantee system for SMEs.* A multi-layer guarantee fund and organization jointly sponsored by central and local government and the business sector has been launched to reduce the exposure of banks when making loans to SMEs. The guarantee organization should be entitled to the preferential tax treatment and regulatory requirement Insurance companies are to be encouraged to develop insurance products for SMEs.

*Strengthening the credibility information system to help the banking sector better identify SME risks.* An SME credibility system has been built to collect and evaluate the credibility information of SMEs. The system is easily accessed by financial institution. A “punish and reward” mechanism should be put into place to foster a culture of honesty so as to enhance the credibility of SMEs.

## 4. Conclusion and Policy Recommendations

Although many policy initiatives have been put forward, and macro financial conditions are favorable, SMEs still suffer from difficulties of financing. The financial institutions remain the major channel of SME financing, and they are quite selective in approving the financing requests of SMEs. Basically, the financial institutions give preference to older, larger and faster growing SMEs in specific types of business. The good background of an SME’s owners helps also. An experienced, wealthier and older owner of an SME is more trusted by financial institutions. Other factors matter too. For instance, if SMEs have collateral or participate in international production networks, their chances to getting financing are improved. The financial institutions also favor SMEs with strong innovation and business capability, and good performance. The selectiveness of financial institutions is reasonable given their nature as profit-seeking commercial bodies. This shows that the “financing gap” faced by an SME is partly due to the “development gap” of the SME. It infers that along with the development of the SME, its financing situation would be improved, even without policy intervention.

But there are financing difficulties coming from drawbacks inherent in the financial system or institution framework, requiring the intervention of policy. In China’s case, there are several policy areas that are particularly important. First, China’s big bank dominated financial system exacerbates the problem of asymmetry of information. Small financial institutions should be developed to be in proximity to SMEs. Financial sector liberalization therefore needs to be expedited. Barriers to the private sector’s participation should be eliminated. Second, the excessive risk aversion of financial institutions toward SME financing needs to be corrected. The Asian financial crisis alarmed the Chinese government, and in consequence it began to tackle NPL problems very seriously. As a result, the banking sector has taken a very conservative stance in risk control when dealing with the private sector and SMEs, even though the economic situation has now changed. To alleviate the SME financing situation, a little more risk-taking by banks should be encouraged. Third, China should take bolder steps to develop direct financing for SMEs. Among other things, private equity (PE) is now a booming business in China, as more and more wealthy people seek high returns from their assets. The SME sector has the opportunity to benefit from the private equity investor. A favorable regulatory environment and fair competition should be established for the development of direct financing. Fourth, the credibility gap of SMEs needs to be addressed. Government should facilitate the collection and dissemination of the credit records of SMEs. The government-sponsored guarantee program can also play an important role in enhancing the credibility of SMEs.

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