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SMALL AND MEDIUM ENTERPRISES (SMES) ACCESS TO FINANCE IN SELECTED EAST ASIAN ECONOMIES

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Acknowledgements

This report consists of the papers from ERIA's SME research working group in Fiscal Year 2010. It attempts to shed some lights on the issues of SMEs' financing in selected East Asian economies (Cambodia, China, Indonesia, Laos, Malaysia, Philippines, Thailand and Vietnam). All papers presented in this report were presented in two workshops held in Jakarta and Bangkok over the period of August 2010 to February 2011.

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EXECUTIVE SUMMARY

Findings from ERIA's SME research project in FY 2009 confirms that access to finance is amongst the most critical factors determining the competitive readiness of regional SMEs and their ability to fully exploit and participate in the global economy and business opportunities from regional economic integration and, in particular, participation in regional production networks. Well recognized in the literature, access to funding is the lifeblood of any enterprise, enabling it to grow, and to generate more output and employment. There is considerable evidence to support the contention that SMEs, in particular, face a number of obstacles and problems in accessing finance, mainly related to their limited resources and perceived risk by lenders. This is particularly problematic and worrisome for policy makers, given that SMEs and entrepreneurship are widely recognized as being the key sources of dynamism, innovation, and flexibility in advanced industrialized, emerging market and developing economies, and are major net job creators in these economies. Without access to finance, SMEs are unable to invest, impairing their capacity to: improve productivity; raise competitiveness; promote innovation; generate employment; and contribute to economic growth and development.

1. Objective and Scope of the Project

This report attempts to shed some lights as comprehensively as possible on the issue of SMEs' financing in selected East Asian economies (Cambodia, China, Indonesia, Laos, Malaysia, Philippines, Thailand and Vietnam) using a uniform questionnaire survey, with the intention of elaborating upon the following questions: (i) what are the major sources of external finance for SMEs, (ii) what is the extent to which, if any, the SME sector identified by size, country, and in aggregate for a sample of countries in East Asia is systematically disadvantaged, or rationed, with respect to access to external financing, (iii) what are the key factors contributing to the extent of this rationing (stringent requirements) focusing upon firm characteristics, owner characteristics, and

firm performance, and (iv) what is the importance of rationing for the performance of SMEs in a sample of East Asian economies.

The first three chapters cover the overview, theoretical framework of the study, and the integrated chapter using the whole sample of SMEs in the project. The next chapters are dedicated to country-specific study, starting from less developed ASEAN countries, which include Cambodia, Lao PDR, and Vietnam, followed by four chapters on Thailand, Malaysia, Indonesia, and the Philippines. The final chapter is on China. These chapters on individual country provide interesting findings that contain both common and different problems and policy implications for SMEs' access to finance.

2. Summary of the Key Findings

Findings from the integrated chapter can be summarized as follows. First, although a significant number of SMEs still rely on their internal resources for both start-up and business expansion, external finance is very important for aspiring smaller domestically owned companies in less developed economies which make lower profits and which have insufficient access to funds. Moreover, the size of the SMEs and stage of the country's development (reflecting the financial market conditions) also affect the diversity of choices of financial institutions and financial products that SMEs can access.

Second, there is potential for credit rationing, or risk premiums exercised by the financial institutions on SMEs. The key findings from our analysis suggests that size and stage of country development (financial market development) do affect the conditions of external finance offered to SMEs, i.e., larger SMEs in more developed economies tend to get bigger loans, with longer terms, and at a lower interest rate than otherwise.

Third, the results suggest that the owners' net worth, collateral, business plan, financial statement, and cash flow are critical for financial institutions in devising the financial conditions they extend to SMEs. In other words, financial intuitions seem to

put higher risk premiums on opaque SMEs by offering less favourable financial conditions to less well-established and transparent SMEs.

The last two findings suggest that financial institution behaviour is strongly linked to the legal, institutional and regulatory legal environment in which they operate. In an economy where the legal system does not adequately protect property rights and a bankruptcy law is lacking or non-existent, where there are inefficiencies in the operation of institutions themselves and the regulatory environment is lacking in terms of disclosure and transparency requirements relating to firm operations, it would be perfectly rational for financial institutions to restrict credit or impose a risk premium on opaquely operating enterprises. Consequently, problems in accessing finance for SMEs may not be due solely to distortions or inefficiencies in the financial sector itself, but also by weaknesses in the legal, institutional and regulatory environment in which these institutions operate.

Finally, financial access has a significant impact on SMEs' innovation capability and participation in the export market. The study suggests that bigger SMEs with access to larger loans with longer terms and at a lower interest rate are more capable of innovation and exporting activity, since these external finances with favourable conditions would provide SMEs enough time and resources to innovate and enter foreign markets.

3. Policy Implications

In order to address these shortcomings in terms of SMEs' access to finance, particularly in emerging market and developing economies, a number of policy measures need to be addressed and in particular the following:

a. Macroeconomic Policy

Regional governments, particularly in emerging market and developing economies, will be required to maintain frugal and sustainable macroeconomic policy settings. Overly expansionary macro policy measures that contribute to sizeable budgetary

imbalances and inflationary pressures would reduce the availability and increase costs of finance for productive firm investment in the private sector. This will further compound difficulties faced by private sector SMEs, in particular, in gaining access to finance. Government policies that place emphasis on rapid industrialization through discriminatory measures that favor large firms will also add to the problems facing SMEs wishing to gain access to finance.

b. Financial Market Reforms

Measures will be required to deepen and broaden financial markets in regional economies with the aim of encouraging greater competition in terms of providers, reducing the cost of borrowing, and greater provision of sources of finance (non bank financial institutions, equity markets, venture capital markets etc.) that will enhance the provision of diversified products and services, bringing them more into line with meeting the needs of SMEs.

c. Legal and regulatory reforms

Empirical results suggest that smaller SMEs in emerging market and developing economies have serious difficulty in obtaining finance, and face higher interest rates. This is not surprising, and consistent with the literature, in the context of economies where a lack of transparency in firm operations and poor corporate governance contributes to asymmetric information and greater lending risk as perceived by financial institutions. In this context it is essential to implement policy measures aimed at improving the legal, institutional, and regulatory framework. The legal framework should ensure property rights and contain provisions that protect lenders against bankruptcy and delinquent loans, encouraging lending institutions to lend to SMEs. In addition, they should also contain provisions that ensure access to land and land-use rights, which is particularly important for SMEs as a source of collateral in emerging market economies.

The institutional and regulatory framework should also encourage the formal registration of SMEs and not contain bureaucratic and regulatory processes that make the costs of formalization (compliance costs) greater than the benefits obtained from formalization. Finally, the regulations should be as transparent and simple as possible,

aimed at improving corporate governance and transparency arising from the adoption of stringent book-keeping and accounting standards.

d. Microeconomic Policy

Microeconomic policies aimed at opening up markets and creating a level playing field for all enterprises will encourage more efficient resource allocation and improve productivity. The establishment and nurturing of a vibrant SME sector will encourage greater competition. This should also be encouraged in the financial sector, with the objective of, promoting access to finance in general as well as reducing the cost of finance.

The government should encourage the establishment of industry organizations for SMEs that will represent the interests of members and provide market information and capacity building. Closer bank-client relationships should be fostered to overcome some of the problems relating to asymmetric information and moral hazard.

It is necessary to introduce credit guarantee schemes subject to rigorous and viable business plans, credit rating, and information systems. Establish specialized and more effective development financial institutions such as an SME bank, and the provision of business development services such as basic business training (e.g. management, business planning, book keeping, accounting, and financial literacy) and network promotion.

In the more developed economies, governments need to play a targeted role in establishing venture capital markets, in collaboration with the private sector, for high tech SMEs, as well as access to equity markets. Target wealthy entrepreneurs/owners to establish new firms or expand their existing businesses, upgrading skills and innovation capability etc. Moreover, business-friendly environment is also essential to welcome foreign owned enterprises to establish in the country, or establish majority foreign owned joint ventures with local SMEs.

CHAPTER 1

Overview:

Small and Medium Enterprises' (SMEs') Access to Finance in Selected East Asian Economies

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1. Background and Research Objective

As the Association of Southeast Asian Nations (ASEAN) vows to accelerate the establishment of an ASEAN Economic Community (AEC) by 2015, the 18th ASEAN Summit, under the chairmanship of Indonesia, has reaffirmed the pivotal role of SME development as a critical element towards narrowing the development gaps amongst and within the ASEAN member states. Recently, the Economic Research Institute for ASEAN and East Asia (ERIA) together with Republic of Indonesia's Ministry of Trade (MoT), and Ministry of Cooperatives and SMEs (MoCSME) hosted a major symposium entitled "Towards a People-Centered ASEAN Community: Strengthening SMEs in ASEAN" on May 2nd, 2011. There were more than 200 participants from the business community, government officials, diplomats, academics, civil society, and media. What emerged from the symposium is that SMEs can play a pivotal role in bringing the benefits of ASEAN economic community building to the people. Concrete recommendations that have been put forward give much needed impetus to examining and shaping the regional integration architecture embodied in the AEC Blueprint measures from the lens of the development of SMEs in the region (i.e., their growth, adjustment, and participation in deepening trade and economic linkages within ASEAN and East Asia). One of the main recommendations is to develop a range of programs or approaches to provide financing for SMEs with little collateral, such as credit insurance or guarantee schemes, credit rating or borrower risk rating, a "one finance advisor-one village" approach, and training local financial institutions on risk management and borrower-risk rating.

Findings from ERIA's SME research project in FY 2009 confirmed that access to finance is amongst the most critical factors determining the competitive readiness of regional SMEs and their ability to fully exploit and participate in the global economy and business opportunities from regional economic integration and, in particular, participation in regional production networks (Thanh, Narjoko, and Oum, 2009).

In this context, the ERIA's SME research in fiscal year 2010 attempted to shed some light on the issues of SME financing in selected East Asian economies. It intended to elaborate upon the following questions: (i) what are the major SME sources of

external finance, (ii) to what extent, if any, is the SME sector identified by size, country, and in aggregate for a sample of countries in East Asia, systematically disadvantaged or rationed with respect to access to external financing, (iii) what are the key factors contributing to the extent of this rationing (stringent requirements) focusing on firm characteristics, owner characteristics, and firm performance (iv) how important is credit rationing for the performance of SMEs in a sample of East Asian economies.

2. Methodology

The research methodology adopted a structured questionnaire survey of SMEs conducted in eight East Asian countries (Cambodia, China, Indonesia, Laos, Malaysia, Philippines, Thailand, and Vietnam)[1]. A total of 150 usable samples were targeted for each country. The questionnaire was aimed at collecting information on SME characteristics, and sources and usage of finance. Information on the following SME characteristics was collected: basic characteristics (i.e., size, age), ownership, cost and input structure, performance (i.e., participation in production networks, sales, sales growth, profit rate, etc.), sources of finance and usage, capability to innovate, and managerial background. The sample contained observations of firms with a maximum of 200 employees. The survey was conducted over the last two or three months of 2010, and adopted a one-to-one approach to minimize reporting errors (i.e. the researchers pay one or two visits to the respondents in order to collect all the information sought by the questionnaire). As a result the study managed to gather slightly more than 1178 respondents over a rather limited time-period.

[1] The format of the questionnaire is largely adapted from a "Survey on Financing of Small and Medium Enterprises 2007" conducted by the Small Business and Special Survey Division, Statistics Canada.

3. Structure of the Report and Key Findings

In Chapter 2, Charles Harvie develops and presents a framework within which the concept of a “financial gap” or “credit rationing” can occur in the context of SMEs, and alternative measures are developed and proposed. Its measurement is critical for the conduct of an empirical study concerned with identifying statistically significant factors influencing the magnitude of this funding or credit gap in relation to the SME sector. Focus of the framework is placed on identifying the significance of firm attributes or characteristics, owner attributes, and firm performance upon the existence of financial gaps or credit rationing, in aggregate and by source of finance, for SMEs (micro-, small- and medium-sized). The statistical significance of financial gaps or credit rationing for the performance of SMEs in aggregate for the eight countries, by individual country and by size of SME, are also investigated.

In Chapter 3, Sothea Oum, Charles Harvie, and Dionisius Narjoko present an empirical analyses based on the analytical framework developed in Chapter 2. They find that, although a significant number of SMEs still rely on their internal resources for both start-up and business expansion, external finance is very important for aspiring smaller domestically owned companies in less developed economies which make lower profits and which have insufficient access to funds. Moreover, the size of the SME and stage of the country's development (reflecting financial market conditions and development) also affect the diversity of financial institutions and financial products that SMEs can access. They also find that there is potential for credit rationing, or risk premiums exercised by financial institutions on SMEs. The key findings from their analysis suggest that size and stage of country development (financial market development) do affect the conditions of external finance offered to SMEs, i.e., larger SMEs in more developed economies tend to get bigger loans, with longer terms and at a lower interest rate than otherwise. Finally, they also find that the owners’ net worth, collateral, business plan, financial statement, and cash flow are critical for financial institutions in devising the financial conditions they extend to SMEs. In other words, financial intuitions seem to put higher risk premiums on opaque SMEs by offering less favourable financial conditions to less well-established and transparent SMEs. Financial access has a

significant impact on an SME's innovation capability and participation in export markets, and the study suggests that bigger SMEs with access to larger loans, of a longer duration, and with a lower interest rate are more capable of innovation and exporting activity, since external finance with favourable conditions provides SMEs with enough time and resources to innovate and enter foreign markets. They also propose some policy recommendations to tackle these problems that are summarized in the latter part of their chapter.

In Chapter 4, Luyna Ung and Sovuthea Hay address the financial constraints faced by SMEs in Cambodia. The paper argues that an under-developed financial market underpins biased provision of credit to micro-sized firms and SMEs that would limit their business expansion. They find that firms which have high sales volume and high profit margin are highly likely to obtain finance, and that collateral is predominantly required. These findings infer that credit is rationed by the market (financial institutions) and intervention is needed to widen access to finance. They propose a number of policy recommendations to address "the missing middle phenomenon". First, the government should provide incentives for export firms to find local partners; provide information on market access, management and technical supports; and enhance awareness among local SMEs of opportunities to supply the existing export-oriented large enterprises through tour organizing, workshops, or seminars. Second, in response to banks demanding collateral and other forms of guarantees for extending credit, the government could help SMEs by expediting land titling, offering a credit guarantee scheme, and creating a credit information bureau that would facilitate the process of lending. Third, improving fair competition among banks is necessary as this could lead to improvements in the terms and conditions of loans through competition between larger banks or with other financial institutions. Finally, the government should address issues surrounding the formalization and registration process for SMEs by giving incentives such as tax benefits, consultancy services, technological know-how transfer, management training, provision of information, access to government procurement contracts, study tours, trade fairs, exhibition priority, and other benefits that they could immediately obtain.

Phouphet Kyophilavong, in Chapter 5, examines financial barriers confronting Lao SMEs. Lao SMEs are at an early stage of development and face various problems. One of the most important issues is access to finance. The main objective of the paper is to

gain a better understanding of the characteristics of Lao SMEs' access to finance. His empirical results confirm that SMEs with financial constraints perform poorly compared with SMEs that do not have such constraints. Only a few SMEs could gain access to finance, about 20% of the 198 SMEs in the survey. There are various constraints facing Lao SMEs related to access to finance, such as: collateral, the complex application process, and lack of information from financial institutions. About 80% of SMEs which requested finance were not satisfied with the lending terms of the financial institutions. Domestic firms which are large in terms of capital and can manage to improve their business innovation seem to have greater access to finance. The author proposes some policy measures to assist SMEs gain access to finance, such as: (i) improving the financial system and liberalizing the financial sector in order to increase competition and to have greater diversification in the financial sector; (ii) improving the business climate in order to minimize the cost of doing business and improving innovation and productivity; and (iii) providing training on access to finance and establishing credit guarantee schemes for SMEs. In addition, the establishment of specialized banks or financial institutions targeting the needs of SMEs should be considered.

Tran Tien Cuong, Bui Van Dung, Nguyen Thanh Tam, and Trinh Duc Chieu take up the case of Vietnam in Chapter 6. They investigate access to finance and the financial gaps and factors constraining such access, of Vietnamese SMEs operating in the Textiles and Garment, Automotive Components Manufacturing, and Electrical and Electronics Industries. Their chapter shows that capital shortage presents a serious barrier to SME development in Vietnam. Many enterprises in their survey sample did not access to finance because they had sufficient internal funds or they encountered obstacles from credit providers, or there were some drawbacks inherent to the SMEs themselves. The survey results indicated the constraints facing SMEs in accessing finance, namely: lack of collateral, young age of the enterprises, major owners having insufficient experience in running or owning businesses, they are of micro size, and they had no participation in production networks. The chapter also shows that the success of SMEs, gauged by larger profit margins as well as earning profits in two consecutive years, is influenced by external factors, such as using two sources of finance, i.e. commercial or personal loans and credit lines from financial institutions including credit cards, and credit from state-owned credit institutions or government

grants, as well as relying on SME policy support from the government. In recent years, many SMEs have received both legal and direct support, most common forms of which are improving the legal framework and business environment, simplifying administrative procedures, and financial assistance in the form of solving tax and financial problems. Furthermore, the authors propose the following measures. From the supply side, banks and other financial institutions should change their traditional mindsets and adopt an appropriate approach to SMEs as a group of borrowers, considering their weaknesses compared to larger enterprises. Encouraging financial institutions to give supporting loans to SMEs, especially credit guarantee funds, is an equally important measure on which the government needs to focus their efforts. Since credit guarantee funds are still operating with low efficiency and little experience in Vietnam, sharing of experience between the country and its East Asian counterparts should be encouraged. From the demand side, it is necessary to overcome the barriers faced by SMEs in accessing finance, such as: overcoming the lack of collateral or property for mortgage by promoting credit guarantee funds; strengthening SMEs' capacity to prepare loan-financed project documentation in order to meet credit providers' requirements; improving accounting, ensuring transparency in business operations, particularly financial management; ensuring that financial institutions have appropriate confidence in SMEs when approving their loan requests; and improving the quality of human resources.

In Chapter 7, Chaiyuth Punyasavatsut examines barriers facing Thai SMEs. The chapter examines financial gaps and factors for better financial access for Thai manufacturing SMEs. The results indicate that SMEs obtain only 30 percent of their financing from external sources. Most of them use their own funds, and borrow from friends and relatives to start and run their businesses. They tend to use an overdraft in order to fulfil working capital requirements. As far as external finance is concerned, small businesses still mostly depend on banks. Despite various measures of support from the government, only 40 percent of Thai firms, mostly small, gain access to credit. The perception of SMEs is that important obstacles which block access to finance are: a lack of information and advice from financial institutions, the complexity and cumbersome loan application process, and inadequate collateral. From the financial institutions' perspective the main obstacles to SME lending are as follows: inadequate

collateral, lack of business experience, lack of a sound business plan, non-performing loan (NPL) history, and high transaction costs per loan application. Thai banks traditionally have collateral-based lending practices, and lack know-how on how to assess and differentiate SME risk. These exacerbate financial gaps and access for SMEs. SME characteristics that are associated with better access to finance are those that reflect good performance and value of firms. Firm characteristics contributing positively to credit access are high sales to assets ratio, low leverage ratio (debt to equity), business experience (older firm or more experienced business owner), and collateral pledge on loans. With respect to financial gaps the author proposes three recommendations. First, improve the Credit Guarantee Mechanism as a means of helping SMEs with inadequate collateral to gain access to finance. Successful credit guarantee schemes then require appropriate risk sharing and prudential measures to reduce over-borrowing and moral hazard behaviour. Second, improve financial information disclosure by SMEs to provide essential information such as good record keeping and proper financial accounting for loan documentation. Information transparency and disclosure can be viewed as evidence of adequate management and the financial literacy of SMEs. Finally, strengthen institutional capabilities in SMEs' credit risk evaluation and management so that financial institutions can provide more information-based lending rather than the collateral-based lending seen at present.

In Chapter 8, Rajah Rasiah examines the ease of access to finance among SMEs in Malaysia. His results show that there is an obvious bias in the financial environment facing smaller firms, which is reflected in the strong inverse relationship between access to finance and firm-size. Access to finance was inversely correlated with labour productivity, which shows that the more productive firms have less access to finance or simply that the cost and other terms of external capital are too high for the better performers. The relationship between firm-size and incidence of participation in R&D activities was also inversely related, demonstrating that in Malaysia smaller SMEs are more dynamic than larger ones. Given that several firms reported having declined the pursuance of external funds on the basis of the terms and conditions, rather than whether they can access it at all, the inverse relationship may actually show that the better performers who have the option of internal sources of funding show higher labour productivity than those who have received external funds. The Malaysian evidence

shows that governments should review their financial instruments to ensure that preferential credit is matched to the needs of the more entrepreneurial firms, and should take small firms seriously as they have proven to be more dynamic than larger SMEs in Malaysia. Small size should not be seen as a deterrent to participation in R&D activities.

In Chapter 9, T.M Zakir Machmud, Ainul Huda and Rhita Simorangkir identify and examine key characteristics and financial constraints faced by Indonesian SMEs. They reveal that about 56 percent of SME respondents have access to finance, which is defined as an ability to acquire finance from external financial institutions. Although having the ability to acquire funding from external sources, reliance on internal financial sources, particularly personal savings and retained earnings, still prevails and plays a crucial role. To a large extent such conditions may reflect the fact that the majority of Indonesian SMEs are still considered to be traditional or conventional in doing business. They find that there is no significant difference in owner characteristics between SMEs that have access to finance and those without access. Both SMEs with access and without access perceive rising business costs as the main obstacle to expansion of their business. The survey also interviewed 11 financial institutions, mainly those from the banking sector. From the lender's perspective the three most important reasons to turn down a loan application are: (i) poor credit history; (ii) poor business plan; and (iii) insufficient sales, revenue, and cash-flows. Reflecting on the survey's findings, some broad policy recommendations are proposed to improve access to finance. First, there must be some capacity-building assistance for SMEs, such as preparing simple business plans, developing simple accounting standard operating procedures and cash flow management systems. This could be conducted by the financial institution itself or require third parties such as private sector firms, for instance through business development services (BDS). Second, the government should provide some incentives for banking institutions to channel credit to productive sectors, rather than consumer credit. Third, they should promote and socialize the use by SMEs of alternative institutions to obtain finance, particularly in remote areas. One example of these alternative institutions is a cooperative that provides deposit and credit services (koperasi simpan pinjam) to members. Promoting the establishment of forums or associations for these cooperatives would lead to the development of a secondary market for these cooperatives.

In Chapter 10, Rafaelita Aldaba presents analysis of a survey of 97 firms in the garments, textiles, automotive, electrical and electronics, and food manufacturing industries in the Philippines. The chapter highlights the difficulties faced by SMEs in accessing finance. For both firms with access to finance as well as those that did not make any requests for finance, financing obstacles are seen as one of the four most serious problems restricting the growth of their businesses. The survey indicates the continued dependence of SMEs on internal sources of financing, not only during the start-up phase but also to finance the current operations of the business. Close to 41% of the respondents intend to expand the size and scope of their business in the next two years. 67% said that financing the expansion through internal funds alone is insufficient, with the same proportion of firms indicating that they would finance their expansion by making a loan request. Previous surveys also showed that a substantial proportion of firms planned to borrow in the future. However, the continuing dependence of firms on internal sources of financing seems to suggest a gap between the plans of firms to borrow and the actual amount of funding made available by banks. SMEs, particularly the smaller ones, have been unable to access funds due to their limited credit track record, limited acceptable collateral, and inadequate financial statements and business plans. The bank survey showed that the top reasons for turning down financial requests were the firms' poor credit history, insufficient collateral, insufficient sales, income or cash flow, unstable business type, and poor business plan. To improve SMEs' access to finance, the chapter suggests the establishment of the Central Credit Information Corporation in order to address informational asymmetries. Changing the mindsets of banks and introducing non-traditional approaches to SME lending would also be important, along with training and capacity-building programs for SMEs in order to improve their financial literacy and management capacity.

Sun Xuegong and Liu Xueyan in their study of SME access to finance in China in Chapter 11 concluded that SMEs in the survey have been suffering from financing difficulties, even while China has experienced a lending spree. The future tightening of monetary policy will worsen the financing situation for SMEs. A proper policy response to the financing predicament facing SMEs is imperative and should be based on a good understanding of the reasons for their financing difficulties to which this survey study is designed to contribute. The survey reveals that financial institutions are quite selective

in responding to financing requests from SMEs. Basically, financial institutions give preference to older, larger, and faster-growing SMEs in specific types of business. The backgrounds of the SMEs' owners are 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 in international production networks, their chances of getting financing are improved. The financial institutions also favour an SME with strong innovation potential, business capability, and good performance. In China, a number of policy areas are of particular importance. 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 SMEs' financing needs to be corrected. The Asian financial crisis alarmed the Chinese government and as a consequence it began to tackle Non-Performing Loan (NPL) problems very rigorously. 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 SMEs' 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 favourable regulatory environment and fair competition should be established for the development of direct financing. Fourth, the credibility gap of SMEs needs to be addressed. The government should facilitate the collection and dissemination of the credit records of SMEs. A government-sponsored guarantee program can also play an important role in enhancing the credibility of SMEs.

4. Policy Implications

There are a number of important policy implications arising from the study. *First*, business start-ups remain heavily dependent upon loans from friends and relatives of the business owner and upon retained earnings. This severely constrains the growth of new businesses which are critical to the future growth and development of the region. *Second*, loans from financial institutions are important as a source of finance for SMEs, but financial institutions still remain limited in their ability to provide the necessary products and services required for SMEs and for new start-ups in particular. Expanding the breadth and depth of such products and services by financial institutions (other than commercial banks) and the development of alternative sources of finance to meet the needs of SMEs remains an important task of policy. *Third*, finance for ongoing business operations also remains heavily dependent upon the resources of the business owner, loans from individuals, and government financial assistance. This indicates the pressing need to develop business development services, primarily provided through the private sector. *Fourth,* credit rationing (amount of finance and cost of finance) appears to be imposed by financial institutions and is most apparent by size of SMEs and by stage of country development. *Finally*, developing and emerging economies experience potential credit rationing and financial gap problems more intensely by their SMEs due to: having smaller sized SMEs, many of which are informal; low profit margins; lack of firm transparency; lack of business plans; lack of cash flow; less wealthy entrepreneurs; less collateral, weaker corporate governance and entrepreneurial skills, less breadth and depth in financial markets, greater macroeconomic imbalances, and having a more distortionary legal, institutional and regulatory environment.

In order to address these shortcomings in terms of SMEs' access to finance, particularly in emerging markets and developing economies, a number of policy measures need to be addressed. The following policy measures could be taken into considerations.

First, regional governments, particularly in emerging markets and developing economies, will be required to address macro policy measures that contribute to sizeable budgetary imbalances with resulting national saving and investment imbalances,

compounding difficulties for the private sector in general in gaining access to finance. Government policies that place emphasis on rapid industrialization through discriminatory measures that favour large firms will also add to the problems facing SMEs wishing to gain access to finance.

Second, on the supply side, measures will be required to deepen and broaden financial markets in regional economies with the aim of encouraging greater competition in terms of providers, reducing the cost of borrowing, and stimulate greater provision of finance (non-bank financial institutions, equity markets, venture capital markets, etc.) that will enhance the provision of diversified products and services more in line with meeting the needs of the SMEs.

Third, the empirical results suggest that smaller SMEs in emerging markets and developing economies have the most difficulty in obtaining finance, and they face higher interest rates. This is not surprising and is consistent with the literature in the context of economies where a lack of transparency in firm operations and poor corporate governance contributes to asymmetric information and greater lending risk, as perceived by financial institutions and greater informality in firm operations. In this context it is essential to implement policy measures aimed at improving the legal, institutional, and regulatory framework. The legal framework should ensure property rights and contain provisions that protect lenders against bankruptcy and delinquent loans, and encourage lending institutions to lend to SMEs. In addition, they should also contain provisions that ensure access to land and land use rights, which is particularly important for SMEs as a source of collateral. The institutional and regulatory framework should be structured to encourage the formal registration of SMEs and should not contain bureaucratic and regulatory processes as well as taxes that make the costs of formalization (compliance costs) greater than the benefits to be obtained from formalization. The regulations should be as transparent and simple as possible, aimed at improving corporate governance and transparency arising from the adoption of good book-keeping and accounting standards.

Fourth, microeconomic policies aimed at opening up markets and creating a level playing field for all enterprises will encourage more efficient resource allocation and improve productivity. The establishment and nurturing of a vibrant SME sector will encourage greater competition. This should also be encouraged in the financial sector,

with the objective of increasing access to finance in general, as well as reducing the cost of finance.

Fifth, encourage the establishment of industry organizations for SMEs that will represent the interests of members and provide market information and assist in capacity building.

Finally, introduce credit guarantee schemes subject to rigorous and viable business plans, credit ratings, and information systems. Establish specialised and better development financial institutions such as SME banks, and the provision of business development services that can assist SMEs in embedding business training (e.g. management, business plan, book keeping and accounting, financial literacy) and network promotion.

However, quotas imposed on commercial banks for loans to private sector SMEs, interest rate subsidies for SMEs, and tax concessions should be avoided since they are ineffective due to an absence of sound legal and institutional capacities (weak governance).

In summary, specific policy measures should comprise the following:

- Encourage formalize by making it easier and less costly/ bureaucratic to become a formally registered enterprise.
- Reduce bureaucratic regulations and taxes that encourage informal business behaviour with the aim of encouraging larger firm size.
- Improve SME governance and entrepreneurial skills.
- Target wealthy entrepreneurs/owners to establish new firms or expand their existing businesses. Also target these for upgrading skills, innovation capability, etc.
- Encourage foreign owned enterprises to establish in the country, or establish majority foreign owned joint ventures with local SMEs.
- Improve book-keeping requirements of SMEs to improve transparency.
- Provide advice/ assistance in the preparation of business plans.
- Clarify collateral ownership by SMEs, particularly important in emerging economies in the context of land ownership or leasing.

- Reduce taxes/ charges on SMEs particularly where they disproportionately affect SME profits and cash flow.
- Tackle legal, institutional and regulatory distortions that discourage commercial bank-SME loans, such as intellectual property rights (IPR) laws, bankruptcy laws, lending on a non commercial basis, etc. These are particularly problematic in emerging market economies.
- In addition to these, government needs to tackle: macroeconomic imbalances (national savings and investment), limited depth and breadth of financial markets, and implementing microeconomic reform measures that encourage competition (in financial markets).
- In the more developed economies governments need to play a targeted role in establishing venture capital markets, in collaboration with the private sector, for high tech SMEs, as well as access to equity markets.
- Establish a credit rating agency for businesses, where possible, to make the task of banks lending to SMEs much easier.
- Encourage bank-client relationships to overcome some of the problems relating to asymmetric information and moral hazard.

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CHAPTER 2

Framework Chapter:
SME Access to Finance in Selected East Asian Economies

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1. Introduction and Background

The onset of globalization, with expanded regional economic integration in the context of East Asia, has intensified the competitive pressures on regional SMEs in both domestic and international markets. Despite their perceived weaknesses, related to their relatively small size and limited resources, the region retains a dynamic, entrepreneurial and increasingly internationalized SME sector (Hall, 1995, 1999, 2002). SMEs have not been swept away with the process of globalization and regional integration, but, rather, their role and contribution have evolved as they attempt to retain a competitive position in the domestic and global marketplaces (Harvie, 2002; Harvie and Lee, 2002, 2005; OECD, 2006a). This has involved the adoption of effective business strategies in response to global competition, as well as meeting the needs of the new economy with its emphasis on knowledge, skill and innovation as key sources of competitiveness. Those enterprises most able to respond flexibly and adaptively to rapidly changing regional and global markets will be the most successful (Harvie, 2002). A critical issue is how best to ensure that they fully participate in the business opportunities that will present themselves, including the adoption of international strategic alliances involving

other SMEs and participation in global and regional value chains, or production networks with multinational enterprises. Knowledge and production networking participation by SMEs enables them to combine the advantages of their flexibility, arising from small scale, with the advantages of economies of scale and scope (OECD, 2006a).

Findings from ERIA's SME research project in FY 2009 confirmed that access to finance is amongst the most critical factors determining the competitive readiness of regional SMEs. This in turn determines their ability to fully exploit and participate in the global economy, and the business opportunities stemming from regional economic integration, and, in particular, participation in regional production networks (Thanh, Narjoko, Oum, 2009). In this context the present study is concerned with (1) elaborating in more detail the key factors that are statistically significant in impacting upon SME access to finance, and that contribute to credit rationing to such firms, (2) identifying the significance of limited access to financing, or credit rationing, upon the performance of SMEs, and (3) providing evidence-based policy recommendations addressing the issue of credit rationing, or limited access to finance, for this group of enterprises which is critical for the regional economy. Hence the primary focus of this study is upon deepening our understanding of SME access to finance in selected East Asian economies and in the region as a whole, and its implications for SME performance.

2. SME Access to Funding – Key Issues and Overview

Access to funding is the lifeblood of any enterprise, enabling it to grow, and to generate more output and employment (Ang, 1992; Beck *et al.*, 2005, 2006, and 2008; Berger and Udell, 1998; Chittenden *et al*., 1996; OECD, 2006a, 2006b, 2006c; Vos *et al*., 2007). There is considerable evidence to support the contention that SMEs, in particular, face a number of obstacles and problems in accessing finance, mainly related to their limited resources and perceived risk by lenders (Cassar and Holmes, 2003). This is particularly problematic, and worrisome for policy makers, given that SMEs and entrepreneurship are widely recognized as being the key sources of dynamism,

innovation and flexibility in advanced industrialized, emerging market and developing economies, and are major net job creators in these economies (OECD, 2006a, 2006c). In developing economies, in particular, SMEs make a significant contribution to employment and national income. Without access to finance SMEs are unable to invest, impairing their capacity to: improve productivity; raise competitiveness; promote innovation; generate employment; and contribute to economic growth and development (OECD, 2006a).

2. 1. SME Financing Issues

Compared with the position of large enterprises, the provision of finance to SMEs by lending institutions can be problematic for a number of reasons (Berger and Udell. 2006; Frank and Goyal, 2003). First, such institutions need to be able to effectively monitor the performance of the enterprise and ensure that: the enterprise is abiding by the initial terms of the contract; the enterprise is making satisfactory business progress; the necessary means are available to ensure that the interests of the lender are being respected. Such monitoring, however, is difficult due to a lack of transparency in the operation of SMEs, which are less likely to follow expected norms of corporate governance. This is compounded by the fact that SMEs experience greater volatility in profitability, growth and earnings in comparison to larger firms, and their survival rate is much lower (Storey and Thompson, 1995). SMEs also suffer from principal-agent problems, and asymmetric information, which can lead to investment in more risky projects and present lenders with the difficulty of distinguishing good loans from bad loans. In these circumstances banks find it rational to engage in credit rationing (e.g. not extending the full amount of the credit requested, even when the borrower is willing to pay a higher interest rate). In addition it can be difficult to disentangle the financial position of the owner from that of the firm. SMEs tend to have a much less developed bank-client relationship, which can be important for successful access to finance. These difficulties can be further compounded in the cases of start-up and young enterprises, which can have difficulties in providing the necessary collateral, and may be seen as potentially offering high returns but at high potential risk (Nofsinger and Wang, 2011). For all of these reasons there may be a ‘pecking order’ in terms of firm lending, with

larger firms favored by lending institutions (Seifert and Gonenc, 2008; Watson and Wilson, 2002).

SME problems in accessing finance are further exacerbated by rigidities in macro level policy, institutions and the regulatory environment. At the macro-economy level, government policy may require access to large amounts of finance, crowding out access to finance for SMEs. This is likely to be most severe in economies with a chronic shortage of national savings. Government policies could also favor implementing industrialization and/or import substitution development strategies that result in large domestic firms being given favorable access to finance to the exclusion of other smaller enterprises. The domestic legal system may not adequately protect lending institutions from delinquent payments and bankruptcy, nor protect property rights, thus increasing the risk inherent in lending to SMEs. The financial system may not provide a range of products and services to meet the needs of SMEs. The tax and regulatory system may encourage firms to operate opaquely, thus reducing the tendency to lend to them.

In addition, the characteristics of banks in emerging market economies, in particular, can further compound SME difficulties, even for those in the formal sector (Firth *et al*., 2009; Ngoc and Nguyen, 2009). Most banks are state-owned, with government guaranteed finance available to priority or targeted sectors. Banks may be subject to interest rate ceilings which make it impossible to cover the price (inclusive of perceived risk) of lending to SMEs. In a system unaccustomed to borrowing from banks, firms will not produce credible accounts and will tend to operate opaquely. Hence many SMEs in the formal sector will shun formal bank lending. Those in the informal sector are already excluded from such a source of funding.

2. 2. Schematic Summary of SME Finance Issues and Framework

Figure 1 provides a schematic summary of the major sources of finance for SMEs (formal (Box 1), informal (Box 2) and internal (Box 3)), key issues relating to SME access to and their cost of finance from the literature (Box 4), elaboration of specific issues impacting access to finance for SMEs (Box 5) and the cost of finance for SMEs (Box 6), the importance of access to and the cost of finance for firm performance, and *vice versa* (Box 7), the importance of the policy, legal, institutional and regulatory

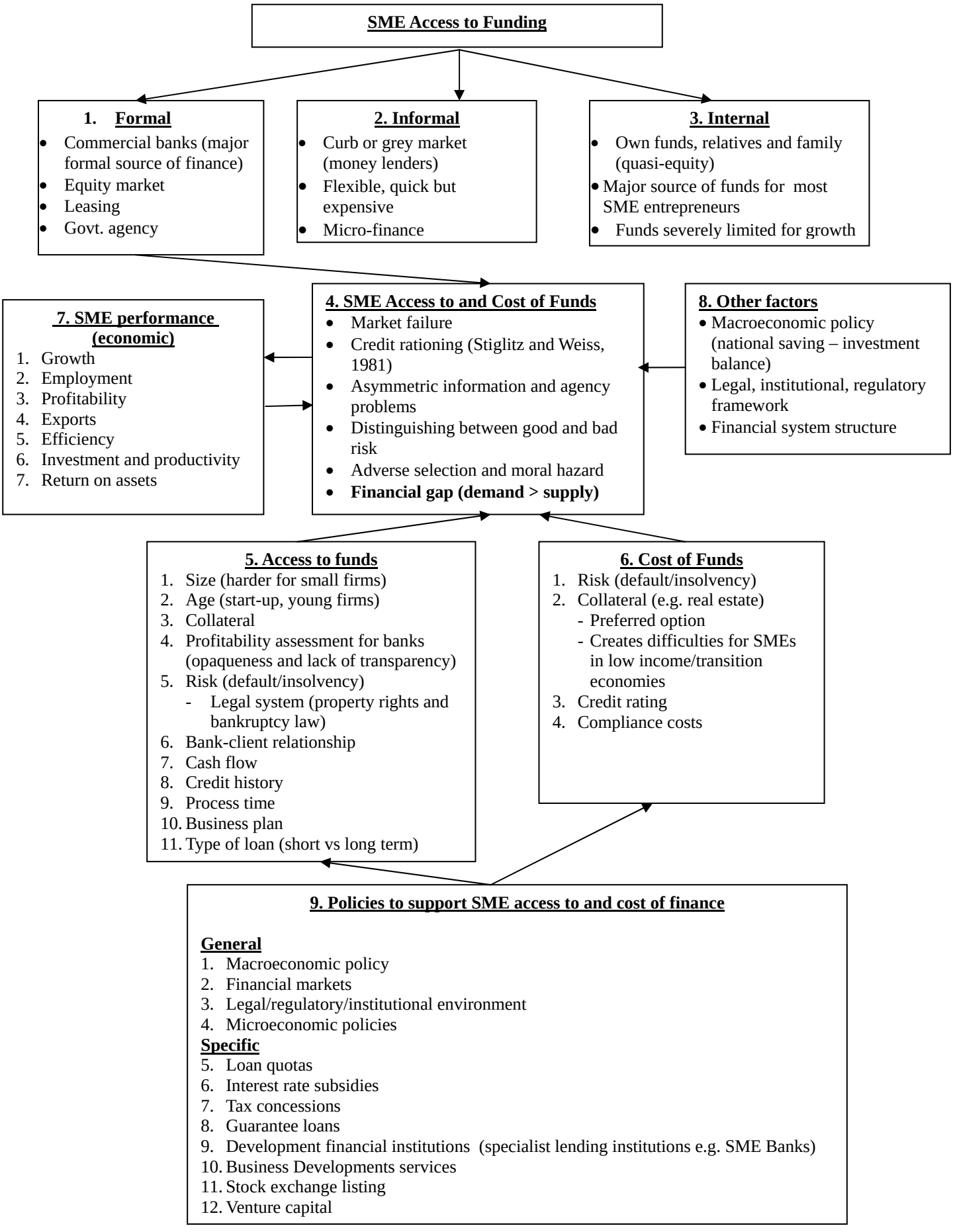
environments to SME access to finance (Box 8), and, finally, specific policy measures that have been and could be adopted to tackle the shortage of finance for SMEs.

Boxes 1-3 in Figure 1 emphasize that there are three major sources of finance for SMEs[1]. These being formal sources (Box 1) (the main external source of finance being from commercial banks, as well as other financial institutions including that of micro-finance institutions), informal sources (Box 2) (such as that from the curb or grey market) which can also be important, particularly in emerging market and developing economies that are dominated by SMEs in the informal sector[2], and have the advantage of flexibility and quick response to SME needs but have extremely high rates of interest, and, finally, the most important source of funding, for between 75-90% of entrepreneurs, that of internally generated funds (Box 3). In many emerging market and developing economies there is a tendency for SMEs to shun the official financial system and remain informal, which further exacerbates their problem of access to funding. This could be due to a lack of interest on the part of banks in lending to SMEs, as well as to a lack of interest on the part of SMEs in becoming formal, which is likely to involve greater scrutiny and transparency of their activities, tighter bureaucratic regulation, and taxation. In addition to these factors, a lack of institutional capability on the part of the authorities to impose laws and regulations may also contribute.

[1] Figure 1 does not include the most important source of finance to SMEs from non financial institutions, which is trade credit. Trade credit has always been an important source of finance for SMEs, and particularly so for those SMEs in emerging and developing economies. Without the provision of such finance the development of the SME sector would have been severely constrained in these economies.

[2] Schneider (2002) estimates that for the average developing economy the informal sector accounts for around 41 percent of official gross national income, compared with 18 percent in the European OECD countries, and that the proportion could be as high as 78 percent in Africa, 57 percent in Latin America and the Caribbean, and between 45-85 percent in Asia (ILO, 2002).

Figure 1. Study Framework



The focus of the study, however, is only on formal sources of finance (i.e. commercial banks and other financial institutions), and it is clear that, in this context, market failure exists (Box 4). SME access to and cost of finance do not compare favorably with the experience of large enterprises. From the literature, market failure in lending to SMEs can arise for a number of reasons, primarily relating to their relatively small size, lack of resources and opaqueness. In the seminal contribution by Stiglitz and Weiss (1981) they show that, due to asymmetric information and principal-agent problems, lending institutions find it difficult to distinguish between good and bad risks, resulting in adverse selection and moral hazard problems. In this context, lending institutions such as banks find it less risky and less costly to lend to large enterprises. From their point of view, therefore, it is rational to apply credit rationing to SMEs, which are subject to greater opaqueness and risk. Problems in accessing finance for SMEs are further compounded by countries imposing import protection for large scale, capital intensive firms. This makes such firms more profitable, less risky and more desirable to lend to. SMEs face higher transaction (compliance) costs in obtaining loans. In many emerging market economies SMEs are discriminated against, and the private sector is still in an embryonic form where many remain in the informal sector, and operate in an environment of underdeveloped financial markets.

SME access to finance is dependent upon a number of factors, both on the supply (lenders) and demand (borrowers) sides (Box 5). These include firm characteristics such as: the size of the SME; the age of the SME, (since start-up and younger enterprises tend to be at a disadvantage relative to older SMEs, because they have no credit track record, less experienced entrepreneurs, and limited collateral); limited availability of collateral, and in particular fixed assets (property, plant and machinery etc.); perceived lack of profitability arising from lending to SMEs by banks; perceived higher risk of lending to SMEs due to higher probability of default and business insolvency; limited bank-client relationships, making it difficult for the bank to assess the viability and business track record of the business; limited cash flow, which exacerbates the risk of default and business insolvency; lack of credit history and credit rating if the business has not borrowed in the past; high process time and cost for loan approvals (due to inadequate data or track record of the company’s finances; lack of a bankable business plan by the

SME; and the likelihood that the duration of any loan that is approved will be short term and not long term.

The cost of funds to SMEs will also likely be higher due to a number of the factors previously listed that limit access to funding (Box 6). These include: greater perceived likelihood of default and insolvency by SMEs relative to large enterprises, a lack of clear ownership of collateral (e, g, real estate), a limited track record of having received credit already and, therefore, no credit rating upon which banks can proceed with the loan, the higher compliance costs faced by SMEs in applying for a loan, and the higher assessment and processing costs required by banks on SME loans relative to the amount borrowed. Assessment costs relative to the size of loans to large enterprises are also likely to be much lower than for SMEs.

Access to finance is critical to the performance of SMEs in a number of areas (Box 7). Access to finance, rather than the cost of finance appears from the literature to be the biggest problem for SMEs. SME performance and development will be severely hindered from a number of perspectives (e.g. growth, employment, profitability, exports, efficiency, productivity and returns on assets) without adequate access to formal sources of finance, as informal sources are very limited and cannot be used as a basis for on-going finance. In turn, an inhibited or poor performance by SMEs in these areas will constrain access to funds and raise the cost of these funds in the future. That is, there is likely to be a bi-directional relationship between the variables contained in Boxes 4 and 7.

Box 8 highlights the fact that access to finance and the terms of this access will be impacted upon by factors beyond the control of the SME itself. Even allowing for the factors previously mentioned as impacting SME access to finance, and the cost of such finance as can be obtained, this problem may be further exacerbated by structural rigidities and distortions in the business environment and financial system. Specifically highlighted here are (1) macroeconomic policy and the relationship between national savings and investment, (2) the legal, institutional and regulatory framework, and (3) the structure of the financial system. These are likely to be quite different across developed, emerging market and developing economies, depending upon their stage of economic development, government policies and the depth and breadth of coverage of the legal system. Emerging market and developing economy SMEs are likely to be at a particular

disadvantage in respect of each of these factors. These economies are most likely to have macroeconomic imbalances that result in excess demand for available domestic savings (financial resources), to have institutional weaknesses that encourage SMEs to participate in low productivity and informal activities, and to possess financial systems that have been less subject to deregulation, openness, and reform of governance and supervision. Given the predominance in such economies of a large number of small and informal enterprises, these are most likely to be at the biggest disadvantage in such an economic system in terms of access to finance.

Finally, many policies have been tried by governments to channel funds to private sector SMEs (Box 9). These include: loan quotas imposed on commercial bank lending to private sector SMEs, interest rate subsidies to SMEs, tax concessions, loan guarantees, the establishment of specialized development financial institutions such as an SME bank, and the provision of business development services that can assist SMEs with business training (e.g. business plan preparation) and network promotion. Macroeconomic policy settings and performance, establishing and deepening financial markets with the requisite regulatory and institutional environment, and appropriate microeconomic policies can establish a sound footing for development of the overall private sector, and for the establishment, nurturing and growth of SMEs. Many initiatives conducted by policy makers in the context of SMEs have failed. The micro-finance literature and experience can shed some light on how such policies can be made more effective.

3. The Existence of SME Financial Gaps[3]

The previous discussion suggested the likelihood that SMEs face a deficiency in obtaining the finance that they require, and that this will act as major inhibitor in terms of their performance – growth, employment, and productivity etc. This section discusses the existence of 'financial gaps' for SMEs. From a theoretical perspective it was considered for a long time that it was not meaningful to talk about a financing gap, except where the authorities deliberately kept interest rates below the market clearing level. As risks increased financial lenders would be required to increase interest rates to bring market demand into equilibrium with market supply. However, Stiglitz and Weiss (1981) showed that under certain conditions financing gaps can exist for all firms, as banks respond in a rational fashion by imposing credit rationing. While the arguments were not specifically targeted at explaining credit rationing for SMEs, these enterprises possess characteristics that make them more prone to credit rationing than larger enterprises. This position has been applied more generally to problems encountered in emerging market and developing economies in particular.

3.1. Concept and Causes of a Financial Gap

The issue of access to finance by firms in general, and the theoretical recognition that financing gaps can exist for firms, can be traced back to the theory of imperfect information in capital markets (Stiglitz and Weiss 1981). Table 1 summarizes the key issues. From the lender's perspective (or supply side), banks have difficulty differentiating between good (high quality) and bad (low quality) loan applicants. As a result banks are likely to adopt more stringent lending policies favoring those who are able to provide more collateral assets, or who have a more established credit record. In other words banks have to adopt **credit rationing** measures to minimize problems from

[3] The term "financial gap" is used here to refer to the existence and extent of difficulty faced by SMEs in attaining access to finance. This could arise as consequences of the implementation of credit rationing by banks, or of the extent of market failure in financial markets. It could be measured by the difference between desired access to finance and actual access to finance, and by the cost and terms of access to finance.

adverse selection and moral hazard. The potential for credit rationing is thought to be greater for small firms.

On the demand side, as argued by Petersen and Rajan (1994), the amount of information that banks could acquire is usually much less in the case of small firms, because banks have little information about these firms' managerial capabilities and investment opportunities. The extent of credit rationing to small firms may also occur simply because they are not usually well-collateralized (Gertler and Gilchrist 1994). The most recent paper by Torre *et al.* (2010) also attributes hindrances to SMEs' access to finance to ''opaqueness", meaning that it is difficult to ascertain if firms have the capacity to pay (have viable projects) and/or the willingness to pay (due to moral hazard). This opaqueness particularly undermines lending from institutions that engage in more impersonal or arms-length financing, requiring hard, objective, and transparent information (Hyytinen and Pajarinen, 2008).

The problem of a mismatch between the supply of funds (loans) and the demand for funds (loans) leads to the notion of "financial gaps" (Industry Canada, 2002), which can be defined as an imperfection (of geography, laws, transaction costs, and regulations) that impedes supply of and demand for financial products from clearing, with the result that markets do not function efficiently. The gaps exist if particular categories of firms that ought to receive financing are systematically unable to obtain it, despite a willingness to pay higher interest rates, indicating market failure particularly if such lending opportunities are profitable. A mismatch between demand for finance and supply of finance can arise due to asymmetry in information and consequent difficulty in distinguishing between good and bad loans, leading to the application of credit rationing. This is potentially more severe for SMEs than for large enterprises. In emerging market economies there is also greater likelihood of Demand > Supply for loans as a result of the implementation of credit rationing.

Table 1. Financial Gap and SMEs

Demand for finance (SMEs)	Supply of finance (financial institutions)
Size	Asymmetric information
Age	Collateral
Collateral	Property rights/contract laws
Transparency – accounting	Bankruptcy laws
Skills/knowledge base	Assessment knowledge
Credit rating	Margins
Taxes/regulations	Risk
Compliance costs	Financial products/services
Formal/informal	Credit rating information
Other	Other

This study intends to elaborate upon the following questions:

(i) To what extent, if any, are the SME sectors identified by size, country and in aggregate, for a sample of countries in East Asia, systematically disadvantaged, or rationed, with respect to access to external financing,

(ii) What are the key factors contributing to the extent of this rationing (or greater likelihood of successful access to finance) focusing upon firm characteristics, owner characteristics and firm performance

(iii) How important is rationing for the performance of SMEs in a sample of East Asian economies?

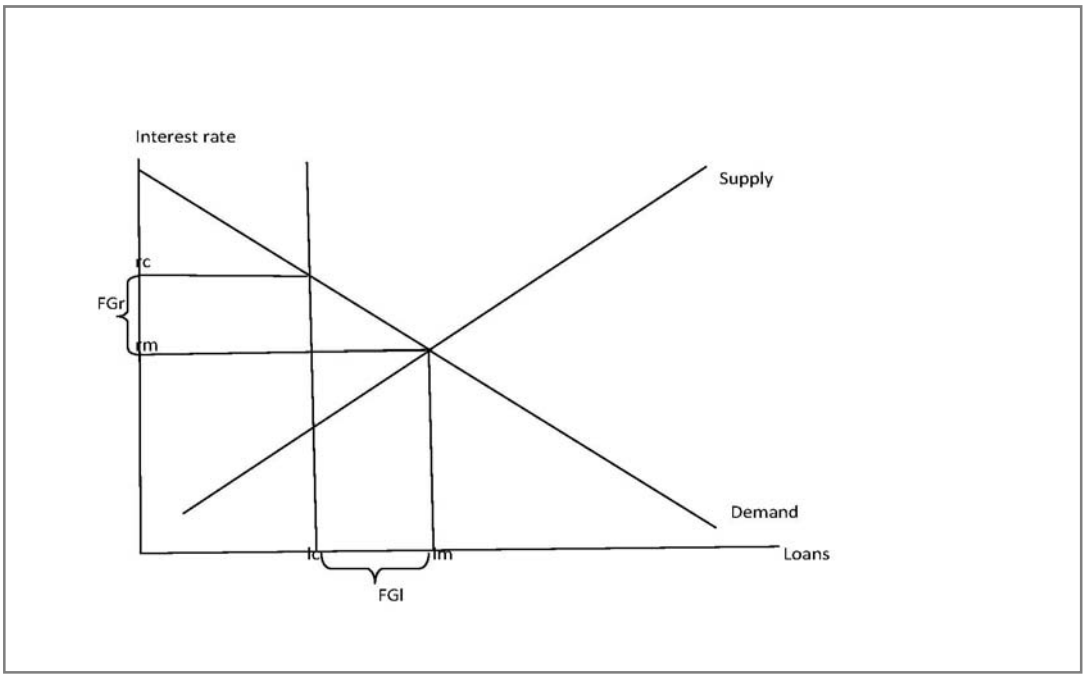
It is worth noting, however, that, for many developing and emerging market economies, household enterprises are predominantly in the informal sector, making access to formal sources of finance virtually zero. However, even these enterprises are potentially viable to lend to. This is the whole basis of the micro-finance literature. The development literature emphasizes livelihood and growth enterprises. The former are potentially good for poverty alleviation, while the latter have the potential for employment generation. The micro-finance literature is, therefore, of relevance in this context.

3.2. Measuring the Extent of a Financial Gap - a Diagrammatic Representation

Critical to the conduct of this study, and to the derivation of robust empirical results addressing the above questions, is the need to derive meaningful indicators of the extent

of any financial gap, or difficulties in accessing finance, relating to SMEs. Figure 2 shows how we can potentially identify the existence of a financial gap, or difficulties in accessing finance for SMEs, and what indicators can be used in the conduct of an empirical analysis. In a financial market with no asymmetric information the market clearing interest rate would be *rm* and the quantity of loans demanded and supplied would be *lm*. However, with asymmetric information and an inability to determine good risk from bad, it may well be rational for banks to engage in credit rationing so that they restrict the total amount of loans available to firms (specifically SMEs) to *lc*. As a consequence the interest rate charged on available loans is *rc*. and the extent of any financial gap, or the extent of the problem for SMEs in accessing finance, for an empirical analysis, can be effectively measured or indicated in two ways:

Figure 2. Financial Gap or Indictors of Difficulty in Accessing Finance



1. by the distance *FGl*, or by the ratio of successful loans (*lc*) to that applied for (*lm*) (the higher this ratio the lower is the amount of the financial gap or credit rationing), or as the ratio of loan rejections to total credit applied for (the lower this ratio the lower is the financial gap or credit rationing), or

2. by the distance *FGr*, or the difference between the market clearing interest rate on loans (proxied by the risk free interest rate on government bonds) and that currently being charged on successful loans to SMEs. The cost of finance for SMEs could also be broadened to include other factors such as the term, or duration, of the loan.

It is important to mention that, without access to extensive and reliable data, it will be difficult to accurately capture these measures (or gaps) indicating the existence and extent of credit rationing, or degree of difficulty in accessing finance for SMEs. As a consequence suitable alternative measures and proxies (such as size of the loan, term of the loan, interest rate on the loan) may be required in order to conduct an empirical analysis.

3.3. Factors Contributing to the Financial Gap or Extent of Credit Rationing

Based upon information contained in Table 1 and information from individual country surveys we can postulate, and test the significance of, the following variables as being potentially influential upon the existence and size of financial gaps, credit rationing or general access to finance, as in Equation 1:

FG = f(S, A, SMEP, I, G, T, O, BP, OT, BSE, CR, CT, Coll, FD, FML) ….. (1)

where:

FG = financial gap/credit rationing/access to finance (this can be based on the relationship between actual loans received and those applied for (*FGl*), or that between the actual interest rate to be paid on the loan and the risk free interest rate (*FGr*), see above, or appropriate proxies for these)

S = firm size (micro, small and large), s'<0

A = firm age, a'<0

SMEP = firm performance (as measured by profitability, productivity, output, sales, exports) p'<0

I = firm innovation (as measured by new products, processes and organizational innovations), i'<0

G = gender of owner/entrepreneur (male/female), g'<>0 (ambiguous)

T = transparency (financial statements), t'<0

O = sector of operation (agriculture, manufacturing, services etc.), o'<>0 (ambiguous)

BP = business plans (preparation/non preparation), bp'<0

OT = ownership type (individual, partnership, joint stock, limited liability etc.), ot' <>0 (ambiguous

BSE = business skill of entrepreneurs (education, training, networking etc.), bse'<0

CR = credit rating, or credit worthiness (availability/non availability), cr'<0

CT = credit terms of the loan (only relevant where the financial gap is measured in terms of loans), ct'>0

Coll = collateral (physical, financial and other assets), coll'<0

FD = financial depth of domestic financial markets, fd'<0

FML = financial market liberalization, fml'<0

Factors emphasized here are predominantly firm characteristics and SME demand for loans/ finance. This study does not attempt to derive from the survey any knowledge about financial institutions/ markets, and hence factors impacting upon the supply of loans. However, we can use proxies for the extent of financial market depth (FD) (notes and coins to total money supply) by country and indexes of financial market liberalization (FML) etc. as measures of the potential supply of finance or financial development and depth within each of the sample of countries.

From Equation 1 we can postulate that the signs of the respective coefficients for each of the independent variables are as follows, to be confirmed or refuted by the subsequent empirical analysis. The coefficient for firm size can be reasonably anticipated to be negative, indicating that as firm size increases the financial gap or credit rationing they face is likely to decline. Firm age is also likely to be negatively related to a financial gap, indicating that the older firm is likely to have a longer track record of being in business, have established dealings with a bank and to be perceived as being less risky and more transparent. Good firm performance in terms profitability, productivity, output, sales and exports is likely to make the firm more attractive to lending by a bank and, therefore, to be negatively related to a financial gap or credit rationing. The greater the demonstrated innovative capacity of a firm, the more likely a bank will lend to it and, as a consequence, it should face a lower financial gap. The impact of the gender of the firm owner on the extent of a financial gap is not clear, or is ambiguous, from the literature. If there is a bias against women entrepreneurs by lending institutions this would be of considerable concern to government authorities, as

approximately one-third of regional SMEs are owned and operated by women. SME transparency (as represented by clarity and depth of financial accounts and statements) can be expected to be negatively related to the financial gap facing SMEs. Greater transparency will make it easier for banks to assess risk in lending to such a firm. Sector of operation by an SME may also be an important factor determining the financial gap for SMEs. However, the outcome, positively or negatively related to the financial gap, is likely to be ambiguous. Certain sectors of the economy may be exposed to more competition and, therefore, be seen by banks as being more risky. Other sectors may be dominated by "informal" SMEs that are in any case effectively excluded from formal sources of finance. Preparation of business plans by SMEs is likely to further facilitate transparency, and reduce risk and asymmetric information as perceived by banks. A negative relationship between this variable and the size of a financial gap can be reasonably anticipated. The relationship between ownership type (individual, partnership, joint stock, limited liability etc.) and the size of financial gap faced by SMEs could be expected to be ambiguous. However, with limited liability ownership, greater information disclosure is likely to be required. As a consequence, for this type of ownership there is a strong likelihood of a negative relationship with the financial gap. The business skills of the entrepreneur/ SME owner can be postulated to be negatively related to a financial gap. Greater demonstrated skills by SME owners will provide banks with greater confidence that loans extended will be more effectively and profitably utilized, thereby reducing perceived risk. The establishment of a credit rating and worthiness by a firm will also contribute to reducing perceived risk by banks, and can be anticipated to reduce the size of any financial gap. The terms of any loan agreement could have an important impact on a financial gap (as measure by the difference between loans applied for and loans obtained). The more costly are the terms of a loan agreement, or the shorter the duration of the loan, the greater the potential gap between desired and actual loans obtained, and the greater the extent of the financial gap. The greater the amount of collateral possessed by an SME, the lower is likely to be the extent of the financial gap. In more general terms it can be postulated that the greater the financial depth or development of a financial system, the greater will be the availability of loans to firms, including SMEs, and, therefore, the lower will be the extent of any financial gap. This variable can be proxied by the ratio of notes and coins

in circulation to the total money supply. Finally, the extent of financial market liberalization or deregulation could give a good indication of the degree of competition in domestic financial markets. The greater the degree of competition, and consequent potential availability of borrowing sources, the lower would be the extent of a financial gap.

3.4. Financial Gaps and SME Sector Performance

The conceptual framework outlining the existence of financial gaps, credit rationing and difficulty of accessing finance for SMEs, and measurement of the difficulty, can also be used to identify the significance of such gaps upon the performance of SMEs. Performance can be measured using a number of variables such as profitability, productivity, output or sales growth, exports, return on assets and other measures as appropriate. It can be empirically estimated using the following Equation 2:

SMEP = f (S, A, I, G, T, O, BP, OT, BSE, CR, CT, Coll, FG) ……. (2)

where:

SMEP = SME performance (as measured by profitability, productivity, output or sales growth, exports, return on assets and other measures obtained from the survey)
S = firm size, s'<>0, ambiguous
A = firm age, a'<>0, ambiguous
I = innovation, i'>0
G = gender of entrepreneur, g'<>0, ambiguous
T = transparency (financial statements), t'>0
O = sector of operation, o' <>0, ambiguous
BP = business plans, bp'>0
OT = ownership type, ot' <>0, ambiguous
BSE = business skill of entrepreneurs, bse'>0
CR = credit rating or credit worthiness, cr'>0
CT = credit terms, ct'>0
Coll = collateral, coll'>0
FG = financial gap (measured in terms of loans or interest rate gap, see above), fg'<0

Equation 2 again emphasizes the importance of firm characteristics and access to finance on SME performance. From Equation 2 it can be postulated that SME

performance is dependent upon firm size (micro, small and medium), but the nature of this relationship is likely to be ambiguous. Firm age may also be significant for performance but the direction of this will be dependent upon other factors that make the outcome from this also ambiguous. Gender of the SME owner is also likely to be ambiguous, as well as sector of operation and impact of ownership type. Firm innovation can be postulated to be positively related to firm performance, as with business transparency, preparation of business plans, the skill level of the entrepreneur, credit rating of the business and access to collateral. Finally, and of particular interest in the context of this study, the size of the financial gap or credit rating facing SMEs is postulated to contribute negatively to SME performance.

4. Methodology

The research methodology adopted in this study consisted of four stages. Stage 1 involved **generating and compiling data** obtained by means of a structured questionnaire survey of SMEs conducted in eight East Asian countries (Cambodia, China, Indonesia, Laos, Malaysia, Philippines, Thailand and Vietnam), with the aim of generating a total of 150 useable samples for each country. Individual country reports were compiled from this data, and included relevant contextual and policy related information and analysis. These country chapters highlight specific country conditions and issues in relation to SME access to finance. This is important, as not all country conditions are similar, and reflect different stages of economic, institutional, legal and regulatory development. In Stage 2 the data generated and compiled from stage 1 is used to **empirically estimate** Equations 1 and 2 outlined in the previous section. Equations 1 and 2 are estimated (1) in aggregate using all the data from each of the individual countries in the study, (2) by individual country, (3), using different measures or proxies where necessary for FG (credit rationing or access to finance), by disaggregated source of finance where possible (e.g. by bank credit, equities, leasing, micro finance/informal and government), and (4) by size of enterprise (micro, small and medium). From this empirical analysis it is possible to identify statistically significant

factors contributing to financial gaps or credit rationing faced by SMEs for (1) the sample in aggregate, (2) by individual country, (3) by source of finance and, (4) by size of SME. In addition, we can identify the impact of financial gaps or credit rationing, in aggregate and by source of finance, on SME performance (using various measures of performance) (1) for the sample in aggregate, (2) by individual country, and (3) by size of SME. Equations (1) and (2) can be estimated simultaneously using the maximum likelihood estimation technique to test for and obtain more accurate results for the statistical significance of the variables identified in each equation.

Stage 3 of the study involved a **detailed analysis of the empirical results** obtained in Stage 2, aimed at highlighting important differences between the results obtained for the sample in aggregate, by individual country, by source of finance and by size of SME. In particular, a number of testable hypotheses are given particular focus:

4.1. Testable Hypotheses

A number of testable hypotheses are highlighted during this stage of the study. These include:

4.1.1. Hypothesis 1

The measures (or proxies) used in this study for capturing the extent of the financial gap, credit rationing or financial constraints faced by SMEs (1) in aggregate for all countries, (2) by individual country and (3) by size of SME (micro, small and medium) is positively (or negatively) and statistically significantly related to firm attributes or characteristics (size, age, innovation, transparency, sector of operation, preparation of business plan, ownership type, credit rating and credit terms), owner attributes (gender, business skills and collateral) and firm performance (profitability, productivity, exporting and output growth). Each of the above is identified separately.

4.1.2. Hypothesis 2

The measures (or proxies) used in this study for capturing the financial gap, credit rationing or financial constraints faced by SMEs, by individual source of finance (1) in aggregate for all countries, (2) by individual country and (3) by size of SME (micro, small and medium) is positively (or negatively) and statistically significantly related to

firm attributes or characteristics (size, age, innovation, transparency, sector of operation, preparation of business plan, ownership type, credit rating and credit terms), owner attributes (gender, business skills and collateral) and firm performance (profitability, productivity, exporting and output growth). Each of these is identified separately.

4.1.3. Hypothesis 3

SME performance (as measured by profitability, productivity, exporting and output growth) in (1) aggregate, (2) by individual country and (3) by size of SME (micro, small and medium) is negatively (or positively) and statistically significantly related to firm attributes or characteristics (size, age, innovation, firm transparency, sector of operation, preparation of business plan, ownership type, credit rating and credit terms), owner attributes (gender, business skills and collateral) and the measures (proxies) of size of financial gaps/credit rationing in aggregate and by source of finance.

Stage 4 of the study emphasized and derived **key policy implications** arising from the empirical results from the study. The empirical analysis enables identification of statistically significant factors contributing to financial gaps, credit rationing or financial constraints (in aggregate and by type of finance) faced by SMEs. It emphasizes firm attributes and characteristics, owner attributes and firm performance. Observable differences in outcomes relating to these factors by individual country, by size of SME and by source of finance in particular, have enabled identification of appropriate evidence-based policies, tailored to fit the particular circumstances and requirements of each country. A “one size fits all” approach is inappropriate given the diversity of the economies studied and differences in their respective stages of economic, institutional and regulatory development. The empirical results shed light on the major weaknesses of SMEs in relation to attaining finance on the demand side, as well on the supply side (financial depth and liberalization), and, therefore, by implication, provide specific policy recommendations on how to improve accessibility to finance for SMEs.

The study enabled validation, or otherwise, of the assertion that access to finance, and therefore minimizing any financial gaps and credit rationing, is critical to improving the performance of SMEs based upon a number of performance measures. This was done in the context of all the country samples in aggregate, by individual country, by

size of SME and by source of finance. In terms of the latter it is possible to also identify the most important sources of finance impacting SME performance.

5. Summary and Conclusions

This chapter has provided a framework within which the concept of a “financial gap” or “credit rationing” can occur in the context of SMEs, and alternative measures of it can be developed and proposed. Its measurement is critical for the conduct of an empirical study concerned with identifying statistically significant factors influencing the magnitude of this funding or credit gap in relation to the SME sector. Data for the study is generated from a structured questionnaire conducted in eight East Asian economies. Focus is placed upon identifying the significance of firm attributes or characteristics, owner attributes and firm performance upon the existence of financial gaps or credit rationing, in aggregate and by source of finance, for SMEs (by size micro, small and medium). The statistical significance of financial gaps and credit rationing for the performance of SMEs in aggregate for the eight countries, by individual country and by size of SME will also be investigated.

The empirical results obtained from this study are of considerable policy relevance. They will facilitate identification of country differences, firm size differences, and source and cost of finance differences for SMEs across the participating economies, as well as key factors contributing to difficulties in accessing finance and the cost of this finance. The importance of such financial constraints on various indicators of SME performance will highlight the urgency, depth and type of response required by individual surveyed countries. Such evidence-based policy recommendations will likely highlight the need for individual countries to tailor their policies aimed at meeting the financial requirements of their domestic SMEs to their own circumstances, needs, priorities and stage of economic development.

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CHAPTER 3

Small and Medium Enterprises' (SMEs') Access to Finance in Selected East Asian Economies

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This paper attempts to shed light on the issues of SME financing in selected East Asian economies. It will elaborate on the following questions: (i) what are the key sources of external finance for SMEs (ii) the extent to which, if any, the SME sector identified by size, country and in aggregate for a sample of countries in East Asia are systematically disadvantaged, or rationed, with respect to access to external financing, (iii) what are the key factors contributing to the extent of this rationing (stringent requirements) focusing upon firm characteristics, owner characteristics and firm performance, and (iv) identify the importance of rationing for the performance of SMEs in a sample of East Asian economies.

1. Introduction

Access to funding is the lifeblood of any enterprise, facilitating its growth, generating more output and employment (Beck et al., 2005, 2006, and 2008). There is considerable evidence to support the contention that SMEs face a number of obstacles in accessing finance, mainly related to their limited resources and perceived risk by lenders. The focus of this paper is limited to formal sources of finance (e.g. commercial banks and other financial institutions), and it is clear that, in this context, market failure exists. SMEs' access to finance and the cost of this finance does not compare favorably with that of large enterprises. From the literature, market failure in lending to SMEs can be ascribed to a number of reasons, primarily relating to their relatively small size, lack of resources, and opaqueness (Petersen and Rajan, 1994; Berger and Udell, 1998; Hyytinen and Pajarinen, 2008).

In the seminal contribution by Stiglitz and Weiss (1981), they show that due to the problems of dealing with uncertainties such as agency problems, asymmetric information, adverse credit selection and monitoring problem, lending institutions find it difficult to distinguish between good and bad risk which can result in adverse selection and moral hazard problems. In this context, lending institutions such as banks find it less risky and less costly to lend to large enterprises, and, therefore, rational to apply credit rationing to SMEs which are subject to greater opaqueness and risk. SMEs face higher transaction (compliance) costs in obtaining loans.

In many emerging-market or transition economies SMEs face even more severe challenges as the private sector is still in an embryonic form, many SMEs remain in the informal sector and operate in an environment of underdeveloped financial

markets. Domestic financial markets may have a limited range of financial products and services that are ill-suited to the needs of SMEs, which stems from a variety of reasons, such as regulatory rigidities, an incomplete legal framework or a lack of interest in lending to such enterprises.

Access to finance is critical to the performance of SMEs in a number of areas. From the literature, it appears that such access rather than the actual cost of the finance is the biggest problem for SMEs. Without adequate access to formal sources of finance, SME performance and development will be severely hindered from a number of perspectives (e.g. growth, employment, profitability, exports, efficiency, productivity and returns on assets), as informal sources are very limited and very costly. In turn, inhibited or poor performance by SMEs in these areas will further exacerbate access to and cost of funds in the future.

This paper attempts to shed light on the issues of SME financing in selected East Asian economies. It will elaborate on the following questions: (i) what are the key sources of external finance for SMEs (ii) the extent to which, if any, the SME sector identified by size, country and in aggregate for a sample of countries in East Asia are systematically disadvantaged, or rationed, with respect to access to external financing, (iii) what are the key factors contributing to the extent of this rationing (stringent requirements) focusing upon firm characteristics, owner characteristics and firm performance, and (iv) identify the importance of rationing for the performance of SMEs in a sample of East Asian economies.

We find that a significant number of SMEs still rely on internal resources for both start-up and business expansion. However, external finance becomes very important for domestically owned, small-sized, lower-profit generating, business-inspirational

SMEs with insufficient funds in less developed economies. Moreover, size of SME and stage of country development, reflecting financial market conditions, also affect the diversity of choices of financial institution and financial products that SMEs can access.

Our analysis reveals potential credit rationing or risk premiums exercised by financial institutions on SMEs. The key findings from our analysis suggests that size and stage of country development (financial market development) do affect the conditions of external finance offered to SMEs, i.e., larger-sized SMEs in more developed economies tend to get larger *amounts of loans, with longer terms,* and *lower interest rates.* We also find that an owner's net worth, collateral, business plan, financial statement, and cash flow are critical in determining the conditions of loans extended by financial institutions to SMEs. Financial institutions put higher risk premiums on opaque SMEs by offering them less favorable financial conditions relative to less well established and transparent SMEs.

Financial access has a significant impact on the innovation capability and export market participation by SMEs. The study suggests that larger SMEs having access to larger loans, of longer term duration and with a lower interest rate, are conducive to their innovation capability and participation in foreign markets. External finance with favorable conditions provides SMEs with sufficient time and resources to enhance their innovation capability and to enter foreign markets.

The rest of this paper is structured as follows. Section 2 discusses pertinent literature to provide a framework for our analysis and to establish some testable hypotheses. Section 3 presents the methodology for the empirical exercise, including a brief description of the survey from which the data for this study was drawn. Section 4

presents the results of the empirical exercises. Section 5 presents the key policy recommendations from these findings and Section 6 concludes the chapter.

2. SMEs Access to Finance in the Literature

Before discussing key issues relating to SME access to finance, it is important to understand how firms choose their sources of finance. There are two main theories in the literature: the tradeoff theory (Myers, 1977, 1984) and pecking order hypothesis (Watson and Wilson, 2002; Frank and Goyal, 2003; Cassar and Holmes, 2003). According to the tradeoff theory firms reach an optimal capital structure by balancing the benefits of debt (tax and reduction of free cash flow problems) with the costs of debt (bankruptcy and agency costs between stockholders and bondholders). The pecking order hypothesis asserts that due to the presence of information asymmetries between the firm and potential financiers, the relative costs of finance will vary between the financing choices inasmuch as firms prefer internal sources of finance (retained earnings, savings of existing owners) to external ones (bank loans, leasing, equity) as the costs of external finance are likely to be greater for them. Therefore, profitable firms with retained profits can use these for firm financing before accessing outside sources.

The issue of access to external finance by firms can also be traced back to the theory of imperfect information in capital markets. According to Stiglitz and Weiss (1981), seen from the lender's perspective (or supply side), banks have difficulty in differentiating between good (high quality) and bad (low quality) loan applicants

where there is asymmetric information. As a result, banks are likely to adopt more stringent lending policies favoring those who are able to provide more collateral assets or have a better established credit record. In other words, banks have to adopt credit rationing measures to minimize problems from adverse selection and moral hazard. The potential for credit rationing is thought to be greater for small firms as they are subject to greater opaqueness.

On the demand side, as argued by Petersen and Rajan (1994), the amount of information that banks could acquire is usually much less in the case of small firms, because they have little information about these firms' managerial capabilities and investment opportunities. The extent of credit rationing to small firms may also occur simply because they are not usually well-collaterised. Gertler and Gilchrist (1994) argue that firm size is a major determinant of access to external finance. A more recent paper by de la Torre *et al.* (2010) also attributes hindrances of SME access to finance to ''opaqueness", meaning that it is difficult to ascertain if firms have the capacity to pay, i.e., have viable projects and/or the willingness to pay (due to moral hazard). This opaqueness particularly undermines lending from institutions that engage in more impersonal or arms-length financing that requires hard, objective, and transparent information.

There are a number of notable empirical findings on the issue of SME finance. Our review is by no means exhaustive. Watson and Wilson (2002), using UK data, find that the pattern of coefficients was found to be consistent with the pecking order model predictions that retained earnings are the most preferred source of finance, then debt and finally the issue of new shares to outsiders. Cassar and Holmes (2003), using a large Australian nationwide panel survey, suggest that asset structure, profitability

and growth are important determinants of capital structure and financing. Their results generally support static trade-off and pecking order arguments. However, Frank and Goyal (2003), using publicly traded American firms for 1971 to 1998, suggest that their results are contrary to the pecking order theory, in that net equity issues track the financing deficit more closely than do net debt issues.

Vos *et al.* (2007), using UK and US data, assert that financial performance indicators (growth, return on assets, profit margin) are not determinants of SME financing activities, indicating a positive account of small business financing. They claim that SME financial behavior demonstrates substantial financial contentment or 'happiness', as they are non-growth orientated. However, they show that growth-interested SMEs are more active in the use of and access to external sources of funds.

Beck *et al.* (2008) find that small firms and firms in countries with poor institutions use less external finance, especially bank finance, less leasing or trade finance compared with larger firms. They also find that larger firms more easily expand their external financing when they are financially constrained than do small firms, and find suggestive evidence supporting the pecking order hypothesis across countries.

Nofsinger and Wang (2011) study the determinants of external financing in initial firm start-ups in 27 countries. They suggest that information asymmetry and moral hazard problems complicate access to start-up capital. They find that entrepreneurial experience is helpful in obtaining financing from institutional investors, and that the legal environment is important for access to external financing. High amounts and diversity in sources of external financing are associated with high levels of property rights, contract enforcement, and corruption protection.

As far as East Asian countries are concerned, Le and Nguyen (2009) emphasize the role of networking on bank finance for SMEs in Vietnam. Firth *et al*. (2009) use firm's profitability, political connections via state minority ownership as a criterion in granting loans and in determining loan size in China. They find that in the absence of credit bureaus and exchange of loan information across the banking sector, banks rely on corporate governance as a signal of borrowers' quality in a lending environment with severe asymmetric information. Good corporate governance can serve as organization collateral to facilitate access to bank loans.

From our brief literature cited above, a number of testable hypotheses will be highlighted in this stage of the study. These include:

Hypothesis 1*:*

SMEs' access to external finance by sources and types are related to: (i) firm attributes: size, firm age, sector of operation, country's stage of development, business life cycle, ownership type; (ii) owner attributes: managerial experience, net worth, running more than one business; and (ii) firm's past performance record: profitability, and sales growth.

The dependent variable is a binary variable and identifies: (i) whether or not a firm applied for any type of external finance (bank loans, leasing, equity, grant, or trade credits from suppliers); (ii) whether or not they had access to more than two financial institutions; and (iii) whether or not they had access to at least two types of external finance in the past 12 months.

From the literature, we expect the relationship between dependent and independent variables can be summarized in Table 1 as follows:

Table 1. Dependent variable: SMEs' Access to External finance/ Multiple Sources/ Multiple Types

Independent Variables	Expected sign
1. Business-life cycle	+/-
2. Foreign ownership	+/-
3. Owner's managerial experience	+/-
4. Owner's net worth	+/-
5. Owner's multiple businesses	+/-
6. Sales growth $_{t-1}$	+/-
7. Profit margin $_{t-1}$	-
8. Expansion plan	+
9. Sufficient internal fund	-
Control Variable	
10. Age	+/-
11. Size	+/-
12. Dummy countries	+/-
13. Dummy sectors	+/-

Hypothesis 2:

Conditions of the loan size, term of the loan, and interest rate offered to SMEs are related to: (i) firm attributes: size, firm age, firm innovation, sector of operation, country's stage of development, business life cycle, ownership type; (ii) owner attributes: managerial experience, net worth, running more than one business; (iii) firm's past performance record: profitability, sales growth; and (iv) meeting lender's requirements: collateral, business plan, financial statement, and cash flow.

Table 2. Dependent Variable: Loan size, Term of Loan, and Interest Rate Offered to SMEs

Independent variables	Expected Sign		
	Loan size	**Term of Loan**	**Interest rate**
1. Business-life cycle	+/-	+/-	+/-
2. Foreign ownership	+/-	+/-	+/-
3. Owner's managerial experience	+	+	-
4. Owner's net worth	+	+	-
5. Owner's multiple businesses	+	+	-
6. Sales growth t-1	+	+	-
7. Profit margin t-1	+	+	-
8. *Collateral*	+	+	-
9. *Business plan*	+	+	-
10. *Financial statement*	+	+	-
11. *Cash flow*	+	+	-
Control Variable			
12. Age	+/-	+/-	+/-
13. Size	+	+	-
14. Dummy countries	+/-	+/-	+/-
15. Dummy sectors	+/-	+/-	+/-

Hypothesis 3: SME performance: SMEs' innovation capability and exports are related to: (i) firm attributes: size, firm age, sector of operation, stage of country's development; (ii) access to finance.

Table 3. Dependent Variable: SMEs' Innovation Capability and Export

Independent variables	Expected Sign	
	Innovation	**Export**
1. Loan size	+	+
2. Term of loan	+	+
3. Interest rate	-	-
Control Variable		
4. Age	+/-	+/-
5. Size	+	+
6. Dummy countries	+/-	+/-
7. Dummy sectors	+/-	+/-

3. Methodology and Data

The research methodology adopted a structured questionnaire survey of SMEs conducted in eight East Asian countries (Cambodia, China, Indonesia, Laos, Malaysia, the Philippines, Thailand and Vietnam). It is anticipated that a total of 150 useable samples will be obtained from each country. The questionnaire aimed at collecting information on SME characteristics, sources and usage of finance. Information on the following characteristics of SMEs is collected: basic characteristics (i.e., size, age), ownership, cost and input structure, performance (i.e., participation in production networks, sales, sales growth, profit rate, etc.), sources of finance and usage, capability to innovate, and managerial background.

Table 4. Sample Distribution

	1 to 5	6 to 49	50 to 99	100 to 200	Total	% of Total
Garment	62	193	53	32	340	32.2 %
Parts, Components and Automotives	22	55	13	11	101	9.6%
Electrical, Electronic, Parts and Machinery	23	87	33	35	178	16.9%
Others	146	215	37	38	436	41.3%
Total	253	550	136	116	1055	
	24.0 %	52.1%	12.9%	11.0%		100.0%

Firm size is defined in terms of employment and large firms are defined as those with more than 200 employees. In other words the sample contains observations of firms with a maximum of 200 employees. There are 1055 surveyed firms that fall within this definition. Tables 4 and 5 summarize the key characteristics of the surveyed SMEs. SMEs between 6 and 49 employees accounted for 52% of the total, followed by 24%, 13%, and 11% for the employment groups of 1 to 5, 50 to 99, and

100 to 200, respectively. Distributed by industry, 32% are from garments, more than 9% from parts, components and automotives, 17% from electrical, electronic, parts, and machinery, and 41% are in other industries. The average age of the SMEs was more than 10 years. Most of them are domestically owned and sold their products domestically.

Table 5. Characteristics of the Surveyed SMEs

Characteristics	Garment			Parts, Components, and Automotives			Electrical, Electronic, parts and machinery			Others		
	N	Mean	S.D	N	Mean	S.D	N	Mean	S.D	N	Mean	S.D
Age (year)	336	15.2	10.5	100	16.9	10.5	170	15.2	10.6	418	13.2	8.9
Ownership (%)												
Domestic	328	97.38	13.54	85	96.64	15.61	154	95.27	18.95	406	98.54	9.80
Foreign	22	63.36	36.28	20	94.30	13.72	33	91.75	18.17	34	80.25	31.11
Sales (% growth)												
2008	187	12.11	68.52	46	26.23	46.59	112	15.84	31.12	396	8.85	22.76
2009	302	11.70	80.60	97	4.96	38.26	163	18.63	97.47	423	13.59	49.70
Profit (%)												
2008	302	8.70	70.01	96	13.16	21.86	160	11.81	71.75	418	18.10	14.16
2009	309	9.43	53.20	97	14.61	18.77	164	-8.65	315.61	413	19.08	13.90
Cost Structure 2009 (%)												
Labour	303	28.88	21.50	96	26.06	15.60	154	22.73	14.57	404	17.06	11.87
Raw Materials	299	50.88	22.14	88	56.56	21.34	151	56.75	21.01	393	55.19	18.75
Utilities	297	8.92	8.77	84	8.41	10.68	133	6.52	7.33	385	14.58	12.06
Interest	271	3.16	6.33	80	3.42	6.30	116	2.53	5.39	366	2.63	5.13
Other costs	285	3.87	7.40	86	6.47	9.92	142	7.36	10.54	375	5.61	8.71
Employees (persons)	340	35.98	41.61	101	36.27	43.45	178	51.72	51.00	434	28.40	41.56
Tertiary (%)	266	7.82	13.36	89	9.53	16.47	121	24.42	26.35	285	11.07	22.14
Vocational (%)	258	12.66	21.06	91	26.29	33.25	126	25.96	28.39	280	14.20	25.96
High school or less (%)	331	82.24	26.25	96	61.04	37.53	161	54.69	39.99	413	80.74	31.64
Sale Destination (%)												
Domestic	331	87.61	27.44	98	93.77	20.62	169	90.30	23.49	426	95.15	17.73
Export	80	57.45	33.79	14	57.92	37.30	42	45.81	37.15	51	38.82	34.71

Source: ERIA – SMEs Survey.

Some adjustments have been made to prepare the data for this study. In most cases this involved adjustments in order to make the data consistent and comparable across the surveyed countries. Adjustments were made for some obvious errors in the data entry process. This is typical for a firm-level survey, where there is always incomplete or missing information. This study, however, did not attempt to replace the missing information with a predicted value.

3.1. Statistical Method

The dependent variables for each hypothesis are examined by way of statistical regression. The statistical model in its general form is given as follows:

$$Y_i = \gamma_0 + \Gamma' X_i + \varepsilon_i \quad \text{.....} \quad (1)$$

where (1) is the equation for dependent variables, *i* represents firm *i* and X_i is a set of explanatory variables that captures firm characteristics and concerned variables proposed in the hypotheses. Industry and country-group dummy variables are included for differences across industries and countries. The industry dummy variables identify whether firms are in the following sectors: garments, auto parts and components, electronics, including electronics parts and components, or other sectors. Meanwhile, country-group dummy variables identify whether a firm operates within the group of developed ASEAN countries (i.e., Thailand, Malaysia, Indonesia, the Philippines, and China) or the group of new ASEAN member countries (i.e., Cambodia, Lao PDR, and Vietnam).

3.2. Measurement and Summary of Variables

Besides the industry and country-group dummy variables described above, the following variables are employed to account for the hypothesized firm characteristics. The set of dependent and independent variable are defined and measured as follows:

3.2.1. Financial Variables

For SMEs need for external finance, three dummy variables are created. First, a dummy variable is created and takes a value of unity if a firm applied for any type of external finance (bank loans, leasing, equity, grant, or trade credits from suppliers) in the past 12 months, or 0 otherwise. The second dummy variable takes a value of unity for a firm accessing more than two financial institutions in the past 12 months, or takes 0 otherwise. The third dummy variable takes a value of unity for a firm accessing at least two types of external finance in the past 12 months, or 0 otherwise

Three variables are identified to capture the conditions of finance extended to SMEs. One is the amount of the loan and another is its length; both are given in natural logarithm form. Lastly, the loan's interest rate is measured by the interest rate on the loan that the SMEs in the sample were able to obtain. These variables tend to be firm-specific since they reflect the risk premium value assessed by the banks or other lending institutions that advanced loans to the SMEs.

Four dummy variables are created to capture the conditions required by lenders for the finance to be advanced which are: collateral, business plan, financial statement, and cash flow. The value of each of these variables is equal to unity if each of the requirements is met, or zero otherwise.

3.2.2. Firm Characteristics

For the characteristics of SMEs, firm size is proxied by the number of employees. Other common alternatives, such as output or profits, are not used as they tend to be more sensitive to changes in the business cycle or macroeconomic variables. The head-count measure is chosen because data on the number of hours worked, which is the ideal measure of employment, is not available. Meanwhile, the age of the firm is proxied by the number of years that its plant has been in commercial production.

Two other dummy variables are created to capture the firm's business life-cycle (start-up, fast growth, slow growth, maturity, and decline) and type of ownership (domestic or foreign owned). The first dummy variable is created to identify whether a firm is a start-up and grows at a rate much faster than the economy, taking the value of unity, or zero otherwise. Foreign ownership is defined by the percentage share of foreign ownership, with a share over 51%. It takes a value of unity if it is foreign owned, or zero otherwise.

Three variables are defined owner attributes: managerial experience, net worth, and running more than one business. The owner's managerial experience is the number of years the majority owner has accumulated in owning or managing a business. The owner's net worth is the estimated total private and business assets of the majority owner. These two variables are converted into natural logarithms. The last dummy variable takes the value of unity if the owner is running other businesses, or zero otherwise.

3.2.3. Firm Performance Variables

In order to assess the relationship between SMEs' access to finance and their performance, two main performance variables are considered against the financial variable, i.e., loan size, term of the loan, and interest rate. The first variable is SMEs' innovation capability and the second is the exporting activity of the surveyed SMEs. The first dummy variable takes a value of unity if a firm is reported to have done business, process, and product innovation at the same time, or 0 otherwise. The second dummy variable takes the value of unity if a firm reports having its products exported to foreign markets, or 0 otherwise.

All variable definitions and summary statistics are given in Table 6.

Table 6. Variable Definition and Summary Statistics

Variable	Definition	N	Mean	S.D
Applied for external finance	Dummy variable takes value 1 for a firm applied for any type of external finance (bank loans, leasing, equity, grant, or trade credits from suppliers) in the past 12 months, or 0 otherwise	1055	0.5441	0.4983
Access to more than 2 financial institutions	Dummy variable takes value 1 for a firm access to more than two financial institutions in the past 12 months, or 0 otherwise	419	0.1551	0.3625
Access to at least 2 types of external finance	Dummy variable takes value 1 for a firm access to at least two types of external finance in the past 12 months , or 0 otherwise	507	0.4300	0.4956
Loan size	Logarithm of firm's amount of loans offered	358	10.1106	2.4389
Term of loan	Logarithm of firm's average number of years of loans offered	376	1.8155	1.2696
Interest rate	Logarithm of firm's average interest rate paid	440	2.3860	0.7293
Innovation capability	Dummy variable takes value 1 for a firm having, business, process, product innovation capability, or 0 otherwise	1055	0.2152	0.4111
Export	Dummy variable takes value 1 for a firm participation in export market, or 0 otherwise	1055	0.1773	0.3821
Business-life cycle	Dummy variable takes value 1 for a firm in the start-up and fast growth stage, or 0 otherwise	1055	0.2408	0.4277
Foreign ownership	Dummy variable takes value 1 for a firm with the share of foreign ownership more than 51%, or 0 otherwise	1055	0.0815	0.2738
Owner’s managerial experience	Logarithm of firm's owner years of managerial experience	834	2.4036	0.8277
Owner’s net worth	Logarithm of firm's owner net worth of private and business asset	838	11.6518	1.6811
Owner’s multiple businesses	Dummy variable takes value 1 for a firm's owner running other businesses, or 0 otherwise	1005	0.3592	1.3476
Sale growth $_{t-1}$	Logarithm of firm's sale growth in Year t-1	596	2.3662	0.9793
Profit margin $_{t-1}$	Logarithm of firm's profit margin in Year t-1	899	2.4899	1.1333
Expansion plan	Dummy variable takes value 1 for a firm 's plan to expand the business in the next 2 years, or 0 otherwise	917	0.6150	0.4868
Sufficient internal fund	Dummy variable takes value 1 for a firm's reported to have sufficient fund to finance its expansion plan, or 0 otherwise	972	0.4064	0.4914
Collateral	Dummy variable takes value 1 if a firm 's required to provide collateral as a condition for financial approval, or 0 otherwise	553	0.6184	0.4862
Financial statement	Dummy variable takes value 1 if a firm 's required to provide financial statement as a condition for financial approval, or 0 otherwise	569	0.5272	0.4997
Business plan	Dummy variable takes value 1 if a firm 's required to submit business plan as a condition for financial approval, or 0 otherwise	568	0.4120	0.4926
Cash flow	Dummy variable takes value 1 if a firm 's required to provide cash flow as a condition for financial approval, or 0 otherwise	570	0.2912	0.4547
Age	Logarithm of firm's number of year since its year of establishment	1026	2.4308	0.7352
Size	Logarithm of firm's number of employment	1055	2.8112	1.3093
Dummy country	Dummy variable takes value 1 for Cambodia, Lao, Vietnam, or 0 otherwise	1055	0.4483	0.4976
Dummy sector	Dummy variable takes value 1 for garment sector, or 0 otherwise	1055	0.3223	0.4676
	Dummy variable takes value 1 for auto parts and components, or 0 otherwise	1055	0.0957	0.2944
	Dummy variable takes value 1 for electronics, and electronics parts and component, or 0 otherwise	1055	0.1687	0.3747
	Dummy variable takes value 1 for other sectors, or 0 otherwise	1055	0.4114	0.4923

4. Empirical Results and Discussion

4.1. SMEs' Access to External Finance by Sources and Types

Before analyzing hypothesis 1 on the need of SMEs for external finance, we check the response from SMEs with regards to their sources of funds for start-up and operations and the main purpose of the requested finance. Results from Tables 7a, 7b, and 7c confirm that firms use first internal finance (loans from friends or relatives and personal savings) as the main source of finance for starting a new firm and operations. However, external finance from financial institutions becomes more important than internal finance in the form of retained earnings, for their business operations. The main purposes of the requested external finance are for working capital, buying machinery, equipment, and to grow the business. These results seem to support the pecking order hypothesis that firms prefer internal sources of finance to external sources as long as these remain available and are cheaper.

Table 7.a. Source of Finance for Business Start-up

	N	Mean	S.D
Loans from friends or relatives of business owner(s)	1055	0.564	0.496
Retained earnings	1055	0.528	0.499
Commercial or personal loans and lines of credit from financial institution including credit cards.	1055	0.362	0.481
Trade credit owing to suppliers	1055	0.331	0.471
Leasing	1055	0.183	0.387
Loans from individuals unrelated to the firm or its owner ("angels")	1055	0.171	0.376
Personal savings of business owner(s)	1055	0.156	0.363
Government funding, grants	1055	0.111	0.314
Micro-credit	1054	0.102	0.302
Other sources of financing	1055	0.047	0.213

Table 7.b. Source of Finance for Business Operations

	N	Mean	S.D
Personal savings of business owner(s)	1034	0.721	0.449
Loans from individuals unrelated to the firm or its owner ("angels")	1034	0.646	0.478
Government funding, grants	1032	0.499	0.500
Commercial or personal loans and lines of credit from financial institution including credit cards.	1030	0.331	0.471
Retained earnings	1033	0.329	0.470
Trade credit owing to suppliers	1029	0.232	0.422
Loans from employees	1028	0.190	0.392
Leasing	1027	0.155	0.362
Micro-credit	1055	0.116	0.320
Other sources of financing	973	0.055	0.229

Table 7.c. Purpose of Requested Finance

	N	Mean	S.D
Working capital/ operating capital, such as inventory or paying suppliers	598	0.540	0.499
Other Machinery and equipment	595	0.262	0.440
To grow the business	599	0.230	0.421
Vehicles/ rolling stock	597	0.136	0.343
Land and buildings	596	0.104	0.306
Debt consolidations	595	0.074	0.262
Research and development	595	0.066	0.248
Other	568	0.039	0.193
Computer hardware and software	599	0.033	0.180
Intangibles? (such as training, customer list, goodwill)	595	0.017	0.129
Purchase a business	595	0.008	0.091

Source: ERIA – SMEs Survey, 2011.

To have a clearer picture of SMEs' choices of external finance, we test hypothesis 1 by running the following regression:

$$F_i = \gamma_0 + \Gamma' X_i + \varepsilon_i \text{ .....} \qquad (2)$$

The dependent variable F_i is a binary variable and identifies: (i) whether or not a firm applied for any type of external finance (bank loans, leasing, equity, grant, or trade credits from suppliers); (ii) whether or not it had access to more than two financial institutions; and (iii) whether or not it had access to at least two types of external finance, in the past 12 months.

Equation (2) is estimated within the framework of binary choice models (i.e., a probit model), instead of a linear probability model (LPM). This is mainly because the predicted probability derived from an LPM may lie outside the 0-1 region, which is clearly not reasonable in practice. Despite this, a binary response model has a number of shortcomings. One important shortcoming is that the potential for bias arising from neglected heterogeneity (i.e. omitted variables) is larger in a binary choice model than in a linear model. Nevertheless, Wooldridge (2002) points out that estimating a binary response model by a binary choice model still gives reliable estimates, particularly if the estimation purpose is to obtain the direction of the effect of the explanatory variables.

Before we proceed with the maximum likelihood regression, we check the correlation matrix of the dependent and independent variables, as shown in Table 8.

Table 8. Correlation Matrix of Dependents and Independent Variable

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Applied for external finance	1													
2	Access to more than 2 financial institutions	1	1												
3	Access to at least 2 types of external finance	1	0.1565***	1											
4	Business-life cycle	-0.0098	-0.0005	0.1922***	1										
5	Foreign ownership	-0.0472	-0.0355	0.022	0.0996***	1									
6	Owner's managerial experience	0.0649	0.1375	0.0184	-0.2168***	-0.0051	1								
7	Owner's net-worth	0.0244	0.1097	0.1873***	0.1184***	0.2445***	0.1565***	1							
8	Owner's multiple businesses	-0.0369	-0.0169	0.1177***	0.0161	0.0417	0.0958***	0.1718***	1						
9	Sale growth $_{t-1}$	0.0353	0.0064	0.1611***	0.1528***	0.1776***	-0.1208	0.076	-0.0406	1					
10	Profit margin $_{t-1}$	-0.1413***	0.0161	-0.0578	0.0336	-0.0551	0.022	-0.2495***	-0.0387	-0.1048	1				
11	Expansion plan	0.1509***	0.032	0.0573	0.0898***	-0.0005	-0.0871	0.0606	-0.0076	0.1363***	-0.0114	1			
12	Sufficient internal fund	-0.1881***	0.1479***	0.1366***	-0.0299	0.0198	0.0525	0.1097***	0.0217	-0.0024	0.0282	0.1396***	1		
13	Age	0.0616	0.1027	-0.0618	-0.2369***	-0.1724***	0.6032***	0.0064	0.0496	-0.2384***	0.1105***	-0.0618	0.0962***	1	
14	Size	0.0990***	0.1862***	0.1754***	0.1210***	0.2880***	0.0353	0.4976***	0.1510***	0.2087***	-0.4372***	0.0802	0.0334	-0.047	1

Since we found no serious multi-collinearity between the independent variables, we include all of them in our regression models. The regression results for each of the SMEs' access to external finance variables are presented in Table 9.

Table 9. Dependent Variable: SMEs' external finance/Multiple Sources/Multiple Types

Independent Variable	Dependent variable		
	Applied for external finance	Access to more than 2 financial institutions	Access to at least 2 types of external finance
Business-life cycle	0.0613 (0.219)	-1.115 (0.763)	0.811** (0.336)
Foreign ownership	-1.492*** (0.497)	0 0	0.139 (0.803)
Owner's managerial experience	0.204 (0.125)	0.276 (0.402)	-0.274 (0.233)
Owner's net worth	0.0628 (0.0666)	-0.243 (0.171)	0.0408 (0.0930)
Owner's multiple businesses	0.0695 (0.0915)	0.0126 (0.132)	0.193** (0.0909)
Sale growth $_{t-1}$	0.0202 (0.0945)	-0.0398 (0.353)	0.126 (0.138)
Profit margin $_{t-1}$	-0.148* (0.0855)	-0.258 (0.205)	-0.131 (0.117)
Expansion plan	0.399** (0.173)	0.500 (0.620)	-0.168 (0.293)
Sufficient internal fund	-0.498*** (0.179)	0.317 (0.428)	-0.0504 (0.314)
Age	-0.0890 (0.172)	1.580*** (0.413)	0.420 (0.292)
Size	-0.0273 (0.0932)	0.250 (0.290)	0.285** (0.145)
Dummy (country, 1 for Cambodia, Lao, Vietnam, or 0otherwise)	0.159 (0.218)	-1.997*** (0.507)	-1.064*** (0.330)
(Dummy var. for garment sector) i	-0.0813 (0.206)	1.534** (0.631)	0.142 (0.352)
(Dummy var. for auto parts and components) i	0.742* (0.412)	0.346 (0.705)	0.355 (0.515)
(Dummy var. for electronics, and electronics parts and component)i	0.453 (0.301)	1.613** (0.732)	-0.193 (0.505)
Constant	-0.576 (0.882)	-3.746 (2.318)	-1.587 (1.407)
Observations	274	117	146

*Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Table 9 reports the results of a maximum likelihood estimation of Equation (2) for the subset of the sample that consists of all firms/SMEs with a maximum size of 200 employees. The table reports the final specifications that give the best results, while the other specifications that were estimated during the experimental stage are not reported here. The Wald test of overall significance in all specifications passes at the 1 % level. The table reports robust standard errors for the heteroscedastic variance.

4.1.1. SMEs' Need for External Finance

First, with regards to the general need for external finance, we found that though not statistically insignificant, younger and smaller SMEs at the start-up and fast-growth stage, with experienced, wealthier owners running multiple businesses, and operating in less developing economies, are inclined to need, or use, more external finance.

However, we found 4 main variables with statistically significant estimated coefficients at the 1, 5 or 10 % level of significance. The highly significant and large coefficients with negative signs imply that foreign-owned SMEs are financially viable and are not actively seeking external finance. Moreover, SMEs which report higher profit margins in previous years and have sufficient internal funds are highly inclined not to seek external funding. This result is very consistent with the pecking order hypothesis. Finally, SMEs with business expansion plans actively seek external finance.

4.1.2. SMEs' Access to Financial Institutions

For those SMEs that received external funding, we attempt to identify their distinctive characteristics with regards to their access to more than 2 financial

institutions. We find that, at a lower level of statistical significance, SMEs that are able to access more than 2 financial institutions are those at a mature stage in their business life-cycle, all are domestically owned (the foreign ownership variable is dropped from the model), are more experienced but have less affluent owners, have lower growth and profit margins but have expansion plans and adequate internal funds (to service the debt), and tend to be larger. However, at the 1 % significance level, only older SMEs and those in more developed economies are statistically significantly able to access more than 2 financial institutions.

4.1.3. SMEs' Access by Type of External Finance

Finally, with regards to types of external finance (bank loans, leasing, equity, grant, or trade credits from suppliers), we found that, at the 1 or 5 % significance levels, larger SMEs at the start-up and fast-growth stage, with owners running multiple businesses and operating in more developed economies are highly likely to be able to access more than 2 types of external finance.

In summary, although the results suggest that a significant number of SMEs still rely on internal resources both for start-up and business expansion, external finance is very important for SMEs which are domestically-owned, smaller=sized, lower profit making, with business aspirations but lacking sufficient funds, in less developed economies. Moreover, the size of SMEs and stage of country development, reflecting financial market conditions, also affects SMEs' access to finance in terms of choices of financial institutions and financial products.

4.2. Conditions of Finance Offered to SMEs

This section extends the previous analysis by gauging firm characteristics that allow SMEs to receive favorable conditions in terms of loan size, term of loan, and interest rate. Moreover, we are interested in whether stringent requirements imposed on SMEs would result in different financial conditions being offered to SMEs. Those requirements are: collateral, business plan, financial statement, and cash flow. Thus, the following general form of a statistical model is estimated for hypothesis 2:

$$LTR_i = \gamma_0 + \Gamma' X_i + \gamma_1 F_i + \varepsilon_i \quad \text{.....} \qquad (3)$$

where LTR_i is loan size, term of loan, and interest rate, respectively, offered to SMEs. i represents firm i as in the previous section, X_i is a set of explanatory variables that captures firm characteristic determinants, and F_i is a set of explanatory variables that captures firm requirements (collateral, business plan, financial statement, and cash flow) imposed by financial institutions. Estimations also include dummy variables for industries and country groups. Estimations are conducted only on the sample of SMEs that successfully applied for external finance.

By checking the correlation matrix there appears to be multi-collinearity amongst our main independent variables, especially amongst owner's net worth, collateral, business plan, financial statement, and cash flow. Therefore, we introduce these variables one by one into the base model.

Table 10. Correlation Matrix of Dependents and Independent Variable

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Loan size	1															
2 Term of loan	0.4263***	1														
3 Interest rate	-0.5499***	-0.2147***	1													
4 Business-life cycle	0.1979***	0.3282***	0.006	1												
5 Foreign ownership	0.3513***	0.1500***	-0.1850***	0.0996***	1											
6 Owner's managerial experience	-0.07	-0.1581***	-0.1578***	-0.2168***	-0.0051	1										
7 Owner's networth	0.7056***	0.3143***	-0.5508***	0.1184***	0.2445***	0.1565***	1									
8 Owner's multiple businesses	0.0837	0.1685***	0.0076	0.0161	0.0417	0.0958***	0.1718***	1								
9 Sale growth $_{t-1}$	0.2368***	0.3381***	-0.0802	0.1528***	0.1776***	-0.1208	0.076	-0.0406	1							
10 Profit margin $_{t-1}$	-0.4331***	-0.2834***	0.1896***	0.0336	-0.0551	0.022	-0.2495***	-0.0387	-0.1048	1						
11 Age	-0.2348***	-0.2156***	-0.1006	-0.2059***	-0.1519***	0.5425***	-0.0062	0.0246	-0.2233***	0.1082***	1					
12 Size	0.7259***	0.4059***	-0.5040***	0.1210***	0.2880***	0.0353	0.4976***	0.1510***	0.2087***	-0.4372***	-0.039	1				
13 Collateral	0.0219	0.0592	-0.034	-0.1266***	0.0306	0.2663***	-0.0177	0.0374	0.1161	-0.2497***	0.1194***	0.2010***	1			
14 Financial statement	0.5979***	0.3825***	-0.5127***	-0.0064	0.1199***	0.1440***	0.3072***	0.1003	0.1905***	-0.4887***	0.0642	0.6409***	0.4722***	1		
15 Business plan	0.3143***	0.3738***	-0.1861***	0.0251	0.1356***	0.1044	0.1296***	0.0801	0.2947***	-0.3399***	0.0461	0.3958***	0.4023***	0.5997***	1	
16 Cash flow	0.3119***	0.1456***	-0.2584***	0.0239	0.0831	0.1035	0.1842***	0.1193***	0.1525***	-0.2295***	0.0418	0.3548***	0.3190***	0.5148***	0.5003***	1

4.2.1. Loan Size

As for loan size, we find that among firm characteristics: foreign ownership, larger firm size, and SMEs located in more developed economies are the ones able to secure bigger loans. A statistically significant and negative sign for the profit margin in the previous year coefficient is consistent with our previous results that profitable SMEs are financially viable, therefore they would prefer not to seek external finance. If they did, it would be for a smaller loan amount.

Table 11. Dependent Variable: Loan Size

Independent variable	Dependent variable: Loan Size					
	(1)	(2)	(3)	(4)	(5)	(6)
Business-life cycle	0.211	-0.0158	0.202	0.0589	0.0967	0.182
	(0.361)	(0.324)	(0.358)	(0.346)	(0.346)	(0.346)
Foreign ownership	2.186*	2.730***	2.233*	2.054	1.910	2.056
	(1.214)	(0.693)	(1.329)	(1.282)	(1.341)	(1.289)
Owner's managerial experience	-0.104	-0.445	-0.130	-0.0892	-0.143	-0.161
	(0.357)	(0.298)	(0.348)	(0.366)	(0.357)	(0.364)
Owner's multiple businesses	-0.111	-0.0557	-0.125	-0.150*	-0.119*	-0.123
	(0.0903)	(0.0792)	(0.0885)	(0.0896)	(0.0714)	(0.0746)
Sale growth $_{t-1}$	-0.0365	-0.0235	-0.0391	-0.0289	-0.138	-0.0409
	(0.147)	(0.131)	(0.141)	(0.159)	(0.165)	(0.157)
Profit margin $_{t-1}$	-0.329*	-0.173	-0.335*	-0.265	-0.271	-0.324*
	(0.186)	(0.147)	(0.178)	(0.183)	(0.185)	(0.177)
Age	0.248	0.297	0.327	0.296	0.264	0.293
	(0.364)	(0.320)	(0.338)	(0.371)	(0.353)	(0.358)
Size	0.867***	0.512***	0.873***	0.701***	0.790***	0.825***
	(0.195)	(0.182)	(0.198)	(0.189)	(0.200)	(0.192)
Dummy (country, 1 for Cambodia, Lao, Vietnam, or otherwise)	-1.055*	-0.952	-1.153**	-0.878	-1.150**	-1.036*
	(0.600)	(0.608)	(0.574)	(0.619)	(0.581)	(0.591)
(Dummy var. for garment sector) i	-0.830**	-0.00793	-0.841**	-0.963**	-0.866**	-0.781*
	(0.399)	(0.389)	(0.398)	(0.383)	(0.393)	(0.402)
(Dummy var. for auto parts and components) i	-1.600**	-1.377	-1.635**	-1.909**	-1.575**	-1.562**
	(0.789)	(0.911)	(0.784)	(0.800)	(0.734)	(0.772)
(Dummy var. for electronics, and electronics parts and component) i	-0.547	-0.207	-0.458	-0.498	-0.528	-0.521
	(0.368)	(0.351)	(0.364)	(0.332)	(0.341)	(0.353)
Owner's net worth		0.660***				
		(0.101)				
Collateral			0.524			
			(0.455)			
Financial statement				1.070***		
				(0.393)		
Business plan					0.746*	
					(0.382)	
Cash flow						0.556*
						(0.308)
Constant	9.256***	2.659	8.787***	8.800***	9.440***	9.187***
	(1.443)	(1.655)	(1.539)	(1.522)	(1.439)	(1.438)
Observations	144	137	144	144	144	144
R-squared	0.518	0.650	0.525	0.541	0.531	0.529

*Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

As far as owner's net worth, collateral, business plan, financial statement, and cash flow are concerned, the estimated coefficients are positive and very statistically significant at the 1, 5, 10% level, except for collateral. This finding suggests that financial institutions seem to feel more secure and thus offer bigger loan amounts to SMEs that: have wealthier owners, are financially established, and are financially transparent. SMEs located in developed economies are more likely to possess these characteristics as they are likely to operate in a more advanced legal, institutional and regulatory environment that requires greater disclosure and transparency.

4.2.2. Term of Loan

In terms of the length of loan we find that, at the 1, 5 and 10% significance levels, larger SMEs at the start-up and fast-growth stage, higher sales growth in the previous year with owners running multiple businesses and operating in less developing economies, are inclined to secure longer term loans.

Table 12. Dependent variable: Term of Loan

Independent variable	Dependent variable: Term of Loan					
	(1)	(2)	(3)	(4)	(5)	(6)
Business-life cycle	0.750***	0.685***	0.710***	0.573***	0.517**	0.726***
	(0.219)	(0.220)	(0.211)	(0.202)	(0.212)	(0.217)
Foreign ownership	-0.885	-2.091*	-0.750	-0.955	-1.205	-0.928
	(1.031)	(1.218)	(0.751)	(0.979)	(0.812)	(1.030)
Owner's managerial experience	0.00573	-0.0833	-0.0801	-0.00729	-0.0736	-0.00390
	(0.128)	(0.132)	(0.129)	(0.118)	(0.121)	(0.128)
Owner's multiple businesses	0.168***	0.153***	0.173***	0.132***	0.184***	0.167***
	(0.0396)	(0.0479)	(0.0376)	(0.0371)	(0.0546)	(0.0414)
Sale growth $_{t-1}$	0.230***	0.267***	0.254***	0.223**	0.0848	0.223**
	(0.0876)	(0.0925)	(0.0770)	(0.0879)	(0.0910)	(0.0887)
Profit margin $_{t-1}$	-0.178**	-0.0732	-0.210***	-0.130	-0.134*	-0.180**
	(0.0810)	(0.0868)	(0.0794)	(0.0822)	(0.0761)	(0.0822)
Age	0.00960	-0.0612	0.145	0.0525	0.0773	0.0257
	(0.131)	(0.133)	(0.146)	(0.125)	(0.127)	(0.133)
Size	0.275***	0.214**	0.240**	0.113	0.164*	0.264**
	(0.100)	(0.0989)	(0.0951)	(0.110)	(0.0938)	(0.104)
Dummy (country, 1 for Cambodia, Lao, Vietnam, or otherwise)	0.319	0.566**	0.185	0.522**	0.221	0.313
	(0.254)	(0.283)	(0.243)	(0.253)	(0.238)	(0.256)
(Dummy var. for garment sector) i	-0.118	0.123	-0.102	-0.215	-0.145	-0.106
	(0.218)	(0.245)	(0.219)	(0.216)	(0.201)	(0.217)
(Dummy var. for auto parts and components) i	-0.108	-0.187	-0.0546	-0.353	-0.00273	-0.109
	(0.437)	(0.379)	(0.354)	(0.412)	(0.432)	(0.446)
(Dummy var. for electronics, and electronics parts and component) i	-0.0932	0.0314	-0.0346	-0.125	-0.132	-0.0808
	(0.261)	(0.268)	(0.246)	(0.239)	(0.224)	(0.266)
Owner's net worth		0.243***				
		(0.0679)				
Collateral			0.824***			
			(0.261)			
Financial statement				0.998***		
				(0.267)		
Business plan					0.946***	
					(0.232)	
Cash flow						0.176
						(0.173)
Constant	0.0699	-2.747**	-0.566	-0.259	0.368	0.0542
	(0.750)	(1.105)	(0.788)	(0.768)	(0.718)	(0.751)
Observations	140	134	139	140	140	140
R-squared	0.436	0.511	0.498	0.509	0.517	0.440

*Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

In contrast, foreign-owned SMEs and those making profits in the previous year tend to seek a shorter term of finance, presumably because they are better financially equipped. These results are also consistent with the pecking order hypothesis.

The coefficients for owner's net worth, collateral, business plan and financial statement are positive and very statistically significant at the 1% level, suggesting that

SMEs with wealthier owners, that are financially established and transparent, are able to secure a longer term loan.

4.2.3. Interest Rate

When examining the interest rate charged to SMEs, we find that those with foreign ownership, experienced owners, and those which report higher growth of sales in the previous year, with a low level of statistical significance, tend to receive favorable interest rates from financial institutions. Larger SMEs located in more developed economies pay lower interest rates, and this was statistically significant at the 1% level.

Table 13. Dependent Variable: Interest Rate

Independent Variable	Dependent variable: Interest Rate					
	(1)	(2)	(3)	(4)	(5)	(6)
Business-life cycle	0.0221	0.0353	-0.0293	0.0449	0.0544	0.0302
	(0.0959)	(0.0988)	(0.0866)	(0.0982)	(0.0957)	(0.0943)
Foreign ownership	-0.256	-0.185	-0.320	-0.298	-0.231	-0.280
	(0.205)	(0.261)	(0.253)	(0.264)	(0.244)	(0.283)
Owner's managerial experience	-0.0784	-0.0287	-0.0869	-0.0893	-0.0728	-0.0755
	(0.0936)	(0.103)	(0.0912)	(0.0934)	(0.0873)	(0.0892)
Owner's multiple businesses	0.0430	0.0472	0.0573	0.0533	0.0454	0.0473
	(0.0644)	(0.0609)	(0.0675)	(0.0661)	(0.0581)	(0.0607)
Sale growth $_{t-1}$	-0.0723	-0.0696	-0.0536	-0.0787*	-0.0487	-0.0707
	(0.0448)	(0.0525)	(0.0415)	(0.0446)	(0.0477)	(0.0451)
Profit margin $_{t-1}$	0.0250	0.00804	0.00614	-0.00243	-0.00241	0.0118
	(0.0499)	(0.0497)	(0.0512)	(0.0538)	(0.0533)	(0.0516)
Age	0.0542	0.0676	0.0490	0.0611	0.0588	0.0567
	(0.0990)	(0.0965)	(0.0953)	(0.0981)	(0.0929)	(0.0945)
Size	-0.115***	-0.0888*	-0.148***	-0.105**	-0.0992**	-0.119***
	(0.0392)	(0.0478)	(0.0401)	(0.0413)	(0.0410)	(0.0417)
Dummy (country, 1 for Cambodia, Lao, Vietnam, or 0 otherwise)	0.893***	0.891***	0.837***	0.833***	0.896***	0.866***
	(0.115)	(0.150)	(0.114)	(0.127)	(0.123)	(0.122)
(Dummy var. for garment sector)i	0.134	0.0765	0.136	0.137	0.134	0.115
	(0.104)	(0.107)	(0.103)	(0.103)	(0.102)	(0.107)
(Dummy var. for auto parts and components)i	-0.166	-0.170	-0.118	-0.105	-0.179	-0.161
	(0.163)	(0.177)	(0.172)	(0.177)	(0.171)	(0.174)
(Dummy var. for electronics, and electronics parts and component)i	0.114	0.125	0.0986	0.106	0.120	0.100
	(0.110)	(0.115)	(0.110)	(0.111)	(0.110)	(0.111)
Owner's net worth		-0.0652*				
		(0.0368)				
Collateral			-0.126			
			(0.113)			
Financial statement				-0.159		
				(0.107)		
Business plan					-0.218**	
					(0.104)	
Cash flow						-0.124
						(0.0817)
Constant	2.382***	2.949***	2.648***	2.563***	2.405***	2.473***
	(0.334)	(0.529)	(0.354)	(0.361)	(0.339)	(0.359)
Observations	145	137	141	142	142	142
R-squared	0.635	0.627	0.636	0.627	0.635	0.627

*Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

The estimated coefficients of owner's net worth, collateral, business plan, financial statement, and cash flow are all negative and statistically significant at the 10% level or more, suggesting that SMEs with wealthier owners and financially established and transparent SMEs are able to receive lower interest rates on loans offered by financial institutions.

In summary, when reading these three results together, we can conclude that there is potential credit rationing or risk premiums exercised by financial institutions on SMEs. The key findings from our analysis suggests that size and stage of country development (financial market development) do affect the conditions of external finance offered to SMEs, i.e., larger SMEs in more developed economies tend to get *larger loans, of a shorter duration due to lower need or dependency, at a lower interest rate.* We also find that owner's net worth, collateral, business plan, financial statement, and cash flow are critical for financial institutions in determining the financial conditions to be extended to SMEs. In other words, financial institutions seem to put higher risk premiums on opaque SMEs by offering less favorable financial conditions to less well established, and financially transparent SMEs. The financial characteristics of the owner also appear to be consistently important to financial institutions in determining willingness to lend, the duration of the loan and the interest rate on the loans to SMEs.

The findings suggest that financial institution behaviour is strongly linked to the legal, institutional and regulatory legal environment in which they operate. In an economy where the legal system does not adequately protect property rights and a bankruptcy law is lacking or non-existent, where there are inefficiencies in the operation of institutions themselves and the regulatory environment is lacking in terms of disclosure and transparency requirements relating to firm operations, it would be

perfectly rational for financial institutions to restrict credit or impose a risk premium on opaquely operating enterprises. Consequently, problems in accessing finance for SMEs may not be due solely to distortions or inefficiencies in the financial sector itself, but also by weaknesses in the legal, institutional and regulatory environment in which these institutions operate.

4.3. SMEs' Access to External Finance and Implications for their Performance

Having examined the motives of SMEs with regards to external finance and financial conditions imposed by financial institutions upon them, in this section we test hypothesis 3 to see whether SMEs' access to external finance has any bearing on their performance. The following general form of a statistical model is estimated:

$$P_i = \gamma_0 + \Gamma' X_i + \gamma_0 LTR_i + \varepsilon_i \quad \text{.....} \qquad (4)$$

where P_i is a binary variable representing the performance of SMEs, i.e., innovation capability and exporting activity. *i* represents firm *i* as in the previous section, X_i is a set of explanatory variables that captures firm characteristics, and LTR_i is loan size, term of loan, and interest rate offered to SMEs. Estimations are conducted only on the sample of SMEs that received external finance.

We checked the correlation matrix and found the presence of multi-collinearity amongst our main independent variables. Therefore, we introduce these variables one by one to the base model.

Table 14. Correlation Matrix of dependents and independent variable

	Variable	1	2	3	4	5	6	7
1	Innovation capability	1						
2	Export	0.3048***	1					
3	Age	-0.1337***	-0.1694***	1				
4	Size	0.4006***	0.3963***	-0.1591***	1			
5	Loan size	0.3776***	0.3970***	-0.1974***	0.7256***	1		
6	Term of loan	0.2954***	0.2120***	-0.2203***	0.4119***	0.4283***	1	
7	Interest rate	-0.2047***	-0.2090***	-0.0367	-0.5317***	-0.5479***	-0.2234***	1

As for the innovation capability, the estimated coefficients of firm size, loan size, and term of the loan are positive and statistically significant at the 1 and 10% level, but negative for the interest rate although at a lower level of significance. This suggests that larger SMEs with access to larger loan amounts, for a longer term and at a lower interest rate can enhance their innovation activity, since external finance with favorable conditions provides SMEs with sufficient time and resources to engage in enhancing their innovation capabilities.

Table 15. Relationship between SMEs Access to Finance and Performances

Independent variable	Dependent variable							
	Innovation capability				Export			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Age	-0.155	-0.142	-0.153	-0.196	-0.159	-0.296*	-0.149	-0.240
	(0.112)	(0.147)	(0.152)	(0.133)	(0.125)	(0.178)	(0.156)	(0.152)
Size	0.505***	0.387***	0.533***	0.509***	0.594***	0.455***	0.630***	0.560***
	(0.0643)	(0.0968)	(0.0813)	(0.0761)	(0.0839)	(0.129)	(0.101)	(0.0981)
Dummy (country, 1 for Cambodia Lao, Vietnam, or 0 otherwise),	0.149	0.0325	0.0559	0.197	0.337*	0.372	0.235	0.517**
	(0.173)	(0.206)	(0.217)	(0.233)	(0.194)	(0.254)	(0.234)	(0.260)
(Dummy var. for garment sector) i	-0.522***	-0.246	-0.910***	-0.628***	-0.0292	0.238	-0.106	0.0881
	(0.181)	(0.207)	(0.233)	(0.209)	(0.177)	(0.235)	(0.216)	(0.214)
(Dummy var. for auto parts and components) i	-0.393	-0.407	-0.988***	-0.662*	-0.403	-0.489	-0.730**	-0.358
	(0.263)	(0.346)	(0.384)	(0.350)	(0.300)	(0.378)	(0.365)	(0.320)
(Dummy var. for electronics, and electronics parts and component) i	-0.387**	-0.158	-0.436*	-0.479**	-0.358	-0.252	-0.449	-0.517*
	(0.188)	(0.241)	(0.240)	(0.216)	(0.238)	(0.286)	(0.282)	(0.283)
Loan size		0.104*				0.160***		
		(0.0547)				(0.0581)		
Term of loan			0.312***				0.0916	
			(0.0779)				(0.0713)	
Interest rate				-0.124				-0.517***
				(0.155)				(0.196)
Constant	-1.772***	-2.654***	-2.260***	-1.353**	-2.611***	-3.804***	-2.782***	-1.190
	(0.420)	(0.663)	(0.573)	(0.625)	(0.554)	(0.821)	(0.699)	(0.770)
Observations	468	347	352	374	468	347	352	374
R-squared	-0.155	-0.142	-0.153	-0.196	-0.159	-0.296*	-0.149	-0.240
	(0.112)	(0.147)	(0.152)	(0.133)	(0.125)	(0.178)	(0.156)	(0.152)

*Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

Similarly, we find that, at the 1% significance level, except for the term of the loan, larger SMEs with access to larger loan amounts over a longer term and at a lower interest rate are particularly conducive to enhancing their participation in export markets.

5. Policy Implications

In order to address the previously identified shortcomings in terms of SMEs' access to finance, particularly in emerging market and developing economies, a number of policy measures need to be addressed, in particular the following:

First, regional governments, particularly in emerging market and developing economies, will be required to address macro policy measures that contribute to sizeable budgetary imbalances with resulting national savings and investment imbalances, compounding difficulties for the private sector in general in gaining access to finance. Government policies that place emphasis on rapid industrialization through discriminatory measures that favor large firms will also add to the problems facing SMEs wishing to gain access to finance.

Second, on the supply side, measures will be required to deepen and broaden financial markets in regional economies with the aim of encouraging greater competition in terms of providers, reducing the cost of borrowing, and greater provision of sources of finance (non bank financial institutions, equity markets, venture capital markets etc.) that will enhance the provision of diversified products and services, bringing them more into line with meeting the needs of SMEs.

Third, the empirical results suggest that smaller SMEs in emerging market and developing economies have most difficulty in obtaining finance, and face higher interest rates. This is not surprising, and consistent with the literature, in the context of economies where a lack of transparency in firm operations and poor corporate governance contributes to

asymmetric information and greater lending risk as perceived by financial institutions. In this context it is essential to implement policy measures aimed at improving the legal, institutional and regulatory framework. The legal framework should ensure property rights and contain provisions that protect lenders against bankruptcy and delinquent loans, encouraging lending institutions to lend to SMEs. In addition, they should also contain provisions that ensure access to land and land-use rights, which is particularly important for SMEs as a source of collateral. The institutional and regulatory framework should encourage the formal registration of SMEs and not contain bureaucratic and regulatory processes that make the costs of formalization (compliance costs) greater than the benefits obtained from formalization. The regulations should be as transparent and simple as possible, aimed at improving corporate governance and transparency arising from the adoption of stringent book-keeping and accounting standards.

Fourth, microeconomic policies aimed at opening up markets and creating a level playing field for all enterprises will encourage more efficient resource allocation and improve productivity. The establishment and nurturing of a vibrant SME sector will encourage greater competition. This should also be encouraged in the financial sector, with the objective of, promoting access to finance, in general as well as reducing the cost of finance.

Fifth, encouraging the establishment of industry organizations for SMEs that will represent the interests of members and provide market information and capacity building.

Finally, the introduction of credit guarantee schemes subject to rigorous and viable business plans, credit rating and information systems. The establishment of specialized and more effective development financial institutions such as an SME bank, and the provision of business development services that can assist SMEs with embedding business training (e.g. management, business planning, book keeping, accounting, and financial literacy) and network promotion.

However, loan quotas imposed on commercial banks to private sector SMEs, interest rate subsidies to SMEs, and tax concessions should be avoided since they are ineffective due to an absence of sound legal and institutional capacities (weak governance).

6. Concluding Remarks

What emerges from our analysis is that a significant number of SMEs still rely on their internal resources or both start-up and business expansion. External finance is very important for domestically-owned, smaller-sized SMEs, making lower profits, with business aspirations but financially constrained in less developed economies. Moreover, size of SMEs and stage of country development, reflecting financial market conditions, affects SME choice of financial institutions and financial products.

We also find that there is potential credit rationing or risk premiums exercised by financial institutions on SMEs. The key findings from our analysis suggest that size and stage of country development (financial market development) do affect the conditions of external finance offered to SMEs, i.e., larger SMEs in more developed economies tend to get larger *loans, with longer terms,* at *lower interest rates.* We also find that owner's net worth, collateral, business plan, financial statement, and cash flow are critical for financial institutions in order to devise their financial conditions extended to SMEs. In other words, financial institutions seem to put higher risk premiums on opaque SMEs by offering less favorable financial conditions to less well established and financially transparent SMEs.

Financial access has a significant impact on the innovation capability and participation in export markets by SMEs. This study suggests that larger SMEs with access to larger loans, longer duration of loans and lower interest rates benefit from improved innovation capability and exporting activity, since these external finances with favorable conditions provide SMEs

with sufficient time and resources to engage in improving their innovation capabilities and enter foreign markets.

There are numerous important policy implications arising from the empirical results presented that straddle macroeconomic policy, financial markets, the legal, institutional and regulatory framework and microeconomic reform. It also seems that there is considerable opportunity for start-up in the emerging and developing economies of East Asia. However, these are the very enterprises that are finding the greatest difficulty in accessing external finance. Unless their owners are relatively wealthy, they appear to experience great difficulty in obtaining external finance. Given their employment generating potential there is likely to be the need to develop specific policies and institutions that can provide them with the finance they require if such potential is to be realized.

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CHAPTER 4

SMEs Access to Finance in Cambodia[1]

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In terms of number of establishments, the private sector in Cambodia is dominated by micro-size firms. This paper argues that SMEs would be important for Cambodia's economy, especially for building up a strong economic foundation. They create large value-added and have higher employment per establishment. Growth in the number of SMEs could help the economy to grow, create more jobs, facilitate FDI and enlarge the base for tax collection. Naturally, many micro firms would grow to become SMEs, but this growth might not be fast enough if there were too many constraints, which the market failed to address. Among them, SMEs are facing challenges in accessing finance, including restrictions on the size of loans, high interest rates and short repayment periods. The paper argues that the under-developed financial market results in biased provision of credit to micro-size firms and SMEs, and that this would limit the expansion of business. From the survey results, the paper finds that firms that have high sales volume, high profit margins and are in the garment manufacturing sector are highly likely to obtain finance, but notes that collateral is predominantly required. This finding infers that credit is rationed by the market, and that intervention is needed to widen access to finance.

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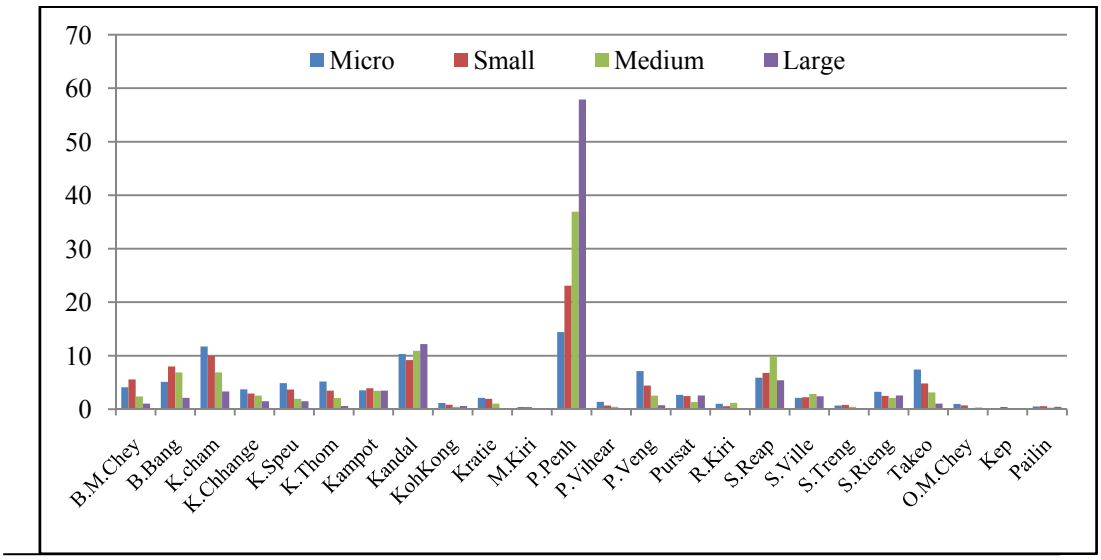
1. Introduction

The number of enterprises in Cambodia has been increasing gradually, tracking the expansion of the economy, especially during the period of high positive growth from 1999 to 2008. In 1999, the number of small and medium enterprises (SMEs) was estimated at about 25,000, and reached 36,000 in 2009. The growth in the number of establishments was therefore about 44% in 10 years. During this period, employment in the industrial sector was observed to expand, and labor productivity in the sector increased significantly (Figure 1).

Figure 1. Distribution of Establishment Listing across Region



Source: Nation-Wide Establishment Listing (NIS, 2009).

Despite a rapid growth in SMEs, Cambodia's structure of establishment is still dominated by micro and large enterprises, in terms of number of firms and employment, a structure characterized as "the missing middle" (Tanaka and Hatsukano, 2010) observed in other developing countries. In South Africa, micro enterprises employed 55% of the labor force and generated 22% of GDP, whereas the big firms accounted for 64% of GDP in 2003 (Kauffmann, 2005). In Cambodia, micro enterprises provided 59% of jobs, but generated only 5.7% of total value added in 2000 (NIS, 2003).

Discussion of the investment climate usually focuses on foreign direct investment (FDI). Little attention has been given to promoting and facilitating investment in domestic firms, especially for the growth of SMEs in term of numbers, employment and value-added. Moreover, studies of SMEs have not been comprehensive enough due to lack of datasets and biased samples. The Provincial Business Environment Scorecard (PBES) was constructed in Cambodia in 2006 and 2009. Improvement in the PBES index was observed in some provinces, but declines were seen in others, especially in informal charges and dispute resolution. The PBES index has a positive relationship to the probability of expansion, and a negative one to the probability of consolidation or closure (International Finance Corporation, 2010 and Asia Foundation, 2009).

Although improving the governance climate could facilitate expansion, or encourage firms to upgrade from micro- to SME- size, there are other factors that would affect such development, including the cost of doing business, market size, technology, cost of capital, and availability of raw materials (Sleuwaegen and Goedhuys 1996). In Cambodia's case, the "missing middle" is caused by lack of connections between large enterprises and SMEs. FDI firms are usually established largely for export purposes, while micro-size firms and SMEs mostly engage in the domestic market. Foreign establishments use modern technology and imported raw materials, which have a weak connection with domestic and micro enterprises. As a result, although FDI firms utilize SMEs extensively, they are usually based abroad, while domestic micro enterprises are locked in their small scale, using inefficient technology, and growing only slowly. Moreover, the regulatory burden discourages firms from upgrading.

The very small number of SMEs in Cambodia's economy could scale up. Three types of constraints have been identified, namely; (1) weak regulatory and legal frameworks generate high cost and uncertainty, and provide no support for SME activities, (2) competition is hampered by a fragmented market, poor infrastructure, low availability of information, and corruption, and (3) limited access to financing due to limited acceptable collateral, low capacity of banks, an underdeveloped financial system and gaps in the financial infrastructure (SME Secretariat 2005).

This paper explore the financing constraints facing by SMEs, particular in the context that SMEs are family based and do not have modern management styles, market analytical skills and planning skills, nor bookkeeping and accounting systems. The

paper is organized by first arguing the importance of SMEs development in Cambodia in terms of job creation, value-added generation, FDI facilitation and expansion of the base for tax collection. Secondly, the paper examines financial development and its constraints for SMEs. Thirdly, based on a survey of 180 firms, the paper will statistically examine the characteristics that enable firms to access finance, using a Probit model. Finally, conclusions are drawn.

2. Arguments for SMEs Development

This paper places different emphasis on micro-, SME- and large-size enterprises, and believes that micro-size firms will naturally grow to small, medium and large enterprises following market selection through competition. In this respect, the size distribution of firms does not follow the law of proportionate effect, and an individual firm is expected to grow independently from its present size (Ijiri and Simon 1964). Growth in size and assets is determined by economic efficiency, resulting from market fragmentation, size and technology. The growth of an economy therefore represents the growth of firms in terms of sales volume, size and assets.

Cambodia's economy experienced rapid growth during the last decade. Besides agriculture, the industrial and service sectors have been playing important roles in overall growth. The garment sector is one of the new industries recently established. It employs around 300,000 workers and accounts for the lion's share of Cambodia's exports. In addition, the tourism sector has generated many economic activities, including accommodation, restaurants, transportation and handicrafts. The two sectors have played key roles in driving growth, in addition to agriculture. The high growth rate has translated into poverty reduction, and into improvement of social indicators both in education and health.

Since the future of the garment sector is uncertain, due to changes in the trade regime and increasing competition, diversification of production is important for sustained growth. It is impossible to create a competitive production base without SMEs, since this is the place where experience is gained and applied in different scales.

Given the competitive nature of SMEs, they have to be innovative because firms emerging from the micro level have to develop distinct features in term of technology, management, value creation and business networking that allow them to differentiate and qualify for graduation. This process provides a strong foundation for economic diversification and competitiveness. For Cambodia, creating an environment that could facilitate the faster growth of micro-size enterprises to the SME level and then into large enterprises, could help to sustain growth through diversification, and to create the solid economic foundation the country needs.

In the SME Development Framework (SMEDF) 2005, Small and Medium Enterprises are defined based on either the number of their employees or the size of their assets. The definition includes micro enterprises with fewer than 10 employees or assets worth less than $50,000. Small and Medium enterprises are defined as having between 11 and 100 employees or assets valued between US$50,000 to 500,000. Large enterprises are those with either over 100 employees or assets greater than $500,000. In practice, the number of employees has been widely used for classification due to the absence of asset valuation, self-assessment, and fluctuating values of asset (Table 1).

Table 1. Classification of SME

	Number of Employees	Size of Asset
Micro	less than 10 employees	less than USD 50,000
Small	between 11-50 employees	between USD 50,000-250,000
Medium	between 51-100 employees	between USD 250,000-500,000
Large	over 100 employees	over USD 500,000

Source: SME Development Framework, 2005.

2.1. Value-added and Job Creation

The Establishment Listing (2009), produced by the National Institute of Statistics (NIS), Ministry of Planning, found that the industrial structure in Cambodia is at an early stage of development. Based on definition by employment size, micro-enterprises made up 97.12% of total establishments. Small and medium enterprises were about 2.7% and less than 0.18% was considered as large enterprises. However, among 1.5 million people employed, 60% are working in micro, 25% in large and 13% in small and medium enterprises (Table 3). This is the “missing middle” phenomenon in terms of

employment. In term of number, the industrial structure is dominated by micro-enterprises, while there is a small number of large enterprises.

Table 3. Establishment by Sector and its Employment

Sector	Number	Percent	Employment	Percent
Mining and quarrying	280	0.07	2,734	0.18
Manufacturing	84,639	22.46	527,925	35.92
Utilities	8,620	2.29	27,917	1.90
Construction	204	0.05	2,825	0.19
Wholesale and retail trade	198,111	52.58	431,860	29.38
Transport and storage	2,042	0.54	11,759	0.80
Accommodation and Food services	29,230	7.76	113,092	7.69
Financial, Insurance and Real estate	5,940	1.58	25,286	1.72
Professional and admin. support	5,722	1.52	22,019	1.50
Education	9,099	2.42	123,325	8.39
Human Health and social work	4,135	1.1	24,616	1.67
Others	28,739	7.63	156,354	10.64
Total	**376,761**	**100**	**1,469,712**	**100**

Source: Nation-Wide Establishment Listing (NIS, 2009).

A better structured establishment would see large enterprises supported by SMEs which were in turn supported by micro enterprises. In Cambodia, large enterprises have mainly been established by foreign direct investment, and rely on imports of almost all raw materials and intermediate goods. For example, the garment industry utilizes only labor as an input for production. The absence of SMEs capable of supplying a certain type of raw material discourages connections between those large enterprises and local enterprises. It has resulted in loss of jobs and value-added. Estimation of gross value added (GVA) in 2000 found that GVA per micro enterprise was around 45 million Riels (US$1,125) per year, whereas larger enterprise generated 4,306 million Riels (US$1 million) per year, almost a hundred times more. This illustrates why allowing micro enterprises to upgrade to SMEs and then to large establishment would create a significant value-added for the economy.

Moreover, average employment per establishment in micro enterprises is 2; the comparable figures are 20 for small; 70 for medium and 556 for large enterprises (Table 3). Therefore, an increase in the number of establishments in the larger size category would create more jobs. However, in terms of productivity, an establishment with number of employees fewer than or equal to ten has higher labor productivity than a

firm with more than 10 employees. A worker in a micro firm can generate a GVA of 13 million Riels per annum (US$3,300) compared with 9.8 million Riels (US$2,500) in the larger size firms (NIS 2003). The different of productivity is not largely different from small to larger, but in terms of value-added and employment, it is hugely different.

2.2. Creation of Manufacturing Base and Facilitation of FDI

Cambodia's production base remains weak. The manufacturing sector is dominated by food processing, garments and furniture. According to the establishment listing, wholesale and retail trade accounted for more than 50% of all establishments, while only slightly more than 20% are in the manufacturing sector. Hotels and restaurants comprise around 8% of total establishments. However, in term of employment, manufacturing provides around 35% of total employment, while wholesale and retail trade activities account for 30%. Hotels and restaurants and education institutions each generate 8% of employment. More than half of Cambodia's micro enterprises are involved in wholesale and retail trade, and only 20% are engaged in manufacturing. More than half the large enterprises are in manufacturing (Table 4).

Table 4. Distribution of Establishments by Type and Sector

Sector	Micro	Small	Medium	Large	Total
Mining and quarrying	0.06	0.63	0.75	0.15	0.07
Manufacturing	22.7	11.84	14.5	52.48	22.46
Utilities	2.31	1.5	2.84	1.95	2.29
Construction	0.04	0.39	0.6	0.3	0.05
Wholesale and retail trade	53.93	7.77	2.24	1.5	52.58
Transport and storage	0.52	1.13	1.05	2.26	0.54
Accommodation and Food services	7.64	12.33	11.21	5.86	7.76
Financial, Insurance and Real estate	1.5	4.06	6.43	1.95	1.58
Professional and admin. support	1.52	1.49	2.84	1.8	1.52
Education	1.61	30.42	33.18	14.59	2.42
Human Health and social work	1.03	3.35	5.23	3.31	1.1
Others	7.14	25.08	19.13	13.83	7.63

Source: Nation-Wide Establishment Listing (NIS 2009).

The numbers suggest that moving micro-enterprises up to SMEs and then to large enterprises would increase engagement on manufacturing, which is an important sector for employment creation and GVA generation. At the same time, the sector is a key area for strengthening skills, management, technologies and supply chains. This sector's

development is necessary if Cambodia is to prepare itself to move up the regional and global value chains. Because it is a competitive environment, the emerging SMEs will be sources of innovation, which will improve the competitiveness of the country. Therefore, through creating an environment that would facilitate growth of micro-enterprises to SMEs Cambodia could increase competition among existing firms and force them to increase in scale, innovation and diversification.

Creation of a manufacturing base could lead to acceleration of Foreign Direct Investment (FDI). Since FDIs could quickly expand economic activities that already exist so as to take advantage of raw material supply chains, labor relations and output supply chains. They would not expect to establish a whole industry, but exploiting production line that they have advantage, particularly when domestic firms may lack capital, technology, scale and other factors that could improve efficiency. Without a firm background of domestic SMEs, FDIs also have constraints in investment.

2.3. Enlarge Tax Base

Cambodia has established two tax regimes. These are based on self-assessment and estimation, and are applied differently across enterprises. Sales volume with respect to economic activity is used to categorize the regime. In 2008, there were 12,089 enterprises classified under the self-assessment regime, which generated 85% of revenues collected by the tax administration. There were 48,510 enterprises classified under the estimated regime. Usually this includes micro enterprises, which are around 80% of total establishments (Hang, 2010). Government collects only around 12% of GDP as tax, which is very low compared to countries that have the same growth, and are shifting emphasis from trade tariffs to domestic taxes. Further tax mobilization could be generated from the growth of micro enterprises into SMEs and then into large enterprises. The majority of establishments in Cambodia have not been registered. In fact only 2.40% are registered. The percentage of registration increases with size of company; only 1.83% of micro enterprises are registered compared with 64 % of large firms (Table 6). The registered enterprises usually pay tax following the self-assessment regime, and non-registered firms are paying under the estimated regime. Under a poor governance system, firms taxed under the estimated regime pay significantly less than

the true taxable amount, based on mutual agreements between the tax auditors and firms.

Registration is also strongly associated with type of owner. Individual ownership accounts for 95% of total establishments. Complex ownerships are usually registered and firms with proper accounting. Only 30% of large enterprises, 35% of medium and 41% of small enterprises are individually owned. For large enterprises, a third of establishments are either limited partnerships or private limited companies (Table 7). Therefore, the upgrading of micro enterprises to SMEs would encourage registration (and the employment of proper accounting practices, if they involved complex ownership). These conditions would expand the tax base and government tax revenues.

Table 7. Type of Business

Business Description	Frequency	Percent
Garment and Textiles	40	22.22
Foods	41	22.78
Construction Materials	41	22.78
Furniture, Household utensils	29	16.11
Ice and water	12	6.67
Rice Milled	17	9.44
Total	180	100.00

Source: ERIA Survey, 2010.

2.4. Good Distribution across Regions

One advantage of facilitating the growth of micro enterprises is that they are well distributed across provinces. In Phnom Penh, micro enterprises comprise only 14% of the total, and in Kandal and Kampong Cham the share is also around 10% of total establishments. Almost 60% of the large enterprises, 40% of the medium and over 20% of the small enterprises are found in Phnom Penh (Figure 1). Kandal, the province surrounding Penh Penh, has the next highest number of firms. Well-connected infrastructure, a high density of people and the availability of utilities in Phnom Penh and Kandal explains this distribution. Kampong Cham, Battambang and Siem Reap are also economically active.

Since micro enterprises have widespread distribution, helping them to grow could lead to inclusive growth in the medium to longer run. Moreover, it would help to promote economic activities across the country, taking advantage of indigenous

technology and know-how. Micro enterprises becoming SMEs could play roles in raw material supplies and related business activities, exploring all potential resources at a different scale. The result of such development would bring poverty reduction at a faster rate and reduce inequality, particularly across the provinces of Cambodia.

Upgrading SMEs could generate more employment, especially in the manufacturing sector. Though labor productivity is higher for smaller enterprises, the total GVA generated in the economy would be significantly higher. This means that economic growth and job creation could be assured from upgrading enterprises. Furthermore, Cambodia is small economy, and the expansion of production will rely on export markets that require proper standards and a reliable supply chain, for which scale is important. The growth of SMEs could further enhance the production base for manufacturing, and production is a key to FDI attraction. As a result, the national tax base would rise. Moreover, by allowing micro firms to grow, there would be inclusive benefit, since it spread across provinces and geographical areas in Cambodia.

3. Financial Constraints to SMEs

This section argues that financial constraints facing micro enterprises and SMEs (MSMEs) are due to an underdeveloped financial system. As a result, MSMEs rely on savings and informal sources for starting up and for providing working capital. Micro-Financial Institutions (MFIs) have played important roles in financing MSMEs, but the issues remain high interest rates, small loans and short repayment times. This section also explores the concept of financial constraint, and provides results bases on a survey of 180 enterprises in Cambodia.

3.1. Overviews of Financial Structure

Cambodia experienced life without a financial system from 1975 to 1979, when the Khmer Rouge put Cambodia through an extreme economic reform, following communism model of an economy. After 1979, the National Bank of Cambodia (NBC) was established as the only bank operating across the country through its provincial

branches, under a centrally planned economy. There was no private commercial bank; such a banking system is commonly known as a mono-banking system. The economic reform in 1989 toward a market economy changed the landscape of the financial sector and set up a two-tier banking system, in which private commercial banks were allowed. In 1990 the first commercial bank was established and created a new channel of financial access for farmers and entrepreneurs with small and medium-sized businesses.

As a result, commercial banks have become widespread and confident, although the banking system remains weak. This prompted the NBC to strengthen the banking system through a reform in 1999 aimed at enhancing the credibility of financial institutions and confidence in the banking system. The Law on Banking and Financial Institutions was adopted, and serves as a foundation for new development of the sector. Its requirements include minimum capital and reserve requirements with the central bank. Moreover, commercial banks have to ensure a certain threshold of solvency, liquidity and fixed asset/equity capital ratio, and are regularly supervise by the NBC. Moreover, commercial banks need to comply with large exposure and loan loss provision restrictions imposed by the central bank.

The development of the banking system has gradually been improved. As of 2010, there are 29 commercial banks, of which 6 are branches of foreign banks, 6 specialized banks, 23 licensed microfinance institutions (MFIs), 26 registered MFIs, 28 NGOs involved in financial activity are registered, but 60 are not registered, and there are 3,937 registered money changers. The banking system is concentrated in Phnom Penh, since banks have few branches across the country.

The government attempted to modernize the financial sector to better serve Cambodia's economic development in the Financial Sector Blueprint 2001-2010. Among financial services, financial leasing began development after the Law on Financial Leases was enacted in 1999. The Cambodian securities market is also under development. The insurance industry is also in development, however the market remains small.

Banking System

The banking sector dominates Cambodia's financial system. It contains many small banks, and activities are limited to urban areas and large business transactions,

especially servicing the international trade sector. Many banks have few branches in different provinces due to limited activities in the provinces. The current banking system plays a less significant function in intermediate saving and investment, and progress in the banking sector remains at early stage.

According to the Law on Banking and Financial Institutions (1999), commercial banks are those operations carrying out three activities: (1) credit operations for valuable consideration, including leasing and guarantees; (2) collecting deposits from the public; and (3) the provision of means of payment. A specialized bank is defined as one that operates in at least one of those three financial services. Commercial banks dominate the financial system. As of 2009, commercial banks account for 99% of total assets, 99% of loan balances and 100% of deposits for the total banking system.

Though at early stage, the banking system has been growing very fast since 2006 due to improvement of banking regulations. Bank deposits increased from $914 million in 2005 to $1,301 million in 2006. The amount jumped to $3,192 million in 2009 and $4,030 million in 2010. Among those deposits a majority are in US dollars. The dollarization of the banking sector facilitates development, while the local currency remains very weak. Private sector credit has also been growing at the same pace, from $584 million in 2005 to $883 million in 2006. During the crisis period, credit to the private sector reached $2,542 million in 2009 and to $3,280 million in 2010. The increases in banking activities resulted from an inflow of foreign investment that also increased from around $375 in 2005, to reach $866 million in 2007 and $553 million in 2010. Such fast growth created pressure on the supervision of banking activity, and vulnerability in the financial system, because growing assets did not reflect any expansion of the banking system.

Total assets in the banking system grew from about $1.18 million in 2004 to $5.21 million in 2009, an average growth of 36% per annum. However, the development of the sector was concentrated in the four largest banks, namely Cambodia Public Bank, ACLEDA Bank, Canadia Bank, and ANZ Royal Bank. They accounted for 62.4% of total assets of the banking sector in 2009, up from 55% in 2006. Currently, there is only one state-owned bank, whose total assets is only 0.7% of the whole industry and provided only 1% of total loans in 2009.

Three of the specialized banks, namely Anco Specialized Bank, Peng Heng SME Banks Ltd., and First Investment Specialized Bank, are targeting their lending to SMEs or rural borrowers. Those banks do not collect deposits. Their lending is only 0.62 % of total lending. As a whole, the recent institutional developments in banking have not facilitated or channeled finance to SMEs. Although there is no information on loans provided to SMEs, banking activities remain concentrated on big business transaction.

Micro-financial Institutions

The development of MFIs became more visible at the end of the 1990s as a substitution for the informal financial system with its usury rates of interest. In 2000, the NBC started to formalize the MFIs by registration and licensing according to their scope of operations. The institutions are now regulated and supervised by the NBC. Micro-Finance is defined as *"the delivery of financial services such as loans and deposit-taking, to poor and low-income households, and to micro-enterprises*" and Micro-Finance Institutions are those operating under Article 2 of the 1999 Law. In 2002, the National Bank of Cambodia issued a compulsory license for micro-finance institutions that engaged in credit and savings mobilization of more than 100 million Riel (US$25,000) or involving of more than 10,000 borrower or depositors.

Two types of MFIs are distinguished- licensed MFIs and registered NGOs. The registered NGOs operate freely with no requirement to be regulated and supervised, while licensed MFIs are under regulation, and need to send reports to the NBC. Since 2002, some NGOs have been licensed and some others have been registered. By the end of 2006, there were 17 licensed MFIs and 26 registered as rural credit operators. Among those institutions, the majority were transformed from NGOs, while others were local private companies. As of December 2009, there were 20 licensed MFIs and 26 registered rural credit operators.

MFIs are the first-hand experience of a banking system for rural people. They have extensive branch networks throughout the country. The number of district branches increased from 745 in 2007 to 1130 in 2009. Total assets increased remarkably from 247 billion Riels (US$60 million) in 2005 to 1,526 billion Riels (US$365 million) in 2009. MFIs do not rely on deposits for lending, though deposits also increased from 8.7 billion Riels (US$ 2.2 million) in 2004 to 39.6 billion Riels (US$9.5 million) in 2009. Total

loans provided in 2005 were 204.6 billion Riels (US$49.6 million) and reached 1,245 billion Riels (US$ 297.8 million) in 2009. MFIs' loans are concentrated, with more than 40% in Agriculture and a third in trade and commercial activities. MFIs usually borrow from abroad for their lending, since interest rates are very high. In 2008, loans in Cambodian Riels were charging an interest rate of 3.02 % per month, while 2.43% per month was charged for loans in US dollars. At commercial banks, loans in Cambodian Riels are on average charged at 22.36 % per annum, while 15.76% per annum is charged for US dollar loans. In 2009, 73.7% of the paid-up capital of MFIs was owned by foreigners. As a result, the performance of MFIs was vulnerable to the external shocks experienced during 2008 and 2009.

Though MFIs offer credit with a very high interest rate, the credit is accessible by micro, small and medium enterprises. The number of people obtaining credit from MFIs increased substantially from 471,026 in 2006 to 904,298 in 2009, while depositors increased from 113,277 in 2006 to 171,190 in 2009. Although the coverage of financial services remains very low, MFIs have extensively opened up finance services to the Cambodian people, particularly in rural area.

3.2. SMEs and access to Finance

SMEs are usually innovative firms that could be sources of competitiveness, in addition to creation of value-added. They have been proved resilient to market friction, due to their low transaction costs and less asymmetric information. In this regard the growth of SMEs is important for industrial development. In our survey the firms that could access finance were found to have higher growth rates than those that reported obstacles. The constraints on SMEs in accessing finance have been observed around the world, especially in developing countries. A cross-country study found that size, age and ownership significantly impacted on access to finance (Beck, T. and Demirguc-Kunt, A. 2006). SMEs are usually small, young and single proprietorship that would face discrimination from banks. Moreover, sources of start-up and working capital are mostly from personal savings or borrowing from informal sources, including friends.

The difficulty of SMEs' access to finance could manifest in two distinctive ways. First, a high transaction cost due to the size of loan required, short-maturity, lack of accounting practices and asymmetric information available make it costly for banks to

offer loans. The difficulty is also seen in the high interest rates face by SMEs, and the need to provide support by collateral. With the interest rate about the equilibrium rate, demand for loans is less than the amount that banks want to lend; the more so if there is a guarantee available. In this regard, there would seem to be an excess supply of loans, but it is difficult for SMEs to access them. Secondly, from the banks' perspective, putting too high an interest rate on a loan could lead to lower expected repayments (Williamson 1987, Beck 2007), therefore banks set interest rates lower than the market clearance rate. At that rate, banks ration the amount of credit advanced by loading conditions with other forms of collateral, loan size, document requirements and other forms of guarantee. This is the situation of excess demand for loans.

In either case, MSMEs are discriminated against in the offering of loans. In developing countries, constrained access may be associated with regulatory and institutional issues, perhaps where property rights are not clearly defined. To the bank, it is very risky to take those uncertainties into account, and this adds to the cost of credit. For example, the majority of SMEs in Cambodia are not registered, which makes it difficult for banks to provide credit.

From the demand side, 25.56% of the surveyed firms said that current financing was not sufficient to fund future business expansion. In parallel, the IFC (2010) study found that 81% of entrepreneurs said that if banks would accept movable assets to secure financing, they would be interested in seeking loans to upgrade and/ or expand their business. It seems therefore that SMEs are lacking access to financial services. However, from the supply side, commercial banks are willing to provide loans only if collateral, such as hard title to property, is provided and, in combination good cash flow. Microfinance is more flexible, and can provide tailored services to clients, but at a higher cost of borrowing. Informal finance, traditionally the main source of finance for SMEs, in particular micro enterprise, appears to give loans at competitive rates compared with microfinance institutions, though is the rates are still high. From this angle, it seems that financial access does not seem to be a barrier to firm expansion.

All the firms complaining about the difficulty of access to finance are micro and small firms (WB, 2009). Constrained access to finance was due to; an inadequate legal framework to protect property rights; inexperience of banks in assessment of risks related to SMEs; geographical concentration of financial institutions; the

underdeveloped banking system; and lack of a policy framework to motivate banks to lend to SMEs (Harner S., 2003). From the demand side, among the 504 firms surveyed, only 59% prepared a simple profit and loss statement, and 57% did not have a bank account (IFC 2010). Therefore, SMEs did not actively seek finance from formal sources, but relied on informal financing, personal savings or retained earnings. The high interest rates charged and the collateral required could be unacceptable or impossible conditions, ensuring that many SMEs do not seek formal financing. In this regard, disengagement among both lenders and borrowers limited the ability of banks to give loans, and create sufficient demand.

3.3. Financing Issues through the Survey

The purpose of this survey is to understand the status of SMEs and their access to credit, where a financing gap is commonly observed to be a major impediment to SME growth. The survey was carried out at 180 randomly selected firms, of which 156 were micro and 24 were small enterprises. This sample could be used to understand the situation of micro enterprises, and their transition to SMEs, by focusing on their financial constraints. The owners of the firms had an average age of 44, 67% were male, their average experience was 13.5 years and 7% were able to speak English or French. Only three firms invested in R&D.

The sampled firms operated in six industries: garment and textiles, food industry, construction materials, furniture and household utensils, ice making and drinking water, and rice milling. Among the 180 surveyed firm around 20% were in each of the garment, food and construction materials industries, and 16% were in furniture and household utensils (Table 9). In term of net worth, 60% of the firms in the survey had sales of less than US$25,000 and 35% were between US$25,000 and $500,000. Only 9 firms had sales of more than US$500,000 (Table 10).

Table 9. Source of Finance use to Keep Business in Operation

	Operation
Commercial or personal loans and lines of credit from financial institution	46.67%
Credit from government lending agencies or government grants	0.56%
Retained earnings	81.67%
Trade credit owing to suppliers	43.89%
Leasing	10.56%
Loans from employees	3.33%
Personal savings of business owner(s)	88.33%
Loans from individuals unrelated to the firm or its owner ("angels")	4.44%
Micro-credit	23.89%
Other sources of financing	1.67%

Source: ERIA Survey, 2010.

Table 10. Business Intend for Loan

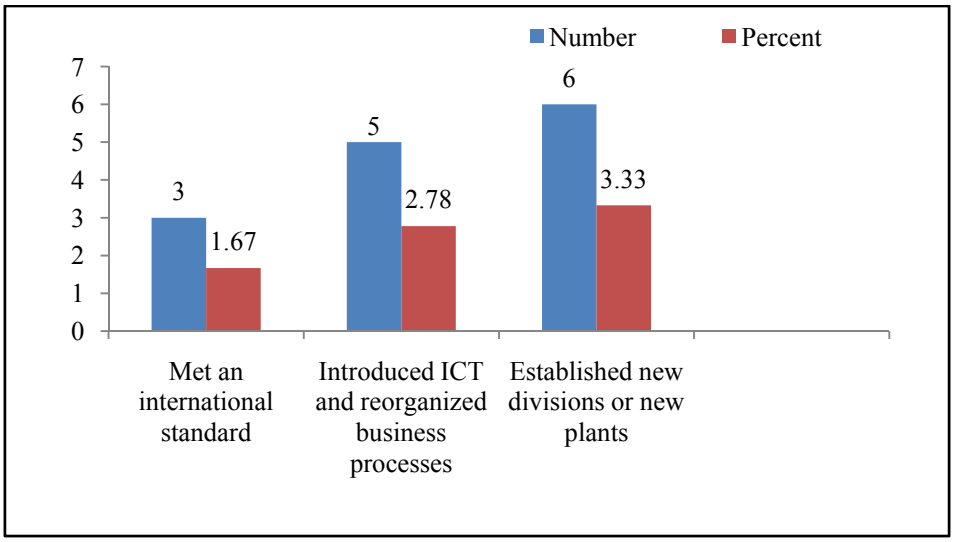
Business Intend	Percentage
Land and buildings	5.5%
Vehicles/ rolling stock	9.1%
Computer hardware and software	1.8%
Other Machinery and equipment	30.0%
Working capital/ operating capital, such as inventory or paying suppliers	74.5%
Research and development	6.4%
Debt consolidations	19.1%
Intangibles (such as training, customer list, goodwill)	1.8%
Purchase a business	0.9%
To grow the business	29.1%
Others	5.5%

Source: ERIA Survey, 2010.

Breaking the sample down employment, 30% of firms employed more than 5 and fewer less than 50 people and 70% employed fewer than 5. Almost all the firms surveyed were domestic; only three firms produced for export, with the rest focused on domestic consumption. In term of networks of production, 76% of firms produced final products, 10% supplied first tier customers and 15% produced intermediate goods. This pattern reflects the rudimentary nature of production networks in Cambodia, due to capacity constraints, the need for upgrades and other internal constraints (Chheang *et al*., 2009). Only 3 firms met an international standard, 5 firms had introduced ICT and 6 firms had established new divisions or new plants during the past three years (Figure 3). However, upgrading is a strong current concern among the surveyed firms. 60% had

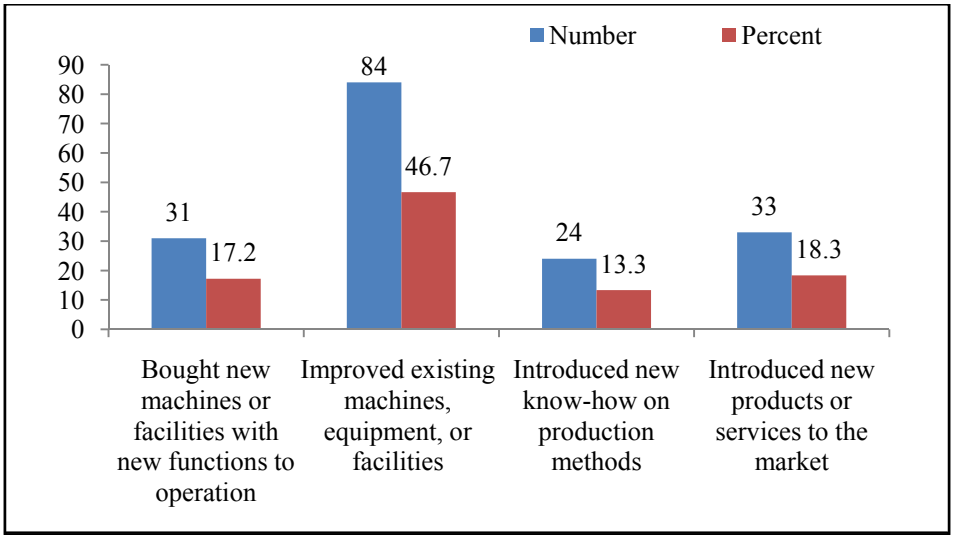
moved into either a new market or new technology in the past three years, which was also a period of high economic growth in Cambodia (Figure 4).

Figure 3. Effort to Improve Business Processes



Source: ERIA Survey, 2010.

Figure 4. Adoption of New Production Method in the Past Three Years



Source: ERIA Survey, 2010.

Against the backdrop of financial crisis, 53% of firms intended to expand their business in the next two years and 13 firms or 7% intended to sell, transfer or close business in next five years. By type, 70% of micro enterprises had the intention to

expand, but only 50% of small firms. Only 6.4% of firms intended to close down in the next five year, but for small firms the figure was 12.50%. In this regard, the small firms have a better chance of growth, but their risks of closure are also high compared to micro enterprises. In contrast, the crowed micro firms environment is highly competitive, and this tends to make expansion uncertain, with firms focused on survival (10 % of micro firms don't know about future circumstances), but successful firms may grow into small enterprise in the future.

Expanding a business requires a financing mechanism. 25.56% of surveyed firms viewed current financing as insufficient to fund their expansion plans. Of these, 3 firms intended to seek an equity input and 104 firms intended to make a loan request for financing. This picture is very similar among both micro and small enterprises. Among constraints on expansion, both micro and small enterprise worried about increasing competition due to relatively easy entry into their markets. They also had concerns about rising costs, but this concern was reported more by the micro firms, probably due to the competitiveness of their market segments. Instability of consumer demand is the third largest worry for the surveyed firms, especially. However, 80% of firms raising the issue of demand were micro firms.

More than half the expanding firms were in the slow growth stage of their life-cycle, and about 35% were in the declining stage. This pattern is similar for both micro and small enterprises. It means that expansion is sought after the stagnation and decline stages, and that firms hope that they could become more competitive. From a bank perspective, expansion of business in this stage of slow growth and decline is very risky, which makes it difficult for them to offer loans. Expansion during the maturity stage, when a firm has stable revenue, is preferable.

Major sources of SME financing can be summarized into 3 types: formal sources (the main external source of finance being from commercial banks or other financial institutions, including microfinance institutions), informal sources and finally the most important source of funding for between 75% to 90% of entrepreneurs, that of internally-generated funds. However, all businesses have recently made requests for financing, of which 99 firms or 55% had requested finance in the last 12 months, and 90% of them had requested finance from one source. Only 10 firms had been refused. Among the firms obtaining credit, only 7.2% had been given a partial amount. This

finding is similar to another survey of 289 firms, which found that only 5% of firm had tried to borrow but failed to obtain credit from banks and other financial institutions (JICA, 2010).

From this survey it is very hard to argue that micro and small enterprises are generally facing a financing gap. However, looking at sources of financing, it shows a varied structure of financing. 80% of small firms go to a bank for credit, while only a third of micro firms do so. Almost 50% of micro firms obtained credit form MFIs. The reason cited is that the institution selected offered the best credit terms and conditions. The financial products from banks and micro institutions were tailor-made for their target customers, given the different operational costs of those financial institutions.

Different sources of financing entail different sizes of loan, different interest rates and varied lengths of borrowing. In the sample, bank loans had an average size of about US$28,000, compared to about US$3,200 from MFIs. The banks could provide larger loans, cheaper interest rates and longer durations. Interest rates from MFIs were around 2% per month, with an average duration of 1.8 years, compared to an average of 1.7% and 2.35 years from the banks.

To protect against risk, banks have to adopt credit rationing measures so as to minimize problems from adverse selection and moral hazard. Additionally they have to deal with the problem of opaqueness, meaning that is difficult to ascertain if firms have the capacity to pay (have viable projects), and/ or the willingness to pay due to moral hazard. The majority of lending was secured with collateral, required a co-signature, and required a formal application for financing and other documents, regardless of the source of finance.

Cambodia's micro and small firms are constrained by limited financial products and an under-developed financial system. Financial leasing is not common, although two firms in the survey had leased equipment. 11 firms had requested trade credit from a supplier, of which 9 had been successful, with an average amount of US$2,311 (Table 11). The majority of firms relied on retained earnings or personal savings to keep their business in operation. In expansion, the financial need is for working capital, plus further capital for buying machinery and equipment. (Table 12) No government finance program is in place that surveyed firms could use.

Table 11. Percentage of Loans that Need Collateral

	No Collateral	With Collateral	Total
Bank	1 2.63	37 97.37	38 100
Microfinance	2 4.76	40 95.24	42 100
Others	14 73.68	5 26.32	19 100
Total	17 17.17	82 82.83	99 100

Source: ERIA Survey, 2010.

Table 12. Characteristics of Surveyed SMEs in Cambodia

	Non-requesting					Requesting				
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Age (year)	76	14	9	3	32	98	16	10	3	32
Size	76	5	4	1	20	98	5	4	1	20
Management experience	76	13	8	2	32	98	14	9	2	31
Sale Volume										
2008	76	122633	326364	2280	2325000	98	231254	491610	1290	2480000
2009	76	122290	342663	2280	2500000	98	233249	525697	1070	2790000
Sale Growth (%)										
2008	76	-2	23	-60	35	98	-2	20	-65	40
2009	76	-3	17	-50	34	98	-3	17	-50	29
Profit (%)										
2008	76	21	10	4	51	98	23	12	1	51
2009	76	19	10	4	51	98	20	11	1	45
Cost Structure 2009 (%)										
Labor	76	10	7	0	40	98	9	9	0	70
Raw Materials	76	60	18	0	90	98	58	16	4	88
Utilities	76	8	12	0	69	98	7	11	0	57
Interest	76	1	5	0	40	98	5	5	0	27
Other costs	76	2	3	0	13	98	1	2	0	15
Sale Patterns										
Domestics	76	100	3	70	100	98	100	1	90	100
Export	76	0	3	0	30	98	0	1	0	10
Distance to market	76	11	6	0	30	98	11	11	0	80

Source: ERIA – SMEs Survey 2010 for Cambodia.

4. Access to Finance: Firm Characteristics

The objective of this paper is to understand the constraints and obstacles to accessing credit in the formal financial sectors. In this regard, the concept of financial constraints could be inferred from the characteristics of those firms that had obtained credit, together with other requirement of the banks.

The decision by the financial institutions to provide credit to an SME is determined by how they perceive the firm's ability to pay after carefully scrutinizing the SME's proposal for funding. There are a number of characteristics that determine a good quality firms in terms of access to credit. This section of the paper uses a probit model to assess the key characteristics of firms that successfully obtain credit.

The statistical model in general form is $CAi= \gamma 0+ \Gamma'Xi+ \varepsilon i$ where CAi is credit approval, Xi is set of explanatory variables that captures characteristics of firms, Γ is matrix of coefficients and εi is an error term. The dependent variable (CAi) is a binary variable and identifies whether or not a credit proposal is approved, or the issue of the financial gap is addressed. In this context, a financial gap is defined as a credit proposal filed by an SME being rejected or only partially approved. The value of CAi is set to 1 if firms applied for credit and had their application approved and zero otherwise.

In the deficient financial institution context, collateral is a prerequisite for accessing a loan. In the sample, only three firms were able to get credit without collateral (table 11). It is common practice that banks use collateral to guarantee loans. In this model, we choose to exclude collateral as a firm characteristic, since it almost perfectly predicts credit approval. From the banks' point of view, larger sales volumes, high rates of profit, and low interest payment as a share of total costs in previous years are key determinants of firms which will obtain loan approval.

Age, size and type are among the key criteria for banks' "credit rationing". The younger firm is more risky and at an early stage of development. The older the firms are, the more well-established they are in the industry where they operate. Size of firms can be measured by number of employees, and larger numbers could connote the firm's ability to pay, as could larger turnover. The larger the size of a firm is, the higher the probability that it can obtain a loan. The size of firm is not a clear-cut indicator, as

smaller size represents potential for growth (and instability), while larger size represents stability and maturity, but less growth potential or even being in the decline stage. Moreover, the bank could be biased in providing credit to a specific type of firm which has been very dynamic. In this particular study, enterprises are classified into 4 industries following the survey (1) Garment and Textiles, (2) Parts, Components, and Automotive (including motorbikes), (3) electrical, electronic, parts and machinery and (4) other.

There are other factors that may influence the decisions of banks to provide loans. Managerial capability and experience is considered to be a significant factor for creditors granting loans to SMEs. Other firm characteristics, of lesser influence, include gender of owner, distance to market, whether the firm is run by a man or women, firm life-cycle, owner's net worth and so on. Dummies of business capability are included to trace the impact of efforts made by SMEs to improve business processes, adopt new production methods, and develop new products.

Data Descriptions and Primary Analysis

Comparing firms that requested loans and those that did not allows us to see their different behavior and characteristics in business process. It is plausible that firms that request credit have higher sales growth, higher profit, better management, good connections, and are more active in expansion etc. It is, however, probably the old firm that holds a strategic market share and is efficient in term of cost optimization.

From the sample survey, the requesting firms tend to be older firms with average size and level of managerial experience. The sales volumes of firms that seek external financing is double that of non-requesting firms. Both groups of firms had seen reductions in sales during the economic crisis period, but requesting firms appears to have slightly higher profit margins.

Both finance seeking and non-seeking firms share very similar cost structures in terms of spending on labor service, raw materials, and utilities. On interest rates, however non-seeking firms recorded only 1% of total cost spent on interest payments. In contrast, finance seeking firms recorded as much as 5% of total cost on interest payments (Table 12).

In this survey, firms did not really engage in exports. In fact 99% were serving domestic market demands. There was one firm exporting 30% of its output, and two firms exporting 10% of their production. Operations of firms were largely confined to their local areas only; 96% of firms sold their product to markets situated within a range of 20km, while another 3% extended their sales to a range of 30km. Firms in the garment and textiles industry made up 27% of the sample, the rest being categorized in other categories including rice milling, ice production, food and beverages and construction materials. The proportion of firms run by woman was higher in the group of firms asking for finance, which can be explained partly by the fact that promotion of microfinance is more targeted to women (Table 13).

Table 13. Other Characteristics (in %) of SMEs Non-requesting and Requesting for Credit

Items	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
	Non-requesting			Requesting		
Size	**76**	**0.882**	**0.3252529**	**98**	**0.87755**	**0.329489**
Type						
(1) Garment & Textile	76	14%	35%	98	27%	44%
(4) Others	76	86%	35%	98	73%	44%
Firm life-cycle						
Start-up	76	0%	0%	98	1%	10%
Fast Growth	76	4%	20%	98	6%	24%
Slow Growth	76	61%	49%	98	57%	50%
Maturity	76	14%	35%	98	12%	33%
Decline	76	22%	42%	98	23%	43%
Owner's net worth						
Less than $25,000	76	55%	50%	98	61%	49%
$25,000-$100,000	76	30%	46%	98	17%	38%
$100,000-$500,000	76	12%	33%	98	14%	35%
$500,000-$1,000,000	76	3%	16%	98	7%	26%
Gender						
Male	76	71%	46%	98	63%	48%
Female	76	29%	46%	98	37%	48%

Source: ERIA – SMEs Survey 2010 for Cambodia

Both requesting and non-requesting firms share similar proportions of stages of life cycle, with around 60% of firms reported to be in slow growth. There is, however, a high possibility of misperception of the questions being asked. While the survey was carried out in 2009, the hardest period of the economic crisis, slow growth in just one or two years, given the whole national economy in recession, by no means meant that a firm was in its slow grow stage. Firms in the maturity stage are perceived to be good in term of providing credit, since sales volume and profits are stable.

Firms making requests for external funds are diverse in terms of net worth. Categories with net worth under US$25000, and between US$500,000 to US$1,000,000 provided 61% and 7% of total observations respectively. Clearly, personal saving is the primary source of finance, on which 94% of non-requesting and 86% of requesting firms relied when entrepreneurs started up their firms. In retrospect, firms who started up using external credit are more likely to solicit for another round of credit for expansion. Sources of finance included loans from individuals, micro-credit and other sources of financing. Moreover, in a well-rooted business network, where the majority of firms are running their business on trade credit, there is far less need for credit from financial institutions. While the leasing industry in Cambodia is still in its infancy, with only 10% among others firms leasing facilities during their start-up period (Table 14).

From the point of view of current business operations, it is clearly seen that 73% of firms who operated their business with commercial or personal loans and lines of credit from financial institutions made request for another package of credit in 2009. However, requesting firms also kept a very large proportion of retained earnings in addition to their external loans. Indeed, retained earnings are the primary source of financing for both requesting and non-requesting firms.

However, the Rural Development Bank is a provider of wholesale credits to microfinance institutions who then lend directly to borrowers. The government has also introduced a Government Guarantee Scheme against loans from commercial banks to SMEs. There was no credit from government lending agencies was found in the survey. The requesting firms also actively use personal savings and micro-credit for their business operation (Table 15).

Table 14. Source of Finance (in %) SMEs Non-requesting and Requesting for Credit

Items	Non-requesting			Requesting		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Start-UP cost						
Commercial or personal loans and lines of credit from financial institution including credit card	52	15%	36%	64	38%	49%
Credit from government lending agencies or government grant	52	0%	0%	64	0%	0%
Retained earning	52	48%	50%	64	27%	45%
Trade credit owing to suppliers	52	71%	46%	64	33%	47%
Leasing	52	12%	32%	64	9%	29%
Personal savings of business owner(s)	52	94%	24%	64	86%	35%
Loans from friends or relatives of business owners(s)	52	35%	48%	64	19%	39%
Loans from individuals unrelated to the firm or its owner ("angel")	52	0%	0%	64	3%	18%
Micro-credit	52	2%	14%	64	14%	35%
Other source of financing	52	0%	0%	64	3%	18%
Business Operation						
Commercial or personal loans and lines of credit from financial institution including credit card	76	13%	34%	98	73%	44%
Credit from government lending agencies or government grant	76	0%	0%	98	1%	10%
Retained earning	76	86%	35%	98	78%	42%
Trade credit owing to suppliers	76	61%	49%	98	33%	47%
Leasing	76	13%	34%	98	8%	28%
Loans from employees	76	1%	11%	98	5%	22%
Personal savings of business owner(s)	76	87%	34%	98	89%	32%
Loans from individuals unrelated to the firm or its owner ("angel")	76	4%	20%	98	5%	22%
Micro-credit	76	5%	22%	98	39%	49%
Other source of financing	76	0%	0%	98	3%	17%

Source: ERIA – SMEs Survey 2010 for Cambodia.

Table 15. Innovation Effort (in %) of SMEs Non-requesting and Requesting Firms

Items	Non-requesting			Requesting	
	Obs	Mean	Std. Dev.	Obs	Mean
Improving business process					
Met an international standard	76	0%	0%	98	2%
Introduced ICT	76	1%	11%	98	2%
Established new divisions or plants	76	0%	0%	98	5%
New production methods					
Bought new machines	76	7%	25%	98	23%
Improved existing machines	76	42%	50%	98	50%
Introduced new know-how	76	4%	20%	98	19%
New product					
Launch of new product	76	11%	31%	98	22%
For new market	8	63%	52%	21	62%
By new technologies	8	63%	52%	21	62%
Increase in sales of new products	7	14%	38%	20	0%

Source: ERIA Survey, 2010.

Firms who seek loans tend to be more innovative in spotting opportunities, even amidst economic crisis. In the survey data on innovation effort, clearly shows that requesting firms are more active in improving standards, establishing new branches and employing ICT. This argument becomes more solid. With new production methods being taken into account, the percentage of requesting firms purchasing new machines and introducing new know-how far exceeds the proportion of non-requesting firms. Although both kinds of firm had made a similar degree of effort to improve or upgrade existing production facilities, firms who seek external credit are more dynamic and innovative in developing new products. This reflects dynamism, and room for potential growth and competition.

Results and interpretation

The probit regression result is shown in Table 16 and is self-explanatory.

Table 16. Characteristics of Firms as Determinants of Loan Approval

Variables	(Coefficient)
Ln (Age)	0.7968983 (1.381127)
Ln (Size)	0.7772998 (0.9824575)
Garment Sector	**5.128155***** (1.943646)
Owner Experience	-0.196355 (0.1413192)
Sale Volumes in 2008	**0.0000718***** (0.0000275)
Profit Margin in 2008	**0.1348384***** (0.0590052)
Interest payment of total cost in 2008	0.0230171 (0.1372763)
Sale Volume in 2009	-0.0000132 (0.0000105)
Interest payment of total cost in 2009	-0.0012819 (0.1445616)
Distance to Market	-0.0126145 (0.0366874)
Life cycle (mature)	-2.528167 (1.737418)
Net-worth (< USD25000)	-0.3583462 (1.826074)
Net-worth (< USD100000)	1.14721 (2.045726)
Sex (Male)	0.9057545 (0.981152)
Constant	-4.985709 (3.320016)
Observation	95

Standard Error in parentheses
*** *p<0.01*

Firms engaged in the garment-textiles industry are more likely to receive external finance, compared to others. From the bank's perspective, this would seem to be a good client. Moreover, the likelihood of credit approval is significantly explained by sales volume and profit margins in previous years. Sales volume is presumably reflecting a scale of business that is considered as possessing a higher ability to repay debt. Furthermore profit margin, which is a key indicator of business performance of SMEs, is the very criteria for credit approval.

The analysis revealed that neither the age nor the size of firms is significant when it comes to receiving credit. The experience of the owner did not explain the likelihood of seeking credit. Net worth, gender of owner and state of development also do not impact on finance-seeking. Other variables, most of them dummies such as firm life-cycle stage, owner's net worth and innovation efforts, were tried in an effort to learn their effect on the credit decisions of financial institutions. Nevertheless some variables were to be omitted due to insignificancy.

Without a credit guarantee scheme or mechanism, almost all loans require collateral and only properties with hard title are accepted. Potential collateral such as accounts receivable is accepted at to very minimal extent, while movable assets such as equipment, vehicles, inventory and not-yet-harvested crops are not accepted.

This finding confirms that banks are taking collateral as a means of credit rationing. Moreover, banks are biased to sectors that they are comfortable with, for example the garment and textile industry. Sales volume and profit margins determine the likelihood of firms obtaining credit. This explains the market behavior of bank lending; the banks play their intermediate role so as to maximize their profit and minimize their perceived risks.

5. Conclusions and Policy Recommendations

Cambodia's industrial structure is dominated by micro-size firm. In terms of employment, it suffers from the "missing middle" phenomenon, where employment concentrates in micro-size firms and large firms. From the point of view of micro-firm dynamics, growth to SME scale is important in creating a diversified, competitive and solid foundation for economic growth. SMEs could generate higher value-added for economic growth, create jobs, broaden the manufacturing base, encourage FDI and enlarge the national tax base. The broad geographic distribution of micro-firms, if upgraded to SMEs, would result in a good income distribution across the country. In a sense, SME development is very critical for industrial development, sustaining growth and creating inclusive growth for Cambodia.

SMEs are facing many challenges, one of which is access to finance. In the context of Cambodia, the challenge is a result of the early stage of development of the financial sector. The banking sector is profit-oriented, and banks focus on big business transactions to maximize their profit. The MFIs that tailor-make credit for micro-sized firms usually set small loan sizes, charge high interest rates and allow only short maturity. Moreover, all credit from the formal sector must come with ***collateral***. There is good evidence that banks perceive a high risk of non-repayment of loans to MSMEs and are setting terms and conditions of lending that seem suitable for them. According to the survey, firms that are seeking finance are more active in terms of improving standards, creating new branches and employing ICT. In the survey, 81 out of 95 firms had their proposed loans approved. From the Probit model, firms in the garment and textiles sector, firms with a big sales volume and firms with high profit margins are more likely to receive a loan from financial institutions. This finding shows market-oriented provision of credit, where market bias assesses SMEs at very high risk. However, non-performing loans are lower for financial institutions that provides to micro-size and SMEs than commercial banks.

While arguments that financial access limitation is a main obstacle to SME growth are pervasive, there should be further research to develop an understanding of why and when SMEs need external fund. This research should analyze firm life-cycles, opportunity and risk of expansion, willingness to register, linkages to multinational corporation, and the possibility of upgrading from micro to small firms, from small to medium and from medium to large.

Undeniably, the policy environment in Cambodia is inadequate. Although there are some mechanisms in place, such government documents as the Small and Medium Enterprise Development Framework, policy implementation still has a long way to go. Once again, outcomes from future research related to SME development in Cambodia will provide indispensable input for formulation of specific government policy to support SMEs, such as policy on technology upgrading or financing for SMEs.

Development of SMEs in Cambodia may require an active role for the state to connect micro-size firms to SMEs and to large enterprises through coordination, and incentives to work together. The linkages between the three levels will facilitate the upgrade and expansion of micro enterprises, whose growth currently relies on the

domestic market, outdated technology and personal savings. Foreign firms find it hard to work with micro enterprises due to incompatible technology, insufficient scale, lack of reliability of supply capacity and differences in working attitudes.

Finally a few policy recommendations could be drawn in respect of the development of SMEs as a whole, and improving access to finance among SMEs, given the current early-stage development of financial institutions in particular.

- The "missing middle" phenomenon suggests that government must play an active role in connecting SMEs to export sector. Fixing the missing middle could a way forward for economic diversification, and could create a strong foundation for growth. Industrial development therefore has to take into account the course of SME development, to ensure competitiveness, inclusive growth and sustainable development. Under a framework of SMEs, industrial development is practical and realistic, building on the existing production base. There are some specific policies, such as providing incentives to export firms to find local partners; benchmarking certain standards or priority areas for export growth; providing market, management and technical consultancy; and enhancing awareness of local SMEs to supplies requires by the existing export-oriented large enterprises through tour organizing, workshops or seminars.
- The current financial institutions are working very well, but banks are strongly biased against "risky" SMEs. This is the problem of asymmetric information. In response to this problem, banks demand collateral and other forms of guarantee thereby rationing credit. At the policy level, government could help SMEs by expediting land titling, offering a credit guarantee scheme, and creating a credit information bureau that would facilitate the process of lending.
- Competition among banks is necessary, as they remain concentrated in Phnom Penh. Policy is needed to encourage the banks to expand across the country rather than allowing the creation of many different banks that concentrate in Phnom Penh. The same is true for the micro finance activity of MFIs and NGOs. It is necessary for merger to take place across financial products, so as to take advantage of scale and cost efficiencies. Some of financial products could be undertaken by the banks in order to enlarge the scope of operation.

This would lead to an improvement in the terms and conditions of loans through competition among the larger banks or financial institutions.

- Further development of the financial system is a key to creating financing options for SMEs. Currently, SMEs can only access finance through MFIs and some specialized banks. The establishment of different schemes targeting SME financing could expedite further development. Stock market development would not directly serve SMEs, but would create space for bank to focus more on SMEs, if large company turns to capital market that would offer cheap financial resources.

The risk of moral hazard needs to be addressed, especially among non-registration of SMEs. The issue of the formalization and registration process for SMEs should be addressed since it has a positive implication on tax revenues as well as on access to finance among SMEs. The formalization could make policy intervention by government possible. There is no specific policy to target registration or formalization. The problem of persuading SMEs to formalize their existence, can be dealt with through offering tax benefits, consultancy, technological know-how transfer, management skills training, information, government contracts, study tours, trade fairs, exhibition priority and other benefits that they could immediately obtain. It is important to keep SMEs engaged and to highlight the benefits of being formal.

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CHAPTER 5

SMEs Access to Finance: Evidence from Laos

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Lao SMEs are at an early stage of development, and face various problems. One of the most important problems is financial constraints. In order to promote SMEs as engines of growth, it is crucial to understand the issues surrounding SMEs' access to finance. The main objective of this study is to examine the barriers confronting Lao SMEs' access to finance and to identify the contribution of financial access to SMEs performance. In addition, factors enabling successful access to finance are investigated. 198 samples from a nation-wide survey are used for this study. The results show that access to finance could improve SMEs' performance. But Lao SMEs face various financial constraints such as collateral, complex application processes as well as a limited economic environment and options for financial sources. Only a small portion of SMEs are able to access finance. However, larger domestic firms, in terms of capital, which are determined to grow their businesses, seem to have a greater possibility of being able to access financial sources.

Keywords: Lao SMEs; access to finance
JEL Classification: F14; F23

1. Introduction

Empirical studies show that financial access contributes to economic growth, and poverty reduction[1] (Beck, Demirguc-kunt, and Maksimovic, 2005 Rajan, and Zingles 1998). Therefore, access to finance has gained attention from policy makers to support SMEs' development. However, access to finance is a complex issue and needs to be understood from both the demand and the supply side.

The Lao financial system is still weak and its contribution to economic growth is quite small. The ratio of bank total assets and deposits to GDP was about 20% and the ratio of total loans to GDP was less than 10% in 2008. In addition, the State-owned commercial bank (SOCB) is dominant with a more than 60% share in terms of assets, deposits and loans (Kyophilavong, 2010). SOCB provides loans or credit mostly to large enterprises and State-owned enterprises (SOE). Therefore, it is difficult for SMEs to gain access to finance from Lao banks.

Lao SMEs are at an early stage of development and face various issues. Access to finance is one of the most important issues for SMEs in Laos. The Government of Laos (GoL) has a plan and a strategy to support SMEs in their bid to access finance in order to increase their performance and productivity. However, there is a lack of understanding of the characteristics of Lao SMEs' access to finance.

Despite the importance of access to finance, studies related to Lao SMEs in terms of access to finance are limited[2]. Therefore, the purpose of this study is to gain a better understanding of the characteristics of Lao SMEs' access to finance. In order to do this, this study has three more specific objectives. The first is to examine the issues of access to

[1] Finance leads to increased growth though various channels. Firstly, finance supports growth by raising and pooling funds which allows firms to take more risky investment. Secondly, finance helps allocate resources to their most productive use. Thirdly, finance helps monitor the use of funds and provides an instrument for risk mitigation (World Bank, 2001; Claessens, 2006).

[2] There are a number of studies on SMEs' access to finance in some countries by Michaelas *et al.*, (1999), Cressy and Olofsson (1997), Jordan *et al.*, (1998), Vos *et al.*, (2007), and Tagoe *et al.*, (2005), and Claessens, Stiji, (2006).

finance. The second is to identify the effects of access to finance on their performance. The third is to assess the factors affecting access to finance. This study used information from an SME survey (196 samples) conducted by the author in November to December 2010.

The rest of this paper is organized as follows. Section 2 provides information on the situation of financial sectors. Section 3 overviews recent economic developments and barriers to SMEs. Section 4 provides background on survey methods and characteristics of SMEs. Section 5 provides information on the situation of SMEs' access to finance.

Section 6 discusses the characteristics of SMEs' access to finance by sector. Section 7 identifies the way in which access to finance affects SMEs performance and identifies the characteristics of SMEs access to finance. The final section concludes and contains policy recommendations.

2. Financial Sector Development and SMEs Promotional Policy

2.1. Financial Sector Development

The financial system is still at an early stage of development and its contribution to growth appears to be rather small in Laos.

As of the end of 2008, the banking sector consisted of (a) four State-owned commercial banks (SOCBs); (b) two joint-venture banks between private and government; (c) five private banks including joint ventures; (d) nine branches of foreign banks; and (e) three representative offices of foreign banks.

In addition, there were 37 Non-banks and financial institutions. SOCBs dominate the market with more than half of total assets and loans; and more than two-thirds of total deposits (Table 2-1). The two largest banks (BCEL and LDB) are fully owned by the government. BCEL maintains a dominant position accounting for approximately half of total deposits and loans. It suggests that the Lao-banking sector is dominated by SOCBs.

Table 2-1. Market Share of Banking Institutions (as of June 2008)

Financial Institution Types	Number	Assets		Deposit		Loan	
		Kip billion	%	Kip billion	%	Kip billion	%
State-owned Commercial Bank	4	7704	61	6542	69	2912	74
Joint Venture Bank + Private Bank	6	2971	24	1854	20	521	13
Foreign Bank Branch *)	11	1942	15	1050	11	521	13
Total	**21**	**12617**	**100**	**9446**	**100**	**3954**	**100**

Source: the Bank of Lao PDR.

Note: *including representative Office of Foreign Bank.

The Lao financial market is relatively small and is still at an early stage of development because there are no alternative sources of funding. Only the banking sector supplies credit to the economy (Kyophilavong, 2010a). Laos established a stock market at the end of 2010. There are only two big companies trading as of March 2011.

Table 2-2 also shows the contribution made by the banking sector to the Lao economy. The Laobanking sector is relatively small when compared to the size of the economy. For instance, the ratio of total assets of the banking system to GDP is about 27 percent. This is particularly low for an economy with a non-diversified financial system, bank-based system (e.g. with no alternative, but where banks mainly supply loans). The low ratio of credit to GDP is due to three main causes, namely, the lack of skilled human resources, distorted price signals and weak legal enforcement of Nonperforming loans (NPLs). Therefore, strengthening the banking sector is one of the most important factors to support economic development in Laos (Kyophilavong, 2010a). Therefore it is difficult for SMEs to gain access to finance from the banking sector because it has supply-side constraints. It is important to strengthen and improve the financial sector in order to promote economic development, especially to find ways to support SMEs in order to diversify the economy.

Table 2-2. Contribution of Banking Sector to Lao Economy (from December 2005 to June 2008)

(%)

Share by GDP	2005	2006	2007	2008
Total Assets	22.4	25.8	28.49	27.02
Total Deposits	17.4	19.1	22.08	20.23
Total Loans	8.3	8.8	8.79	8.47
T-bills	0.68	0.74	n. a	n. a

Source: Bank of Lao PDR.
Note: - on June of 2008.
- n.a refers not available.

2.2. SME Promotional Policies

The Government of Laos (GoL) has enhanced private sector development to promote growth (GoL, 2004). Therefore, in order to achieve this objective, GoL has established strategies and policies to support SMEs' development.

Before the introduction of the New Market Mechanism in 1986, most large enterprises were State-Owned Enterprises (SOEs). Since then, the government has embarked on a major privatization program with two pillars. The first was transferring SOEs to private ownership (including joint ventures with domestic and foreign enterprises). The second was the privatization of markets by allowing private enterprises (including foreign-owned enterprises) to operate more freely (Bird and Hill, 2010). As a result, the number of SOEs was reduced from more than 800 in the early 1990s to 149 in 2004. While the contribution of SOEs to the economy has declined, some industrial sectors (cement, steel, pharmaceuticals, food processing and beverages), the financial sector, and utilities are still state-owned.

In 1994 the government introduced the Business Law, which allowed enterprises to operate freely. In 2006, the government replaced the Business Law with the Enterprises Law in order to reduce administrative costs and barriers. This law introduced a negative list for registration, promised a 10-day registration period, and simplified registration procedures (Bird and Hill, 2010). The government also began to actively promote Foreign Direct Investment (FDI) by introducing the Law on Promotion and Management of Foreign Direct Investment in 1994. To promote FDI and provide more incentives, this law was amended in 2004.

These laws were important in promoting investment, but because foreign and domestic investors were covered under different investment laws, approval conditions and national treatment were compromised. In order to correct these weaknesses, in July 2009 the National Assembly passed a new investment law; it merges the domestic and foreign investment laws; moves towards national treatment for domestic and foreign investors; eliminates barriers for obtaining investment licenses; and defines investment incentives better (Bird and Hill, 2010).

In summary, GoL has considered private sector development as an engine of growth, therefore, GoL has introduced new laws, regulations and programs in order to support private sector development.

2.3. SME Promotion Policies and Financial Supports

In order to promote SME and private sector development in Laos, GoL has promulgated Primary Office Decree No.42/PM. The goals of this decree are as follows: a) to improve the regulatory environment; b) to enhance the competitiveness of establishments; c) to expand domestic and international market access; d) to improve access to finance; e) to encourage the development of business organization; f) to enhance entrepreneurial attitudes and characteristics within society. Furthermore, Prime Minister's Degree No. 42/PM established the SME Promotion and Development Office (SMEPDO). The main objective of SMEPDO is to promote the establishment and sustainable development of SMEs.

Until now there has been no SME Promotion Bank. However, SMEPDO has introduced an SME fund decree in 2010. The main objective of the decree is to introduce rules and regulations on mobilizing and using SME funds to support SMEs. However, there is still a lack of supporting decrees and regulatory framework required to implement it.

3. Recent Economic Developments and Barriers to SMEs

3.1. Recent Economic Developments and the Role of SMEs

SME development is crucial to sustain economic development. Even though Laos has maintained high economic growth, it still has serious macroeconomic issues to overcome. First, Laos is basically facing chronic twin deficits in government spending and in international trade. Deficit financing is mainly dependent on foreign sources. Secondly, recent economic development in Laos is highly dependent on resources such as mining and hydroelectricity. It shows that the Lao economy is not diversified and is at high risk of external shock and the effects of Dutch disease. Therefore, the strengthening of SME development is one of the most important factors for long term growth in Laos.

Various empirical studies have illustrated that resource-rich countries like Laos fail in accelerating growth compared with resource-poor countries for a number of reasons. One important cause of low growth in resource-rich countries is “Dutch disease”, a syndrome which occurs when capital inflows and resource booms give rise to an appreciation of the real exchange rate, which in turn has a negative effect on tradable goods production (Sachs and Warner, 2001; Coden and Neary, 1982). Tradable goods such as agricultural and industrial goods are the engines of long-term economic growth, and therefore a shrinking tradable sector leads to declining growth in the long-term.

In order to cope with Dutch Disease and to ensure long-term economic development, diversifying economic activity and appropriate macroeconomic management are crucial (Kyophilavong and Toyoda, 2008). SMEs play an important role in diversifying the economy and generating employment, income and new technology for long-term development.

3.2. The Current Situation and Barriers

Unfortunately, there is a lack of data on enterprises in Laos. Therefore, information about the contribution of SMEs to economic activities is not available. The NSC conducted The Economic Census in 2006 and provided initial information on the size distribution of

enterprises (NSC, 2007). The results showed that micro, small and medium-size enterprises dominated the private sector but there were few large firms in the economy. There were a total of 126,913 enterprises employing 346,000 persons. About 93 % of enterprises employed less than 5 workers. About 23% of enterprises were located in Vientiane, 30% in the north, 32% in the central region, and 16% in the south. The trade sector, including wholesale and retail, was the major source of employment, accounting for about 64% of all employment in all sectors. This survey showed that Lao enterprises were relatively small in terms of employment and sales (Kyophilavong, 2010b).

SME development seems to have expanded. GTZ (2008) conducted a survey of 390-460 registered establishments in 2005 and 2007, and the results showed that enterprise growth was quite dynamic. Most establishments reported that their activities were expanding. In addition, Kyophilavong *et. al.*, (2007) confirmed that about 10 % of establishments perceived their business as running very well and more than 17 % were optimistic about the future of their business.

According to my knowledge, there are three studies of barriers facing SMEs in Laos. First, GTZ (2008) provides information on changes in the awareness of barriers facing SMEs. The top four barriers facing SMEs in 2007 were: access to capital; finding skilled technical labor; access to technology and business development service providers; and increased fees and regulations. Secondly, Kyophilavong *et. al.*, (2007) carried out a survey of SMEs in 2006 and collected more than 16,000 samples. According to the survey results, the top three obstacles to running SMEs were taxation, macroeconomic stability, and access to finance. Thirdly, ADB-Word Bank (2007) carried out a survey on the enterprise investment climate in 2005. The major constraints facing enterprises were identified as infrastructure, regulation, taxation, macroeconomic stability, and access to finance.

In sum, the main barriers for SMEs are access to finance, taxation and regulations, and the business climate, including macroeconomic stability.

4. Data Collection and Characteristics of SMEs

4.1. Description of Data Collection

In order to obtain a valid, representative sample, the survey was divided into two parts: the sampling section process and the survey process. The survey process used the same approach as a previous study[3] (Kyophilavong, 2010b).

The sampling is shown in Table 4-1 and 4-2. 198 samples were collected in the main cities and provinces in Laos. The sample included five sectors such as garments (18%), manufacturing (13%), wood processing/ handicraft (20%), construction material (13%), food/ beverages (26%).

Table 4-1. Sample Distribution

	Sample	Percentage
Vientiane	102	51.5
Savanakhet	46	23.2
Champasack	50	25.3
Total	**198**	**100.0**

Source: ERIA SMEs Survey in 2010.

[3] The sampling process followed four steps.(1) Collection of a list of establishments from the tax department of the Ministry of Finance, and the enterprise register office at the Ministry of Industry and Commerce. (2) Selection of SMEs which had a contact phone number and detailed address. (3) Division of SMEs were by detailed sectors. (4) Division of SMEs by sectors into big, medium and small. The survey process was conducted as follows. (1) Interviewers (students and lecturers from FEBM), including a pre-test in order to gather feedback from the questionnaire translation. (2) SME owners/ directors to be interviewed were called to confirm their willingness to participate in the survey. (3) appointments were made with owners/ directors of establishments. (4) Face to face interviews were conducted.

Table 4-2. Sample Framework

	Sample	%
Construction Materials	27	13.64
Food/ Beverage	53	26.77
Garment	37	18.69
Manufacturing	26	13.13
Wood Processing/ Handicraft	40	20.20
Other	15	7.58
Total	**198**	**100.0**

Source: ERIA SMEs Survey in 2010.

4.2. Characteristics of SMEs

Table 4-3 shows the characteristics of SMEs by sector in terms of number of employees, ownership, profits, sales growth, cost structure, source of intermediate inputs and products, and sales destination.

More than 60% of firms were established after 2000, which shows that SMEs are still in the early stages of development. More than half of firms are domestic SMEs. SMEs had profits of more than 19% of total sales in 2009 which was approximately 1% less than in 2008, which shows that SMEs might have been negatively impacted by the Global Financial Crisis in 2008. Sale growth was declined in 2008 due to the impact of the Global Financial crisis. Approximately 58% of SMEs are involved in exporting.

Table 4-3. Characteristic of SMEs

Characteristic of Firm	
Established since 2000 (%)	68.2
Number of Employment (%)	
1-5 person	35.4
6-49 person	44.9
Educated Employment (%)	
Tertiary Education	4.7
Vocational Training	13.1
Ownership (%)	
Domestic	54.0
Foreign	45.9
Profit (%)	
2008	18.69
2009	19.84
Sale Growth (%)	
2008	10.7
2009	20.4
Cost Structure 2009 (%)	
Labor	17.1
Raw Materials	42.55
Utility	14.8
Product Sold (%)	
Domestic	58.7
Export	41.3

Source: ERIA SMEs Survey in 2010.

Table 4-4 illustrates business capacity: firms' efforts to improve business processes or organizations, adopt new production methods, and introduce new goods to the market in the past three years. The results show that 40% of SMEs have met international standards. About 50% of SMEs bought new machinery or facilities with new functions into operation. And 45% of SMEs have introduced new products or service to the market in the past three years. In summary, most sectors have tried to improve their business processes, adopt new production methods, and introduce new products to the market, but their business capacity is still limited.

Most SMEs are family-run and about 20% of SME owners have experience in investing in and operating other businesses. About 46% of SMEs want to expand their business in the next few years. It shows that small number of SMEs owners have experiences in investing and operating other business (Table 4-5).

Table 4-4. Business Capacity

Efforts for Improving Business Processes	%
Met an International Standard	40.9
Introduced ICT Technologies	31.3
Established New Divisions or New Plants	28.8
Bought New Machines or Facilities	56.6
Improved Existing Machines, Equipment	62.6
Introduced New Know-How	56.1
Introduced New Products or Services to the Market in Past Three Years	46.5
To the New Market	42.9
By using the New Technologies	34.3

Source: ERIA SMEs Survey in 2010.

Table 4-5. Experiences of Owner

	Percent
The Majority Ownership of the Business by Members of the Same Family	52.5
Owner Invests in Others	18.2
Owner as Operator of these Other Business	27.8
Intend to Expand the Size and Scope of your Business	46.5

Source: ERIA SMEs Survey in 2010.

5. Situation of SMEs Access to Finance

5.1. Source of Finance and Its Satisfaction

SMEs face financial constraints for their business set-up and operation in Laos. The main sources of internal finance for business set-up and operations are from personal savings, retained earnings and loans from friends and relatives (Table 5-1 and 5-2).

In terms of sources of finance for set-up, personal savings of business owners, retained earnings and loans from friends and relatives make up the highest share which accounts for about 70% of total sources of finance. Less than 15% of SMEs have finance sources from financial institutions including credit cards, credit from government lending agencies, and micro-credit. Finance sources for operating are similar to finance sources for business set-

up, but the share of credit from government lending agencies is somewhat higher accounting for about 20% of the total.

In summary, the majority of financing for business set-up and operations comes mainly from internal financial sources such as personal savings, retained earnings and loans from friends and relatives. Very few SMEs are able to access loans from external financial sectors such as banks, financial institutions and micro-credit. It shows that SMEs are facing constraints in accessing financial sources especially in the external financial sector.

Table 5-1. Sources of Finance for Set-up

	Frequency	Percent
Financial-Institution including Credit Cards	13	3.0
Credit from Government Lending Agencies	38	8.6
Retained Earnings	96	21.8
Trade Credit Owing to Suppliers	38	8.6
Leasing	21	4.8
Personal Savings of Business Owner(s)	133	30.2
Loans from Friends or Relatives	70	15.9
Angels	13	3.0
Micro-credit	9	2.0
Other Sources of Financing	9	2.0
Total	**440**	**100.0**

Source: ERIA SMEs Survey in 2010.

Table 5-2. Source of Finance for Operating

	Frequency	Percentage
Commercial or Personal Loans and Lines of Credit from Financial Institution including Credit Cards	29	6.6
Credit from Government Lending Agencies	90	20.5
Retained Earnings	84	19.2
Trade Credit Owing to Suppliers	19	4.3
Leasing	27	6.2
Loans from Employees	76	17.4
Personal Savings of Business Owner(s)	90	20.5
Angels	17	3.9
Micro-credit	0	0.0
Other Sources of Financing	6	1.4
Total	**438**	**100.0**

Source: ERIA SMEs Survey in 2010.

About 80% of SMEs are not satisfied with financial institutions when they request financial support (Table 5-3). It shows that SMEs face various constraints in terms of accessing finance such as high opportunity costs, a complex documentation process, and lack of information from financial institutions.

Table 5-3. Satisfaction of Financial Accession

	Frequency	Percent
Very Satisfied	8	21.1
Satisfied	0	0.0
Neither Satisfied nor Dissatisfied	13	34.2
Dissatisfied	14	36.8
Very Dissatisfied	3	7.9
Total	**38**	**100.0**

Source: ERIA SMEs Survey in 2010.

5.2. Recent Requests for Financing

Only a small percentage of SMEs have requested finance. 73 SMEs have requested finance which accounts for about 30% of the total number of SMEs (198 firms) in this study.

There are three types of request for financing; request for lease financing, request for equity financing, and request for supplier and government financing. Requests for leasing financing is one of the highest shares accounting for 54.8% and next is requests for supplier and government financing which accounts for 26.0% and finally, requests for equity financing which accounts for 19.2% (Table 5-4). It shows that leasing finance has become popular for SMEs.

There are three periods of request for equity financing: the last 12 months, the last 3 years, and more than 3 years ago. Requests for financing in the last 12 months is the highest share, accounting for 46.6% and the second highest share is requests for financing in the last 3 years (Table 5-4). It shows that the number of requests for financing has increased recently due to increasing SME performance and financial system development, especially in the leasing business.

In financial sources, banks play an important role, accounting for 70% of total credit providers and 13% from financial institutes (Table 5-5). There are various reasons for choosing credit providers (Table 5-6). One of the most important reasons for choosing a financial institution is "Thought this credit supplier would offer the best credit terms and conditions" accounting for 30 % and "This was the regular financial institution for the business" accounting for 18%. The use of finance has various proposes but the main use of financial sources is for buying other machinery and equipment (22.4%); working capital/ operating capital (21.2%); buying vehicles/ rolling stock (13.5%) (Table 5-7).

From the analysis above, it can be seen that leasing finance seems to play an important role in SMEs being able to obtain machinery, vehicles and other equipment and their requests for leasing financing has increased mainly due to an increased supply of leasing firms.

Table 5-4. Recent Request for Financing

	Unit	The last 12 months	The last 3 years	More than 3 years ago	Total	Percent (%)
Request for Lease Financing	Freq.	19	19	2	40	54.8
	%	47.5	47.5	5	100	
Request for Equity Financing	Freq.	11	0	3	14	19.2
	%	78.6	0.0	21.4	100	
Request for Supplier and Government Financing	Freq.	4	3	12	19	26.0
	%	21.1	15.8	63.2	100	
Total	Freq.	**34**	**22**	**17**	**73**	**100.0**
	%	**46.6**	**30.1**	**23.3**	**100.0**	

Source: ERIA SMEs Survey in 2010.

Table 5-5. The Last Financial Institution or Credit Supplier

	Frequency	Percent
Bank	16	72.7
Microfinance Institution	3	13.6
Government Institution	1	4.5
Other	2	9.1
Total	**22**	**100.0**

Source: ERIA SMEs Survey in 2010.

Table 5-6. The Reasons for Choosing Financial Institute

	Frequency	Percent
This was the regular financial institution for the business	7	17.9
This was the only credit supplier in our area	2	5.1
Other credit suppliers would reject the application	5	12.8
This credit supplier would offer the lowest interest rate	6	15.4
This credit supplier would offer the best credit terms and condition	12	30.8
Others	7	17.9
Total	**39**	**100.0**

Source: ERIA SMEs Survey in 2010.

Table 5-7. Propose of using Finance

	Frequency	Percent
Land and Buildings	11	6.5
Vehicles/ Rolling Stocks	23	13.5
Computer Hardware and Software	8	4.7
Other Machinery and Equipment	38	22.4
Working Capital/ Operating Capital	36	21.2
Research and Development	11	6.5
Debt Consolidation	7	4.1
Intangibles	6	3.5
Purchase a Business	5	2.9
To Grow the Business	18	10.6
Another Purpose	7	4.1
Total	**170**	**100.0**

Source: ERIA SMEs Survey in 2010.

Credit suppliers require collateral for credit approval, accounting for about 50% and co-signer from spouse, family members and relatives which accounts for about 40% (Table 5-8). This shows that in order to obtain credit from a credit provider SME owners must, as a minimum, have collateral and co-sign from spouse or relatives. It is one of the biggest constraints for SMEs in accessing finance as most SMEs lack assets for collateral.

There are a number of documents which are requested as part of the application process such as a formal application for financing, business financial statements, a business plan, personal financial statement, appraisal of assets, and cash flow projection (Table 5-9). As many owners of SMEs have quite a low level of education, complex documents and

application processes are another important constraint on SMEs' access to finance. However, about 90% of requests have been approved either in the full amount or partial amount (Table 5-10).

Table 5-8. Credit Supplier Require the Business to Provide

	Frequency	Percent
Loan Guarantee	16	18.4
Collaterals	37	42.2
Co-signer	34	39.1
Total	**87**	**100.0**

Source: ERIA SMEs Survey in 2010.

Table 5-9. Documents were Requested as Part of the Application Process

	Frequency	Percent
Formal Application for Financing	36	19.6
Business Financial Statements	28	15.2
Business Plan	29	15.8
Personal Financial Statement	30	16.3
Appraisal of Assets	29	15.8
Cash Flow Projection	24	13.0
Other Documentation	8	4.3
Total	**184**	**100.0**

Source: ERIA SMEs Survey in 2010.

Table 5-10. Credit Authorized as a Result of this Request

	Frequency	Percent
The Full Amount was Authorized	34	73.9
A Partial Amount was Authorized	11	23.9
The Request was Turned Down	1	2.2
Application was Withdrawn	0	0.00
Total	**46**	**100.0**

Source: ERIA SMEs Survey in 2010.

5.3. Request for Financial Type

5.3.1. Details on Last Requests for Lease Finance

There are 41 SMEs, which account for about 20% of the total number of SMEs (198 firms) in this study which have requested new or additonal capital lease financing. Requests which occurred during the last 12 months and last 3 years account for more than 90% (Table 5-11). It shows that recently, SME requests for leasing finance have been increasing.

There are various types of assets that SMEs try to acquire from leasing finance (Table 5-9). Their acquisitions include machinery and equipment (38.7%), vehicles (22.7%) and business or office space (17.3%) (Table 5-12).

Table 5-11. The Most Recent Requests for Capital Lease Financing

	Frequency	Percent
The last 12 months	19	46.3
The last 3 years	20	48.8
More than 3 years ago	2	4.9
Total	**41**	**100.0**

Source: ERIA SMEs Survey in 2010.

Table 5-12. Type of Asset that the Firm Wants to Acquire

	Frequency	Percent
Business or Office Space	13	17.3
Vehicles	17	22.7
Computer Hardware and Software	12	16.0
Other Machinery and Equipment	29	38.7
Other	4	5.3
Total	**75**	**100.0**

Source: ERIA SMEs Survey in 2010.

5.3.2. Details on Requests for Equity Financing

There is a small portion of SMEs which request equity financing in Laos. There are 14 SMEs, accounting for 9.6% of total SME requests for equity financing (Table 5-13).

The request for equity financing has also increased recently; it shows that more than 70% of SMEs have requested equity finance in the last 12 months.

There is a small portion of requests for equity financing from a friend or relative of the business owners and a private investor from outside the firm compared with a crown corporation or government institution and other (Table 5-14).

Table 5-13. The Most Recent Request for Equity Financing

	Frequency	Percent
The last 12 months	11	78.6
The last 3 years	0	0.0
More than 3 years ago	3	21.4
Total	**14**	**100.0**

Source: ERIA SMEs Survey in 2010.

Table 5-14. Request Equity Financing From

	Frequency	Percent
A friend or relative of the business owner	2	8.7
An employee of the business	0	0.0
A private investor from outside the firm unrelated to the firm and its owners	4	17.4
A crown corporation or government institution	9	39.1
Other	8	34.8
Total	**23**	**100.0**

Source: ERIA SMEs Survey in 2010.

5.3.3. Details on Requests for Supplier and Government Financing

There are 19 SMEs which account for about 10% of SME requests for supplier and government financing (Table 5-15). Requests for supplier and government financing seem to be declining. SMEs SMEs requests occurred mainly more than 3 years ago.

Table 5-15. Requests for Supplier and Government Financing

	Frequency	Percent
The last 12 months	4	21.1
The last 3 years	3	15.8
More than 3 years ago	12	63.2
Total	**19**	**100.0**

Source: ERIA SMEs survey in 2010.

6. Characteristics of SMEs in Accessing Finance by Sector

6.1. SMEs Access to Finance by Sector

In order to promote SMEs access to finance, the characteristics of SMEs by sectoral access to finance are identified. The results are shown in table 6-1. SMEs were divided into six sectors as follows; garment, wood processing/ handicraft, food/ beverage, construction materials, manufacturing, other sector.

Garment and wood processing/ handicraft request finance more than other sectors accounting for 27.9%, and 23% respectively. About 80% of garment-sector SMEs have requested financing in the last 3 years. On the other hand, only about 57.1% of wood processing and handicraft-sector SMEs have requested financing in the last 12 months.

Table 6-1. SMEs Access to Finance by Sector

	Unit	The last 12 month	The last 3 years	More than 3 years ago	Total	Percent (%)
Garment	Freq.	0	14	3	17	27.9
	%	0	82.4	17.6	100	
Wood Processing/ Handicraft	Freq.	8	4	2	14	23.0
	%	57.1	28.6	14.3	100	
Food/ Beverage	Freq.	4	3	2	9	14.8
	%	44.4	33.3	22.2	100.0	
Construction Material	Freq.	2	6	1	9	14.8
	%	22.2	66.7	11.1	100.0	
Manufacturing	Freq.	3	2	1	6	9.8
	%	50.0	33.3	16.7	100.0	
Other	Freq.	1	4	1	6	9.8
	%	16.7	66.7	16.7	100.0	
Total	**Freq.**	**18**	**33**	**10**	**61**	**100.0**
	%	**29.5**	**54.1**	**16.4**	**100.0**	

Source: ERIA SMEs Survey in 2010.

6.2. Last Request for Lease Finance by Sector

In terms of requests for lease financing, it seems that the garment and wood processing/ handicraft sector dominates with more than 50% of requests. Most of the garment and wood processing/ handicraft requests for leasing financing have occurred in the last 12 months and the last 3 years (Table 6-2).

Table 6-2. Last Request for Leases Financing by Sector

	Unit	The last 12 month	The last 3 years	More than 3 years ago	Total	Percent (%)
Garment	Freq.	1	11	0	12	30.0
	%	8.3	91.7	0.0	100.0	
Wood Processing/ Handicraft	Freq.	6	2	1	9	22.5
	%	66.7	22.2	11.1	100	
Food/ Beverage	Freq.	3	1	0	4	10.0
	%	75.0	25.0	0.0	100	
Construction Material	Freq.	4	2	0	6	15.0
	%	66.7	33.3	0.0	100	
Manufacturing	Freq.	3	1	0	4	10.0
	%	75.0	25.0	0.0	100	
Other	Freq.	2	2	1	5	12.5
	%	40.0	40.0	20.0	100	
Total	**Freq.**	**19**	**19**	**2**	**40**	**100**
	%	**47.5**	**47.5**	**5.0**	**100.0**	

Source: ERIA SMEs Survey in 2010.

6.3. Requests for Equity Financing by Sector

The wood processing and handicraft and construction material sector requests for equity finance have been more than other sectors, accounting for about half of all requests. Two sectors have requested equity financing in the last 12 months (Table 6-3). It shows that requests for equity financing have been increasing due to increased demand of SMEs for this type of finance and also factors from the supply-side.

Table 6-3. Requests for Equity Financing by Sector

	Unit	The last 12 month	The last 3 years	More than 3 years ago	Total	Percent (%)
Garment	Freq.	1	0	0	1	7.1
	%	100.0	0.0	0.0	100.0	
Wood Processing/ Handicraft	Freq.	4	0	0	4	28.6
	%	100.0	0.0	0.0	100	
Food/ Beverage	Freq.	2	0	0	2	14.3
	%	100.0	0.0	0.0	100	
Construction Material	Freq.	2	0	1	3	21.4
	%	66.7	0.0	33.3	100	
Manufacturing	Freq.	0	0	1	1	7.1
	%	0.0	0.0	100.0	100	
Other	Freq.	2	0	1	3	21.4
	%	66.7	0.0	33.3	100	
Total	**Freq.**	**11**	**0**	**3**	**14**	**100**
	%	**78.6**	**0.0**	**21.4**	**100.0**	

Source: ERIA SMEs Survey in 2010.

6.4. Requests for Supplier and Government Financing by Sector

The Garment and Construction Material sectors make about half of all requests for supplier and government financing. Most construction material SMEs requests for supplier and government financing were made more than 3 years ago (Table 6-4). On the other hand, around half of garment sector requests for supplier and government financing were made in the last 3 years.

Table 6-4. Requests for Supplier and Government Financing by Sectors

	Unit	The last 12 month	The last 3 years	More than 3 years ago	Total	Percent (%)
Garment	Freq.	1	2	1	4	21.1
	%	25.0	50.0	25.0	100.0	
Wood Processing/ Handicraft	Freq.	2	0	1	3	15.8
	%	66.7	0.0	33.3	100	
Food/ Beverage	Freq.	1	0	2	3	15.8
	%	33.3	0.0	66.7	100	
Construction Material	Freq.	0	0	5	5	26.3
	%	0.0	0.0	100.0	100	
Manufacturing	Freq.	0	1	1	2	10.5
	%	0.0	50.0	50.0	100	
Other	Freq.	0	0	2	2	10.5
	%	0.0	0.0	100.0	100	
Total	**Freq.**	**4**	**3**	**12**	**19**	**100**
	%	**21.1**	**15.8**	**63.2**	**100.0**	

Source: ERIA SMEs survey in 2010.

6.5. Characteristics of Financial Services by Characteristics of SMEs.

This session investigates the characteristics of SMEs access to finance in terms of loan size, interest rate and term of loan. I have divided characteristics of firm into four categories: by year of establishment, by sector of industry, by firm size in terms of number of employment, and by firm size in terms of value (asset) of firm (Table 6-5). The results are explained as follows.

In firm access to finance by year of establishment, I have divided firms into two groups: firms which were established before 2000 and those established after 2000. There is not much difference in loan interest rate per month by firms' establishment year, but it is different in loan size and term of loan. Firm which were established before 2000 seem to

get larger loans from credit suppliers than the firms established after 2000. On the other hand, firm which were established after 2000 seem to have a longer term of loan from credit suppliers than firms established before 2000. It might be due to credit constraints from suppliers which could not provide longer terms of loans to firms.

In firm access to finance by sector, the sample size was divided into six sectors: garment; wood processing/ handicraft; food/ beverage; construction materials; manufacturing; other sector.

There is not much difference in loan interest rate by sector, although there were some differences in loan size and terms of loan. Manufacturing and garment seem to receive larger loan size from credit suppliers compared with other sectors. Despite having a large size of loan, the garment sector has a short term of loan and high loan interest rate. It shows that the garment sector seems to face more problems in accessing finance compared with other sectors.

In firm access to finance by size of firm in terms of employment, firm size is divided into five categories: 1-5 persons; 6-49 persons; 50-99 persons; 100-199 persons; and more than 200 persons. There are some differences in terms of loan size, interest rate and terms of loan. Large firms seem to have larger loan size but comparatively short terms of loan and have to pay higher interest rates. Most big firms prefer a longer term of loan for their cooperation and investment, but credit suppliers do not provide long term of loans for large firms. Suppliers might face credit constraints and consider the high risks involved in providing loans.

In access to finance by worth of firm, worth of firm is divided into five categories: less than $25,000; $25,000-$100,000; $100,000-$500,000; $500,000-$10,00,000; over $1 million. There are differences in loan size, loan interest rate, and term of loan by worth of firm. More valuable firms seem (high worth of firm) to receive larger-size loans than smaller firms which have a lower value. Surprisingly, large, valuable firms seem to pay a higher interest rate and have a shorter term of loan compared with lower value firms.

In summary, there are some differences in loan size, interest rate and terms of loan by year of firm establishment, sector, firm size and worth of firm. Large manufacturing firms

in terms of number of employment and value (worth of firm) which were established before 2000 seem to receive higher value loans but shorter period of term of loan. In addition, larger firms seem to pay higher interest rate than smaller firms. It could explain why credit suppliers, which are mainly from state-owned commercial banks (SOCB), put constraints on providing loans to firms.

Table 6-5. Characteristics of Financial Service by Characteristics of SMEs

	Loan Size	Interest Rate per Month	Term of Loan (month)
By Establish Year			
Before 2000	514243	1.3	19
Since 2000	64936	1.4	24
By Sector			
Garment	161364	1.5	5.9
Wood Processing/ Handicraft	42450	1.1	30.6
Food/ Beverage	23617	1.2	27.0
Construction Materials	72500	1.4	19.8
Manufacturing	787176	0.9	28.3
Other	12159	3.2	30.7
By Size (Person)			
1-5 persons	16798	1.3	16.7
6-49 persons	44644	1.3	32.3
50-99 persons	1277721	1.6	25.2
100-199 persons	162500	1.5	2.0
More than 200 persons	203000	1.5	8.6
Worth of Firm ($1000)			
Less than 25	37089	1.4	16
25 – 100	45688	2.0	31
100 – 500	60845	1.3	23
500 – 1000	400000	1.3	2
Over 1 million	678060	1.0	24

Source: ERIA-SME Survey.

7. Factors Affecting Firm Performance and Access to Finance

7.1. Factors Affecting Firm Performance

Multi-regression model is used in order to investigate the factors affecting firm performance[4]. Firm performance is determined by various factors. A detailed explanation of variables is shown in Table 7-1.

The dependent variable is the percentage of profit in total sales in 2009, and the independent variable includes characteristics of firm, situation of access to finance, and characteristics of owner of firm. We used the Ordinary Least Square (OLS) method. In order to avoid multicollinearity in the independent variables, the correlation matrix method was employed. We chose variables which had correlations of less than 50%. We estimated firm's performance functions in order to investigate the impact of various variables on firm performance. The results are explained below.

The regression result is shown in table 7-2. The adjusted R^2 of this model was 0.25 %, showing the model fitted quite well. Of 26 variables, there are 5 variables which were found to be statistically significant when assessing the performance of a firm. In 5 variables, we found four variables such as food/ beverage, domestic firm, management experience, and experience in other business which have a positive impact on firm performance. But one variable (overall source of financial operating) has a negative impact on firm performance. Here, overall source of financial operating is defined as a number of financial sources which includes sources from both formal and informal financial sources such as commercial or personal loans from financial institutions, credit from government lending agencies or government grants, micro-credit, retained earnings, trade credit owing to suppliers, leasing, loans from employees, personal savings of business owners, loans from individuals unrelated to the firm or its owner, and other sources of financing. The greater the number of financial sources,the greater the constraints on access to finance there

[4] See more analysis on factors access to finance see Vos *et al.,* (2007); Cressy and Olofsson (1997); and Michaelas *et al.,* (1999).

will be. The empirical data confirm that constraints on access to finance has a negative impact on firm performance.

Table 7-1. Variables for Regression

Symbol	No. of QQ	Definition	Unit
Y1	Q6.A	Profit in Total Sale (2009)	%
X1	Q6.A	Sale in 2009	US$
X2	Q6.B	Number of Employment	Number
X3	Q.A1	Request for Funding	Yes = 1
X4	Q.G1	Sources of Financial Operations	Number
X5	Q.2	Year of Establishment	2010 = 1
X6	Q4	Construction Materials	Yes = 1
X7	Q1	Food/ Beverage	Yes = 1
X8	Q2	Garment	Yes = 1
X9	Q3	Manufacturing	Yes = 1
X10	Q4	Wood Processing/ Handicraft	Yes = 1
X11	Q5	Domestic Firm	Yes = 1
X12	Q6	Tertiary in Total Employment	%
X13	Q7.B	Domestic Buyers	Domestic = 1
X14	Q8.A	Improving Business Processes/ Organization	Number
X15	Q8.B	Adoption of New Production Method	Number
X16	Q8.C	Introduction of New Products or Services	Yes = 1
X17	Q.E1	Age of the Largest Shareholder	Year
X18	Q.E2	Gender	Male = 1
X19	Q.E3	Management Experience	Year
X20	Q.E4	Languages Ability	English/ French = 1
X21	Q.E5	Net-worth of the Largest Shareholder	Number (1-5)
X22	Q.E6	The Largest Shareholder is Family Member	Yes = 1
X23	Q.E8	Owner as Operator of these Other Business	Yes = 1
X24	Q.E10	Experience in Other Business	Yes = 1
X25	Q.F1	Business Expansion	Yes = 1
X26	Q.F4	Obstacles to Growth of Business	Number

Source: ERIA SMEs Survey in 2010.

Table 7-2. Factors Affecting Firm Performance

Symbol	Definition	Coefficient	t-value
X1	Sale 2009	-0.000	-0.4
X2	Number of Employment	-0.005	-0.4
X3	Request for Funding	-3.593	-1.4
X4	Sources of Financial Operations	-2.501	-2.1 **
X5	Year of Establishment	-0.254	-1.5
X6	Construction Materials	0.974	0.2
X7	Food/ Beverage	6.998	1.67 *
X8	Garment	-2.939	-0.6
X9	Manufacturing	-1.824	-0.4
X10	Wood Processing/ Handicraft	4.446	1.1
X11	Domestic Firm	7.326	1.8 *
X12	Tertiary in Total Employment	-0.035	-0.5
X13	Domestic Buyers	-1.14	-0.3
X14	Improving Business Processes/ Organization	-0.021	0.0
X15	Adoption of New Production Method	0.171	0.1
X16	Introduction of New Products or Services	-0.690	-0.3
X17	Age of the Largest Shareholder	0.118	1.5
X18	Gender	2.715	1.1
X19	Management Experience	0.737	2.9 ***
X20	Languages Ability	0.4	0.1
X21	Net-worth of the Largest Shareholder	-1.203	-1.4
X22	The Largest Shareholder is Family Member	-1.106	-0.4
X23	Owner as Operator of these Other Business	-1.649	-0.6
X24	Experience in Other Business	8.525	2.8 ***
X25	Business Expansion	-4.08	-1.6
X26	Obstacles to Growth of Business	-0.185	-0.3

Source: Author's estimation from ERIA SMEs survey in 2010.

Note: *, **, an***indicates that the coefficient are significant at the 10%, 5% and 1% level, respectively.

7.2. Determinants of Factors Affecting SME Access to Finance

In order to assess the factors that influence access to finance , the logit model is used. This model is particularly suited to the task at hand because it is designed to handle regressions involving dichotomous dependent variables[5]. This consideration is singularly

[5] The same framework was used to analysis the factors affect on production network in Lao SMEs, see more details in Kyophilavong (2010b).

important since business owners were asked to say whether they requested financing or not. These responses, coded 1 for ‘request for financing’ and coded 0 for other, is called the dependent variable. Here, it is important to note that ‘Request to finance’ is proxy for ‘Access to finance’. The explanatory variables describe various attributes of type of establishment, type, size and etc (for more details see Table 7-3).

We used a logit model to estimate the factors affecting access to finance for Lao SMEs. The results of the logit model are shown in Table 7-4. In 25 dependent variables, five variables were found to be statistically significant on firm’s access to finance. Food/ beverage and garment were found to have a negative impact in terms of firm’s access to finance. On the other hand, domestic firms, improving business processes/ organization, net worth of the largest shareholder (size of firm in terms of capital) were found to have a positive impact on access to finance. The empirical result shows that domestic large firms which have seen improvement in their business have a greater possibility of being able to access finance.

Table 7-3. Definitions of Variables for Model

Variables	No of QQ	Definition	Unit
Y	Q.A1	Request for Funding	Yes = 1, No = 0
X1	Q6.A	Profit in Total Sale (2009)	%
X2	Q6.A	Sale in 2009	US$
X3	Q6.B	Number of Employment	Number
X4	Q.2	Year of Establishment	2010 = 1
X5	Q4	Construction Materials	Yes = 1
X6	Q1	Food/ Beverage	Yes = 1
X7	Q2	Garment	Yes = 1
X8	Q3	Manufacturing	Yes = 1
X9	Q4	Wood Processing/ Handicraft	Yes = 1
X10	Q5	Domestic Firm	Yes = 1
X11	Q6	Tertiary in Total Employment	%
X12	Q7.B	Domestic Buyers	Yes = 1
X13	Q8.A	Improving Business Processes/ Organization	Number
X14	Q8.B	Adoption of New Production Method	Number
X15	Q8.C	Introduction of New Products or Services	Yes = 1
X16	Q.E1	Age of the Largest Shareholder	Year
X17	Q.E2	Gender of the Largest Shareholder	Male = 1
X18	Q.E3	Management Experience	Year
X19	Q.E4	Languages Ability of the Largest Shareholder	English/ French = 1
X20	Q.E5	Net-worth of the Largest Shareholder	Number (1 – 5)
X21	Q.E6	The Largest Shareholder is Family Member	Yes = 1
X22	Q.E8	Majority Owner as Operator of these Other Business	Yes = 1
X23	Q.E10	Experience in Other Business	Yes = 1
X24	Q.F1	Business Expansion	Yes = 1
X25	Q.F4	Obstacles to Growth of Business	Number

Source: ERIA SMEs Survey in 2010.

Table 7-4. Factors Affect Request for Financing

Variables	Definition	Coefficient	z-value
X1	Profit in Total Sale (2009)	-0.032	-1.25
X2	Sale in 2009	-0.000	-1.11
X3	Number of Employment	0.002	0.89
X4	Year of Establishment	-0.081	-1.52
X5	Construction Materials	-0.985	-0.86
X6	Food/ Beverage	-2.525	-2.06 **
X7	Garment	-2.861	-2.05 **
X8	Manufacturing	-2.609	-2.1
X9	Wood Processing/ Handicraft	-0.843	-0.8
X10	Domestic Firm	3.018	2.22 **
X11	Tertiary in Total Employment	0.0131	0.65
X12	Domestic Buyers	-0.687	-0.8
X13	Improving Business Processes/ Organization	2.568	3.54 **
X14	Adoption of New Production Method	-0.903	-1.14
X15	Introduction of New Products or Services	0.794	1.22
X16	Age of the Largest Shareholder	0.018	0.81
X17	Gender of the Largest Shareholder	-0.582	-0.91
X18	Management Experience	0.125	1.56
X19	Languages Ability of the Largest Shareholder	0.333	0.44
X20	Net-worth of the Largest Shareholder	0.411	1.73 *
X21	The Largest Shareholder is Family Member	0.255	0.28
X22	Majority Owner as Operator of these Other Business	0.783	0.94
X23	Experience in Other Business	0.747	0.94
X24	Business Expansion	-0.163	-0.24
X25	Obstacles to Growth of Business	0.222	1.24
	Constant	-5.066	-2.36
Number of Obs.		160	
LR chi2 (31)		89.78	
Prob > chi2		0	
Pseudo R2		0.441	

Source: Author's estimation from ERIA SMEs survey in 2010.
Note: *, **, an***indicates that the coefficient are significant at the 10%, 5% and 1% level, respectively.

8. Conclusion and Policy Recommendations

Lao SMEs are at an early stage of development and face various problems. One of the most important issues is access to finance. The main objective of this study is to gain a better understanding of the characteristics of Lao SMEs' access to finance.

Some SMEs have improved their businesses and adopted new production methods, but this is only a small portion of the total number. Lao SMEs have performed quite well recently with total average profits of about 19%. Empirical results confirm that SMEs which have constraints on financial access have poor performance compared to SMEs which do not have constraints on access to finance. There are few SMEs which could gain access to finance, about 20% of SMEs (198 firms) in this study. However, the trend towards access to finance has increased recently due to financial sector improvement, liberalization of the financial sector and the demand for finance. However, there are various constraints on access to finance such as collateral, the complex application process and lack of information from financial institutions. About 80% of SMEs which request finance are not satisfied with the lending terms of financial institutions. Domestic firms which have a large size in terms of capital and can manage to improve their business innovation seem to have greater opportunities to access finance.

In order to promote SMEs as an engine of growth, it is important to help them to gain access to finance. It is important for policy makers to take into consideration the following.

Firstly, it is clear that the high cost of accessingfinance and financial services is not diversified in Laos. Therefore, it is important for policy makers to improve the financial system, and liberalize the financial sector in order to increase competition and have greater diversification in the financial sectors. Secondly, whilst the business climate remains poor and SMEs are still at an early stage of development and face various difficulties. Therefore, it is important for policy makers to improve the business climate in order to minimize the cost of doing business and improve innovation and productivity. Thirdly, as SMEs are facing heavy constraints on access to finance,it is important for policy makers to provide training on access to finance and induce credit guarantee schemes for SMEs. In

addition, the establishment of banks or financial institutions for SMEs needs to be considered.

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CHAPTER 6

Small and Medium Enterprises Access to Finance in Vietnam

VO TRI THANH

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This paper investigates the access to finance, and the financial gaps and factors constraining such access, of Vietnamese Small and Medium-sized Enterprises (SMEs), operating in the Textiles and Garment, Automotive Components Manufacturing, and Electrical and Electronics Industries.

The paper shows that capital shortage presents a serious barrier for SME development in Vietnam. Not all enterprises in the survey sample have access to finance. This can be because they have sufficient internal funds or they may experience difficulties with credit providers, perhaps due to weaknesses inherent to the SMEs themselves. However, access to finance only ranks fourth among the most serious impediments for those having access to capital, and sixth among those who have never raised external capital.

The survey results indicate that the constraints of SMEs in accessing finance are lack of collateral, being a younger enterprise, major owners having insufficient experience in running or owning businesses, micro size, and no participation in production networks. However, it seems that the enterprises having either collateral, or good credit profiles and sound business plan are better trusted by financial institutions.

The paper also shows that the success of SMEs, such as larger profit margins as well as earning profits in two consecutive years, is influenced by external factors, such as using two sources of finance, i.e. commercial or personal loans and credit lines from financial institutions including credit cards, and credit from State-owned credit institutions or Government grants, as well as relying on the SME policy support by government. In recent years, many SMEs have received both legal and direct support, the most common forms of which are improving legal framework and business environment, simplifying administrative procedures, and financial assistance in the form of solving tax and financial problems. Further narrowing the supply-demand gap in the capital market for SMEs requires more effort from all related parties, including the supply side, the demand side, and the Government.

1. Introduction

1.1. Overview

For more than two decades, Vietnam has pursued an open market and reforming policies in order to mobilize resources for economic development. Together with the implementation of the Enterprise Law and administrative reform, Vietnam has continuously reduced impediments in terms of the legal framework, administrative procedures and policy to facilitate the development of enterprises in all sectors in the economy, including SMEs and households.

According to Decree No. 56/2009/ND-CP dated 30 June 2009, SMEs comprise the businesses registered in accordance with the Enterprise Law, cooperatives and individual business households, of either micro, small, or medium size. There are two criteria for defining the type of SME, namely scale of total assets (as the prior criterion), and annual average number of employees. In particular, a micro-sized enterprise is defined as one having 10 or fewer employees.

Table 1. Classification of SMEs

Size / Sector	Micro-sized enterprise	Small-sized Enterprise		Medium-sized enterprise
	Number of employees	Total asset	Number of employees	Total asset
Agriculture, Forestry and Fishery	10 persons or fewer	VND 20 billion or less	Over 10 to 200 persons	Over VND 20 billion to VND 100 billion
Industry and Construction	10 persons or fewer	VND 20 billion or less	Over 10 to 200 persons	Over VND 20 billion to VND 100 billion
Trading and Services	10 persons or fewer	VND 10 billion or less	Over 10 to 50 persons	Over VND 10 billion to VND 50 billion

Source: Decree No. 56/2009/ND-CP.

Up to May, 2010, Vietnam has 496,101 enterprises and about 3.7 million individual business households[1] registered in provincial and district registration agencies. SMEs account for 97% of total registered enterprises in Vietnam, of which just over 55% are micro-sized enterprises with the number of permanent laborers being fewer than 10.

Table 2. Classification of SMEs by Scale of Labour Dimension

Year	2006	2007	2008
Micro-sized enterprise	56.97	55.14	55.01
Small-sized Enterprise	36.27	38.43	38.87
Medium-sized enterprise	3.64	3.61	3.07
SMEs	96.88	97.18	96.95
Large enterprise	3.12	2.82	3.05
Total	**100.00**	**100.00**	**100.00**

Source: White book on SMEs in Vietnam 2009.
Note: Unit in %

According to the White Book on SMEs in 2009, from 2000, the average registered capital of enterprises increased by 9 times over the 2000 - 2008 period. The increases were 0.962 billion, 3.14 billion, 8.1 billion and 8.7 billion VND in 2000, 2006, 2007 and 2008 respectively. However, due to the global economic recession and Vietnam's economic downturn, the average registered capital of enterprises in 2009 fell to 6.1 billion VND. The economic recession has created challenges for SMEs in accessing finance and, as a result, has negatively affected financial resources for SMEs.

Shortage of capital poses a serious problem for SMEs, according to recent studies and ERIA's SME research project in financial year 2009. The proportion of under-capitalized SMEs was 77%, 34.8% of which believe that shortage of capital is a significant barrier. In particular, in 2008, because of tightened monetary policy, access to finance became difficult

[1] According to Vietnamese legislation, the concept of enterprise includes those in the form of private enterprise, limited liability company, joint stock company and partnership company, except individual business household. A limited liability company wholly owned by foreign owner(s) is called a 100% foreign owned company, and a limited liability company jointly owned by domestic and foreign owners is called a joint-venture.

for all, enterprises including SMEs. In 2009, several enterprises still suffered from under-capitalization. There are two major reasons for this, resulting from factors either internal to or external of the enterprises themselves.

Findings from ERIA's SME research project in financial year 2009 confirm that access to finance is amongst the determinants of the competitiveness of regional SMEs and their capacity to fully exploit and participate in the global economy, and business opportunities from regional economic integration and, in particular, participation in regional production networks.

The challenges of SMEs' access to finance from banks and financial institutions in the process of global and regional economic integration have been the subject of warnings since the early 2000s. At that time, about 20% of the loans of SMEs came from banks and financial institutions, with the remaining 80% mainly from non-financial institutions, relatives, and friends, who impose an interest rate 3-6 times higher than that of banks (Hoang Hai, 2004).

John Rand *et al.,* (2008) show that 23.2% of the SMEs had had loan requests rejected by banks and financial institutions, or had submitted documents found faulty. The corresponding figures from other studies in 2005 and 2009 were 26.5% and 20.3% respectively (CIEM, DoE, ILSSA, 2006 and 2010). This group of SMEs is therefore identified as a group of credit constrained enterprises, i.e. those having problems getting a formal loan, and/or those in need of a loan despite approved formal loans, and/or firms that did not apply for a loan due to high interest rates, application problems or lack of collateral.

Trinh Duc Chieu *et al.,* (2010) shows that the development of SMEs is determined by several factors such as land (production premises), taxes and fees, capital (finance), human resource, technology, market and the business environment. Capital is among the factors which significantly and usually affect the business operations of SMEs, because they have difficulty in accessing finance, particularly medium- and long-term loans. This difficulty is caused by both the SMEs and the financial institutions. On the one hand, the limitation of their labor force and their ability leads SMEs to find it difficult to prepare investment projects and business development plans which could persuade banks and financial

institutions to grant loans. On the other hand, many banks are fearful of giving loans to SMEs because their loan-financed projects are largely small-scale, with higher risks than those of large enterprises, and procedure fees are also high. The rejection of SMEs' loan requests rests on the following grounds: (i) riskiness (especially for young SMEs, with insufficiently credible credit profile); (ii) larger transaction costs than those of large enterprises; (iii) lack of collateral; and (iv) insufficient accounting record of loan applicants. In addition, the SMEs are frequently small-sized, so the opportunity of mobilizing equity capital is limited, thereby affecting their development. The research team applied binary logistic regression to evaluate the policy impact. The result of estimation shows that capital (ability to access credit: formal loans, interest rates) and the 3 factor groups - namely human resources, market and business environment - have significant impacts on revenue growth of the sampled SMEs.

The focus of this study is to understand SMEs' access to finance in Vietnam. It also intends to elaborate upon the two points, namely the extent to which SMEs are systematically disadvantaged and rationed with respect to external financing, and the characteristics of SMEs that contribute to high performance, which in turn facilitates access to finance.

1.2. Methodology

The research team conducted questionnaire surveys among SMEs in different provinces and cities of Vietnam, and among financial institutions of which the headquarters are mostly located in Hanoi. The questionnaires were formally designed by ERIA for all the economies participating in this project, and the research team added some more content in accordance with the characteristics of Vietnam's enterprises for convenience during the survey.

A list of 200 enterprises was chosen using simple sample selection methodology. These enterprises represent three specific geographical areas of Vietnam (the north, the south and the centre) where there are massive enterprises operating in textiles and garments, automotive parts, and components (including motorbikes), and electrical and

electronics. Ha Noi, Bac Ninh, Bac Giang, Dong Nai, Binh Duong, and Da Nang were the provinces and cities selected for the study. Additionally, some enterprises from other sectors were selected to compare with the above counterparts. Some enterprises were also studied in depth so as to understand the issue.

The selected enterprises exhibit different forms of ownership, namely private enterprises, limited liability enterprises, join-stock companies, and foreign-invested enterprises. Such a diversity leads to an objective and complete understanding of the reality of production networks of enterprises.

Table 3. Overview of Enterprises Surveyed

		Number of surveyed enterprises	Percentage of surveyed enterprises
I	***Sector***		
1	Textile and garment	112	66.3
2	Parts, Components, and Automotives (including motorbikes)	20	11.8
3	Electrical, Electronic, parts and machinery	20	11.8
4	Others	17	10.1
Total		**169**	**100.0**
II	***Province/City***		
1	Hanoi	36	21.3
2	Bac Ninh	32	18.9
3	Bac Giang	20	11.8
4	Binh Duong	20	11.8
5	Dong Nai	21	12.4
6	Da Nang	40	23.7
Total		**169**	**100.0**
III	***Form of ownership***		
1	Private company	17	10.1
2	Limited liability company	67	39.6
3	Joint stock company	16	9.5
4	100% foreign owned Co.	66	39.1
5	Joint-venture	3	1.8
Total		**169**	**100.0**
IV	***Size***		
1	Micro-sized enterprise	121	71.6
2	Small-sized Enterprise	10	5.9
3	Medium-sized enterprise	38	22.5
Total		**169**	**100.0**

Source: Authors' calculations from the survey.

169 enterprises were surveyed, of which almost all were small-sized and medium-sized enterprises (about 91% of total enterprises; 6 enterprises had 300 laborers but assets were less than VND 100 billion and are, thus, defined as medium-sized enterprises according to Vietnamese criteria). 5.9% was the proportion of micro-sized enterprises that had no more than 10 laborers, none of which has between 1 and 5 laborers. The largest proportion of the total enterprises surveyed came from the textiles and garments sector (66.3%), due to the massive jobs and exports created by the garment industry in the context of Vietnam having plentiful laborers and being deeply integrated into the Asian and global economy.

Table 4. Number of Surveyed SMEs by Industry and Size

Industry	Micro-sized enterprise	Small-sized enterprise	Medium-sized enterprise	Total
1. Textiles and garment	80	7	25	112
2. Parts, components, and automotives (including motorbikes)	15	0	5	20
3. Electrical, electronic, parts and machinery	15	1	4	20
4. Others	11	2	4	17
Total	**121**	**10**	**38**	**169**

Source: Authors' calculations from the survey.

Table 5. Number of Surveyed SMEs by Form of Ownership and Size

Form of Ownership	Micro-sized enterprise	Small-sized enterprise	Medium-sized enterprise	Total
Private company	13	2	2	17
Limited liability company	54	6	7	67
Joint stock company	12	0	4	16
100% foreign owned Co.	40	2	24	66
Joint-venture	2	0	1	3
Total	**121**	**10**	**38**	**169**

Source: Authors' calculations from the survey.

To analyze access to finance from the supply side, the research team conducted a questionnaire survey on 10 financial institutions, including eight commercial banks and two financial leasing companies. The research team used a number of methods to analyze the collected data. Once data were entered and cleaned, software such as STATA and SPSS

was used for analysis. The qualitative data were distributed to be analyzed together with quantitative data. Description methods, single and cross tabulations and graphs are employed to analyze the survey data. In addition to the qualitative and descriptive analysis, the team utilized quantitative analysis methods, such as binary regression, to evaluate the relationship between SMEs systematically disadvantaged, rationed and their characteristics and affecting factors. Finally, the team matched the survey results with secondary data obtained from other surveys, or calculation results based on common published data. The following section presents the outcomes of this review and an assessment of SMEs' access to finance.

2. SMEs' Access to Finance

2.1. Status of SME Financing in Vietnam

Since 2000, with the significant development of the SME sector, Vietnam has opened its financial market and liberalized some capital transactions. After obtaining WTO membership in 2007, Vietnam has gradually removed barriers encountered in business registration and financial services, and thanks to that, facilitated business entities engaging in financial markets. From 2008, the financial market has witnessed strong participation by domestic as well as foreign entities. They are the capital resource providers for any form of business including SMEs. There are two major types of financial institutions: banking institutions and non-bank credit institutions. Since 2000, Vietnam has had all the short-, medium- and long-term components of a capital market, including primary and secondary markets. This ensures liquidity and an efficient market mechanism for financial products. Moreover, the quality of financial services has improved; and the increasing consumers' interest is due to the variety of financial products available.

In recent years, the annual mobilized capital of credit institutions has grown continuously. The fastest growth was observed in the joint-stock commercial banks. The most mobilized capital was in the state-owned commercial banks, accounting for a 50%

share of all credit institutions. Yet this figure has tended to narrow due to strong competition from joint-stock commercial banks and joint ventures involving foreign banks.

For 10 years there has been a dramatic growth of credit, with an annualized average of 30%, exceptionally in 2007 of over 50%. However, the "overheating growth" of credit was evident during the last 5 years (To Ngoc Hung, 2010; Nguyen Xuan Trinh *et al.,* 2010). The credit growth in 2009 was 37.87% compared to 24.2% in 2008. The sharp increase in 2009 is attributed to expanding monetary policy, as part of an economic stimulus package by the government aimed at reaching higher economic growth in 2009 (6.23%) in comparison with economic growth in 2008 (5.32%).

Outstanding loans are largest in joint-stock commercial banks, financial companies, and financial leasing companies. State-owned commercial banks account for the largest share in Vietnam's banking system, providing 51% of outstanding loans. The major proportion of outstanding loans is short term, accounting for 56.82% of the total outstanding loans in 2009. Outstanding loan structure by sectors has changed, with a declining share for State-owned enterprises (from over 50% to 30% of total outstanding loans), and an increasing share for non-State enterprises. The loan structure of commercial banks has also seen a certain shift. However, the proportion of outstanding loans to industry, trade and repair, hotels and restaurants, and transportation remains unchanged. Agriculture, forestry and fishery accounted for the largest proportion of outstanding loans, though this decreased from 29.6% in 2002 to 25.2% in 2009. Meanwhile the proportion of loans provided to the construction sector increased from nearly 14% to just over 20%. The share for the remaining sectors went down from 8.5% to 5.1% during the same period. By term of loans, in the 1990s, although short-term loans accounted for a very high portion of the banking system (95% short term loans in 1990, 5% medium and long term loans, collectively), medium- and long-term loans in recent years have increased, occupying typically 40% of the total. However, the term mismatch is a matter of concern, as 80-85% of loans are short term (under 1 year), while 40-45% outstanding from lenders is a result of medium and long term lending (2 years or more).

Table 6. System of Credit Institutions in Vietnam by Mid 2010

Group of credit institutions	Type	Number
Banks	State-owned commercial bank	3
	Joint-stock commercial bank	39
	Joint venture commercial bank	5
	Commercial bank with 100% foreign capital	5
	Branch of foreign bank	48
	Vietnam Development Bank (VDB)	1
	Vietnam Bank for Social Policies	1
Non-bank credit institutions	Financial company	17
	Financial leasing company	13
	Central People's Credit Fund	1
	People's Credit Fund facility	1037
	Microfinance institution	68

Source: To Ngoc Hung (2010), Supervising system for national financial issues, *National level Research Program KX.01.19/06-10.*

Note: Unit: Number of credit institutions.

Table 7. Mobilized Capital and Credit Outstanding of Credit Institutions

Group of credit institutions		2005	2006	2007	2008	2009
State-owned commercial banks	Mobilized capital	455,749.50	567,105.90	710,687.20	842,787.32	943,433.96
	Outstanding credit	410,745.20	469,849.60	613,228.70	740,355.63	949,651.63
Joint-stock commercial banks	Mobilized capital	95,130.37	160,863.60	347,112.70	462,416.91	474,217.06
	Outstanding credit	80,386.10	131,676.10	286,725.40	337,564.98	560,564.67
Joint venture banks and foreign commercial banks	Mobilized capital	47,282.41	68,017.20	112,680.10	122,415.94	148,909.98
	Outstanding credit	52,237.30	64,478.80	95,569.40	139,386.86	161,290.00
Financial companies and Financial leasing companies	Mobilized capital	5,085.21	11,065.70	23,198.80	37,678.09	50,794.23
	Outstanding credit	9,732.50	13,778.40	25,054.20	38,813.74	61,259.42
People's Credit Fund	Mobilized capital	6,811.91	8,485.30	12,296.80	16,279.56	19,839.21
	Outstanding credit	7,760.80	9,678.90	13,263.70	16,970.05	22,459.29
Total	Mobilized capital	610,059.40	815,537.70	1,205,975.60	1,481,577.81	1,904,194.44
	Outstanding credit	560,861.90	689,461.80	1,033,841.40	1,273,091.26	1,755,255.01

Source: To Ngoc Hung (2010), Supervising system for national financial issues, *National level Research Program KX.01.19/06-10.*

Note: Unit: Billion VND.

Along with the benefits from integration, Vietnam is facing difficulties and challenges, typically from the global financial crisis in 2007-2008 triggered in the US. The inflation rate in 2008 was 19.89%, while the GDP growth rate in 2008 was 6.23% compared with 8.48% in 2007. This was the big challenge for the entire economy, which in turn directly affected commercial banks. Due to the critical nature of financial and monetary business, the activities of commercial banks and credit institutions are closely monitored by the State Bank of Vietnam (SBV) through legal documents and guidelines. Upon becoming a public company listed on the stock market, commercial banks and credit institutions must strictly comply with the securities' provisions.

Since 2008, a new environment has impacted the structure of the country's financial market. Due to the systemic effect of the global economic crisis, the instability in Vietnam's financial market exposed weaknesses in both the market itself and the policies governing it. A regulatory policy, providing 8 solutions for a stable macro economy and financial markets was issued in Government resolution No. 10/2008/NQ-CP and affected the operation of the financial system. The key solutions include (i) using monetary policy to curb inflation and ensure economic growth, with administrative intervention in monetary markets by restraining the growth of outstanding credit, controlling interest rates, managing the exchange rate, and the formation of 2 prices in the money and foreign exchange markets; (ii) closely controlling and enhancing the efficiency of public expenditure. However, because of the growth target, the budget deficit and public debt increased to nearly 70% of GDP in 2010, up from 40% in 2008; (iii) strengthening financial market supervision. The change in the macro economy due to the impact of the economic stimulus package from the Government in late 2009 and 2010 has brought big challenges for the financial market system. In addition, inability to control the real estate and gold markets has unfavorably affected the financial markets, as capital flows are frequently allocated among financial, gold, real estate markets and other investment alternatives.

2.2. Survey Analysis

The findings indicate that the majority of SMEs in Vietnam encounter three major obstacles in their development, namely rising business costs, increasing competition, and shortage of skilled labor. Access to finance ranks fifth among serious obstacles that the enterprises encountered in the whole survey sample, fourth among those having access to capital, and sixth among those that have never raised external capital.

Table 8. Serious Obstacles for Enterprises in their Development

Type of Obstacles	Enterprises accessing to financial institutions	Sample
1. Rising business cost	70.7	71.6
2. Finding qualified labour	52.0	52.1
3. Tougher competition	50.7	53.3
4. Access to finance	25.3	18.9
5. Instability of consumer demand	22.7	27.8
6. Government regulations	8.0	14.8
7. Management capacity	5.3	10.7
8. Environmental regulations/ compliance	2.7	4.1
9. Insurance premium	2.7	5.3

Source: Authors' calculations from the survey.
Note: Unit: %.

Table 9. Serious Obstacles for the Enterprises without External Financing

Type of Serious Obstacles	Percent
1. Rising business costs	68.5
2. Tougher competition	53.7
3. Finding qualified labors	50.0
4. Instability of consumer demand	24.1
5. Government regulations	22.2
6. Access to finance	14.8
7. Management capacity	11.1
8. Insurance premium	9.3
9. Environmental regulations/ compliance	3.7

Source: Authors' calculations from the survey.
Note: Unit: %

Only about half (44.4%) of the surveyed enterprises had approached external formal and informal financial institutions with loan requests over the past 12 months. The maximum number of institutions which one SME accessed was four. This figure is smaller than expected, which supports the ideas that either a number of SMEs can finance

themselves from their own internal capital, or that in some cases SMEs find it hard to access external financial sources for their business funds. The later argument might be explained by the fact that SMEs had difficulty, or worried about difficulty, in accessing credit or loans from both formal and informal credit providers.

From the survey, a number of enterprises have not made any external financial requests over the past 12 months. They accounted for 55.6% of the surveyed enterprises. It seems that these business entities are usually at the start-up stage, or might not in urgent need of loans for their activities, or they might think that it is hard to achieve approval for a formal loan due to their start-up characteristics. As indicated by the survey, the major source of capital for business start-up is the owner's individual savings (43.8% of surveyed enterprises), followed by commercial loans and personal loans. If relatives and friends' investments are included, the owner's share of investment in the start-up period comprises up to nearly 66% of total capital. In summary, individual capital rather than a formal financial source is the major provider of funds for business start-up.

Table 10. Shares of Enterprises which never uses External Financing by Development Stages

Stage of development	Enterprises never using external financing	Sample
Early stage	33.3	18.3
Rapid growth stage (faster than growth rate of the economy)	14.8	21.9
Slow growth stage (slow consumption)	35.2	37.9
Maturity stage (remain stable of consumption)	11.1	17.8
Contraction stage (decrease of consumption)	5.6	4.1
Total	**100.0**	**100.0**

Source: Author's calculations from the survey.
Note: Unit: %.

The survey results in Table 11 show that the enterprises intending to use external loan requests to finance working capital or operating capital account for 69.7%. This figure is significantly higher than the proportion using loan requests to acquire machinery and equipment, to consolidate debt, and to invest in land and buildings, which are 29.3%, 14.1% and 10.1%, respectively. In summary, the SMEs mainly seek access to finance for working capital or operating capital, and to a lesser extent for investment in machinery and

equipment, land and buildings, and debt consolidation. They rarely think about using approved loans to grow their business or to acquire other enterprises, or to invest in research and development (R&D).

Table 11. Purpose of using the Requested Financing

	Frequency	Percent
a. Land and buildings	10	10.1
b. Vehicles or rolling stock	7	7.1
c. Computer hardware and software	2	2.0
d. Other machinery and equipment	29	29.3
e. Working capital or operating capital	69	69.7
f. Research and development	2	2.0
g. Debt consolidations	14	14.1
h. Intangibles	0	0
i. Purchase a business	0	0
j. To grow the business	0	0
k. Another purpose	7	7.1

Source: Author's calculations from the survey.

The financial sources that the enterprises use to finance their start-up and to maintain their business operations are illustrated in Tables 12 and 13 in descending order in terms of proportion of businesses having access to those sources. In business start-up, internally generated capital from the personal savings of business owners contributes the most. When businesses enter subsequent stages, the sources of finance show some change. The proportion of enterprises using internal capital falls from 43.8% at the start-up phase of business to 30.8% at the stage of maintaining business operations. In maintaining business operations, commercial and personal loans and credit lines from financial institutions, including credit cards, ranks first with access for 53.3% of the enterprises. 92% of SMEs usually deal with banks as the main financial institution for new loans. Only one enterprise in the sample in Danang City borrowed from the Government support funds, the rest used People Credit Funds[2], parent company's subsidies or partner's funds. In summary, SMEs

[2] People Credit Fund is a credit fund voluntarily formed by legal entities, individuals and households under cooperative form with the aim of mutually assisting one another in doing business.

raise more capital from external sources once their business operations enter the maintenance and expansion phase of their life-cycle.

In maintaining business operations, external finance such as loans from friends or relatives of business owners(s), or loans from individuals unrelated to the firms or to the firms' owners, decreased substantially from 31.4% to 10.7%. This is due to firms switching to other sources of capital, in this case to commercial or personal loans and credit lines. For example, the proportion of enterprises using external finance increases from 37.9% to 53.3%, and the proportion of enterprises using trade credit also goes up from 5.9% to 16%. Credit obtained from government lending agencies or government grants slightly increases from 0.6% to 5.9%. Thus, the financial support to SMEs from the Government still remains modest. In addition, micro-credit and leasing account for a small percentage, which implies that these financial instruments are yet to develop.

Table 12. Sources of Finance for Financing SME Start-up

Source of Finance	Frequency	Percent
1. Personal savings of business owner(s)	74	43.8
2. Commercial or personal loans and credit lines from financial institutions including credit cards.	64	37.9
3. Loans from individuals unrelated to the firm or its owner ("angels")	37	21.9
4. Loans from friends or relatives of business owner(s)	16	9.5
5. Others	16	9.5
6. Retained earnings	15	8.9
7. Trade credit owing to suppliers	10	5.9
8. Micro-credit	6	3.6
9. Leasing	4	2.4
10. Credit from government lending agencies or government grants	1	0.6

Source: Author's calculations from the survey.

Table 13. Sources of Finance for keeping Business Operation

Source of finance	Frequency	Percent
1. Commercial or personal loans and credit lines from financial institution including credit cards.	90	53.3
2. Retained earnings	89	52.7
3. Personal savings of business owner(s)	52	30.8
4. Trade credit owing to suppliers	27	16
5. Loans from individuals unrelated to the firm or its owner ("angels")	18	10.7
6. Others	16	9.5
7. Credit from government lending agencies or government grants	10	5.9
8. Leasing	10	5.9
9. Micro-credit	11	6.5
10. Loans from employees	5	3

Source: Author's calculations from the survey.

Characteristics of enterprises having access to external formal and informal credit providers over the last 12 months seem to differ insignificantly from those of the survey sample, except in the intention to expand their businesses. The proportion of the enterprises which accessed external formal and informal credit providers over the last 12 months and intended to expand their business within the next two years is higher than that of the sample. The number of enterprises using commercial loans for financing their business expansion accounted for 86% while that of the sample is only 74%.

Investigation of those firms with rejected loan requests yields the following insights: First, firms lacking collateral assets from the major proportion of rejected loan requesters. Second, all the rejected loans were requested by enterprises that had operated for less than 10 years. Businesses with more than 10 years of operation had no loan requests rejected. Third, business owners' experiences have an inverse relationship with the probability of their loan requests being rejected. From the data, only firms with owners possessing less than 20 years experience had loan requests rejected. The less experience, the higher the probability of the loan requests being rejected. In contrast, no loan requests from business owners with more than 20-years experience were rejected.

Table 14. Proportion of Enterprises Having Loan Requests Rejected

	Percent		Percent
1-Collateral		***4-Size***	
Collateral provision required	25.0	Micro-sized enterprise	5.7
No collateral required	75.0	Small-sized enterprise	0
2-Firm age		Medium-sized enterprise	0
Less than 3 years	25.0	***5-Growth of sales***	
From 3 to 5 years	50.0	Making loss in 2008 and 2009	50.0
More than 5 to 10 years	25.0	Change from loss to profits and vice versa	0
More than 10 years	0	Profitable in 2008 and 2009	50.0
3- Years of experience of the owner in owning or managing		***6-Stage of business development***	
Less than 5 years	50.0	Start-up	25.0
From 5 to less than 10 years	25.0	Fast growth	25.0
From 10 to less than 20 years	25.0	Maturity	50.0
From 20 years and above	0	Contraction	0

Source: Author's calculations from the survey.
Note: Unit: %

Fourth, credit lenders partially or fully approved loan requests from all types of firms (micro-, small-, medium-sized). However, rejected loan requests happened only in micro enterprises. More loans were fully approved than partially. The proportions of enterprises with fully approved loan requests, partially approved loan requests, and rejected loan requests were 86%, 10% and 4%, respectively. Those whose loan requests were fully approved can be seen as gaining advantage in term of access to finance, while the enterprises with partially approved requests were seen as at a disadvantage.

Table 15. Proportion of Enterprises being Approved or Rejected when Making Loan Requests by Size

Size	Full amount requested	Part of amount Requested	Request Rejected	Total
Micro-sized enterprise	83.3	16.7	5.7	100.0
Small-sized enterprise	82.9	11.4	0	100.0
Medium-sized enterprise	95.7	4.3	0	100.0
Total	**85.9**	**10.1**	**4.0**	**100.0**

Source: Author's calculations from the survey.
Note: Unit: %.

Fifth, in terms of industry, enterprises in textiles and garments also make up a large proportion of enterprises with fully or partially approved or rejected loan requests. The figure is higher than that of enterprises in textiles and garments in the whole survey sample (66.3%). Comparing the extent of approved loan requests in three industries, the proportion of enterprises with fully approved loan requests is the highest, followed by that of enterprises with partially approved loan requests, and finally by that of enterprises with rejected loan requests.

Table 16. Proportion of Enterprises being Approved or Rejected when Making Loan Requests by Industry

	Full amount requested	Part of amount requested	Request Rejected	Sample
Textile and garment	67.1	90.0	75.0	66.3
Parts, Components, and Automotives (including motorbikes)	11.8	10.0	0	11.8
Electrical, Electronic, parts and machinery	9.4	0	25.0	11.8
Others	11.8	0	0	10.1
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Author's calculations from the survey.
Note: Unit: %.

Table 17. Proportion of Enterprises being Approved or Rejected when Making Loan Requests within Sector

	Full amount requested	Partial amount requested	Request Rejected	Total
Textile and garment	82.6	13.0	4.3	100.0
Parts, Components, and Automotives (including motorbikes)	90.9	9.1	0	100.0
Electrical, Electronic, parts and machinery	88.9	0	11.1	100.0
Others	100.0	0	0	100.0

Source: Author's calculations from the survey.
Note: Unit: %

Sixth, none of the surveyed enterprises which have participated in production network[3] have their loan requests rejected. Meanwhile, enterprises that do not participate in production networks (i.e. enterprises using inputs produced by themselves, or purchased from other enterprises, wholesale or retail) also have had their loan requests rejected. Direct export enterprises as a members of production networks, seemed to have more difficulty in access to finance, as half of them are refused when making loan requests.

Table 18. Proportion of Enterprises being Approved or Rejected when Making Loan Request by Sale Pattern

Sale patterns	Full amount requested	Part of amount requested	Request rejected
Supply to final assemblers	35.3	40.0	0
Supply to first tier	20.0	10.0	0
Supply to second tier	11.8	20.0	0
Supply to third tier	3.5	0	0
Supply to wholesalers/retailers	51.8	60.0	100.0
Direct exports	52.9	40.0	50.0

Source: Author's calculations from the survey.
Note: Unit: %.

Seventh, there is no significant relationship between rejected loan requests and firms possessing the following characteristics:

(i) There is no evidence that show that the business owners' gender has any direct relationship with an SME's capital access.

(ii) Likewise, rejected loans occurred at every stage of business development. Therefore, there is no significant link between loan acceptance and business development stages.

(iii) Not only firms who had negative business performance had their loans applications rejected, but also those who showed positive figures. Credit providers, specifically, rejected loan requests from the companies experiencing losses, and those who made

[3] The enterprises participating in production network are those using inputs produced by themselves, or purchased from other enterprises, and supplying them to the first tier, second tier and third tier buyers in the production chain.

profits in 2008 and 2009, or those with decreasing productivity and those with increasing productivity, or those with small owner's net worth and those with large owner's net worth.

Table 19. Proportion of SMEs Having Loan Requests Approved or Rejected by Characteristics

	Profitable in 2009	Ratio of profit growth to costs	Education level of owner		Ratio of labor graduated college and university levels from 10% and above
			College and university	University	
Full amount requested	74.1	58.8	69.4	64.7	65.2
Part of amount requested	80.0	60.0	60	50	50.0
Request rejected	50.0	50.0	25	25	100.0

Source: Authors' calculations from the survey.
Note: Unit: %.

With respect to performance, firms whose loans were either fully or partially approved showed superior business performance to those whose loans were rejected. In addition, companies having their loans requests fully approved tended to outperform those with partially approved loans. The proportions of enterprises with fully approved loan requests, partially approved loan requests, and rejected requests, which rated lending services as very satisfactory or satisfactory were 61.2%, 22.2% and 0%, respectively.

As indicated by the analysis of advantaged and disadvantaged enterprises in access to finance, based on characteristics of industry and size, those in the garment industry seemed to have more advantage than those in other industries. The proportions of enterprises in this sector having loan requests fully and partially approved were 67.1% and 90%, respectively. The proportion of small enterprises with access to finance is also higher in this sector.

Table 20. Proportion of SMEs being Approved or Rejected when Making Loan Requests by Industry and Size

	Industry				Size	
	Textiles and garment	**Parts, components and automotives (including motorbikes)**	**Electrical, electronic, parts and machinery**	**Others**	**Micro-sized enterprise**	**Small-sized enterprise**
Full amount requested	67.1	11.8	9.4	11.8	5.9	68.2
Part of amount requested	90.0	10.0	9.4	11.8	10.0	80.0
Request rejected	75.0	0	25.0	0	0	100.0

Source: Authors' calculations from the survey.
Note: Unit: %

From the analysis of characteristics of enterprises with rejected loan requests, only a small proportion of them were satisfied with their lending service, compared to those with approved loan requests. Most of the former group had to pay extra fees, put in collateral or obtain co-signatures from individuals other than the business owners, for loan approval. Only a few enterprises made requests for financing leases or equity. Nonetheless, most of the enterprises calling for equity financing transferred into follow-up investment, and these were mainly enterprises owned by members of the family. Most of the surveyed enterprises never requested credit from State-owned credit institutions or government grants.

There are some findings for high performing SMEs, characterized by an increase in profit margin between 2009 and 2008 or consecutive profits in 2008 and 2009 as follows:

A high proportion of enterprises operating in the three sectors (textiles and garments; parts, components, and automotive, including motorbikes; and electrical, electronics, parts and machinery) gained an increase in profit margin between from 2008 to 2009 and earned profits in both years. However, the proportion of the enterprises posting profits in both years is higher in textiles and garments than in the other two industries. The enterprises with male owners were more successful, albeit insignificantly, than female owners in terms of achieving an increase in profit margin between 2008 and 2009 or earning profits in both years. Owners who were between 30 and 50 years of age achieved better business

performance in terms of profitability in both years. If the owners could use other languages (mostly English), their enterprises had advantages, albeit not unambiguous. The enterprises owned by family members achieved better results than enterprises owned by retired people. Investment in R&D did not affect the performance of enterprises, and SMEs are not really interested in R&D. The idea of expanding business frequently exists in an enterprise, but this depends on business performance. Almost all enterprises are established on their own.

The majority of enterprises enjoying larger profit margins use two sources of finance to maintain business operations, namely commercial or personal loans and credit lines from financial institutions, including credit cards, and credit from State-owned credit institutions or Government grants.

Similarly, most of the enterprises earning profits in two consecutive years rely on two sources of finance to maintain business operations, i.e. commercial or personal loans and credit lines from financial institutions including credit cards, and credit from State-owned credit institutions or Government grants.

Surprisingly, almost all the SMEs with better performance, including those enjoying profits in two consecutive years, as well as those achieving an increase in profit margin, were enterprises whose owners established their business on their own.

2.3. Empirical Analysis

2.3.1. Methodology and Data

2.3.1.a. The Econometric Model

The data collected from the survey are mainly in the categorical form, especially the information relating to SME financial access, thus logistic regression is relevant to the quantitative analysis using an econometric model. Moreover, as the values for dependent variables are binary, the authors employ binary logistic regression for more in-depth analysis.

The model is expressed as:

$$p_i = P(y_i = 1) = F(z_i) = \frac{1}{1+e^{z}}$$

$$\text{where: } z_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \ldots + \beta_k x_{ki}$$

In which:

p_i: probability that a considered event occurs

x_{ji}: x_{ik} is the observation of the k^{th} independent variable

$\beta_0, \beta_1, \ldots, \beta_k$ are the regression coefficients that will be estimated

The model validation is accessed through the Hosmer-Lemeshow statistic and R-squared, while the model adequacy is checked via predicted percentage correct and the deviation obtained when estimating the selected model. The results show that all the requirements for a suitable model with the given data set are met (except there is a little violation of the assumption that the deviation should be normally distributed). Overall, the selected model adequately fits the data (for more details, see Appendix I).

2.3.1.b. Data

A 169-observation database collected from the SME survey conducted by the research team is used for econometric model estimation, by applying a logistic binary regression model. As previously mentioned, this survey was conducted in six Vietnamese provinces, from the North to the South. Three main manufacturing industries were targeted in the survey, including textiles and garments; parts, components, and automotive; and electrical, electronic, parts and machinery. Some additional enterprises in other manufacturing sub-sectors are also included in this survey.

The survey information is related to general information (locality, legal status, sector, number of years of establishment, business performance (cost structure, profitability or losses), employment, sales patterns and business capability. On the financial side, numerous questions relating to finance requests, requests for leases, for equity financing, and for supplier and government financing were incorporated in the questionnaire. In addition, some other information about business expansion was also included in the survey. Some of the information collected will be used as dependent and explanatory variables to estimate the above model (for more details, see Appendix I).

2.3.2. Result

Results from the binary logistic regression with the credit request and rejected credit request as dependent variables are reported in the tables below.

Table 21. Credit Request and Possible Explanatory Factors*

Model for Credit Request		B	S.E.	Wald	df	Sig.	Exp(B)
Step 10[a]	*Legal status*			*12.596*	*4*	*.013*	
	Ltd, Co.	-.472	.668	.499	1	.480	.624
	Joint-stock	.039	1.063	.001	1	.971	1.040
	FDIs	-2.394***	.722	10.987	1	.001	.091
	Joint-venture	-2.345	1.701	1.901	1	.168	.096
	Years	.140*	.075	3.491	1	.062	1.150
	Q8.a1(yes)	1.407**	.580	5.893	1	.015	4.084
	Q8.a2(yes)	2.831**	1.422	3.966	1	.046	16.960
	Q8.a3(yes)	-1.135*	.597	3.612	1	.057	.321
	Q8.b1(yes)	.798*	.473	2.843	1	.092	2.220
	Qe_5			8.214	4	.084	
	Less than $25,000	.034	1.046	.001	1	.974	1.035
	$25,000 - 100,000	-1.079	.719	2.251	1	.134	.340
	$100,000 - 500,000	-1.019	.652	2.447	1	.118	.361
	$500,000 - <$1mill.	1.402	.859	2.663	1	.103	4.062
	Qf_5			8.080	4	.089	
	Qf_5(1)	1.857**	.778	5.698	1	.017	6.406
	Qf_5(2)	.957	.645	2.202	1	.138	2.604
	Qf_5(3)	2.231**	.911	5.989	1	.014	9.306
	Qf_5(4)	.758	1.207	.394	1	.530	2.133
Observations		143					
-2 Log likelihood		76.9					
R-squared		0.362 (Cox & Snell)[b]		0.482 (Nagelkerke)[b]			

Source: Author's calculations from the survey.
Note:

a. Variable(s) entered on step 1: Prov_code, Q1.1, Years, pro_grs, Q8.a1, Q8.a2, Q8.a3, Q8.b1, Q8.c, Qe.1, Qe.2, Qe.3, Qe_5, Qf.1, Qf.2, Qf_5, Qg_2, Export.
b. Values estimated at the last step reported (step 10).

Domestic private enterprises; none categories; over $1 million; start-up are bases. *, **, *** correspond to significance levels of 10%, 5% and 1%.

In the model for credit request, the dependent variable is binary, taking the value of 1 if the enterprise has made financial requests (including any request for borrowing, capital

leases, government grants and equity financing; regardless of whether the request was approved, withdrawn or rejected) and 0 otherwise.

From the estimation results in the above Table, legal status, year of establishment, business capacity and stage of development of enterprises have significant impacts on the situation of raising credit request of surveyed enterprises.

More specifically, it is less likely for foreign direct investment (FDI) enterprises to make a credit request in comparison with domestic private companies, with the probability of the former equal to 0.1 of the latter (other things being equal). In other words, the probability of a domestic private company making a credit request is 10 times higher than that of an FDI enterprise (if other factors are equal). This is supported by the panel data analysis that private enterprises, limited liability and joint-stock companies all have significantly higher proportions of loan requesting firms - of 76.5%, 73.1%, and 81.3% respectively - than that of FDI enterprises, of only 59.1%.

In the case of business capacity, estimated results indicate that efforts to improve business processes (including to meet international standards, introduce information and communication technology (ICT) and establish new divisions or plants) and buying new machines or facilities all lead to a demand for additional capital (except in the case of establishing new divisions with the minus sign of the estimated coefficient indicating the reduced likelihood of a new credit request). Enterprises buying new machines or facilities, trying to meet international standards, and introducing ICT are more likely to request new credit than the rest, with the probabilities larger by two, four and nearly 17 times, respectively. The cross-sectional analysis also shows that, the proportion of enterprises striving to meet international standards, to introduce ICT or acquire new machines is relatively high, of 74.5%, 82.4% and 74.5% respectively. These figures are higher than those of the enterprises which fail to meet international standards, or fail to introduce ITC or fail to buy new machines, which are 64.9%, 66.4% and 59.2%, respectively.

The estimation results also show that the older enterprise is more likely to make a credit request, though the difference is insignificant, only 1.15 times per additional year of experience. From the cross-sectional analysis, the proportion of enterprises in older

categories submitting loan requests is higher than that of younger enterprises. The proportions of the four divided categories, less than 3 years, from 3 to 5 years, from more than 5 to 10 years and more than 10 years of establishment are 47.2%, 69.6%, 78.4% and 80% respectively.

Finally, the estimated coefficients for stage of business development indicate that enterprises in all stages of development other than the start-up are more likely to make a loan request (all estimated coefficients are positive). Of the stages, the fast growth and maturity periods show a significantly different need from the start-up period. In the two earlier mentioned stages, the respective probabilities of one enterprise making a loan request are 6.4 and 9.3 times higher than that of similar enterprise at the later stage. This might reflect the fact that in the start-up period, business owners tend to use their own capital to run their business. In addition, it is very hard at this stage for an enterprise to get a loan approved by the formal creditors. This result is also supported by the cross-tabulation analysis that the proportion of start-up enterprises making loan requests is only 41.9%, as compared to the respective figures of those belonging to fast growth, slow growth, maturity and decline stage, of 78.4%, 70.3%, 80%, and 57%.

The result shows that locality; introducing new products or services; age, gender and experience of majority owner; business size and export status are insignificant determinants of the need for capital.

2.3.3. Model for Rejected Credit Request

The table below reports the result of estimating the binary logistic regression with the dependent variable being rejected credit request. The variable takes the value of unity for those enterprises having had a loan request rejected (including fully and partially rejected ones) and zero otherwise. As can be seen, years of establishment (categorically divided), number of credit institutions to which the surveyed enterprise made their loan request (*Num_cred*) and net worth of the dominant business owner (*Qe_5*) are statistically significant (reported in the table below).

Table 22. Rejected Credit Request*

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 14[a]	Year_cat			4.882	3	.181	
	Year_cat(1)	-2.855**	1.321	4.671	1	.031	.058
	Year_cat(2)	-.604	.995	.369	1	.544	.547
	Year_cat(3)	-499.764	2.8E108	.000	1	1.000	.000
	Newprome_cat(1)	2.340	1.431	2.673	1	.102	10.386
	Num_cred	-1.057*	.620	2.906	1	.088	.347
	Qe_5			4.880	4	.300	
	Qe_5(1)	-2.908**	1.413	4.237	1	.040	.055
	Qe_5(2)	-1.502	1.234	1.482	1	.223	.223
	Qe_5(3)	-501.119	1.7E108	.000	1	1.000	.000
	Qe_5(4)	-2.666*	1.596	2.791	1	.095	.070
Observations		88					
Predict Percentage Correct		92					
R-squared		0.611 (Cox & Snell)[b]		0.815 (Nagelkerke)[b]			

Source: Author's calculations from the survey.
Note:

a. Variable(s) entered on step 1: Year_cat, size_labor, FDI, Profit08, Profit09, Prodline_cat, Export, NewPrometh_cat, Q8.c, Num_cred, Qa.17, Qa.18, Qa.19, Qa.20, Qe.3, Qe_5, Qg.1a.
b. Values estimated at the last step reported (step 8).

Less than 3 years; no new production method introduce; and less than $25,000 are bases. *, ** correspond to significance levels of 10% and 5%, respectively.

The result shows that at the 5% level of significance, the enterprises in the group established for 3 to 5 years are less likely to be rejected upon making a loan request compared to those newly established (less than 3 years). More specifically, if an enterprise belongs to the youngest group (established less than 3 years), the probability of being rejected by formal financial institutions is more than seventeen times higher than that of enterprises in the 3 to 5 years old group.

The result also indicates that at the 90% confidence interval, the more credit providers (including both formal and informal suppliers) the enterprises has approached with a loan request within 12 months, the less likely they are to be rejected. Furthermore, if an enterprise approached more than 1 credit provider, the probability of their loan request being rejected is only one-third (other things being equal). The cross-tabulation result also indicates that only those enterprises accessing one or two credit agencies have had a loan request rejected.

The estimated result also illustrates that the net worth of the dominant business owner significantly affects the probability of a loan request being approved. The enterprises whose owner's net worth is between $25,000-100,000 or over $1 million categories are less likely to be rejected than those with owner's net worth of less than $25,000. The probability of a loan request being rejected when owner's net worth is less than $25,000 is more than 18 and 14 times as high as when owner's net is worth between $25,000 and $100,000 (at the 5% level of significance), and over $1 million (at the 10% level of significance) respectively. The two categories of net worth, from $100,000 to less than $500,000 and from $500,000 to less than $1 million do not show significant differences from the base category (less than $25,000). The reason may be due to numeric problems when estimating the model.

3. SME Policy and Supporting Programs

Since 2000, the environment for promotion and development of business in Vietnam, including development of SMEs and their financing sources, has seen positive changes thanks to inaction of the Enterprise Law, improvement of the legal framework for enterprises, and the Government's policies to support SME development.

The Enterprise Law changes the approach to business start-up and registration, from one of "asking permission to do business" to one of "notifying the requisite authority of the existence of the business entity", as long as the planned business activity is not prohibited by law. Statutory maximum time limits for completing business registration formalities were established, procedures were simplified, and several notarization requirements were abolished. The principle of a "one-stop-shop", as the mechanism for granting the certificate of business registration and tax registration as well as seal-engraving, has been applied to the business registration process in many localities. A new national registration system within the Agency for Enterprise Development of the Ministry of Planning and Investment (MPI) is currently being developed which will allow access to public registration data on a

nationwide basis. In 2007, the Prime Minister approved a project for simplifying administrative procedures in areas of state management, including administering businesses, reforming and making the business environment more transparent, rational, and unanimous, ensuring simplification of administrative procedures and reducing the time and costs of doing business for people and enterprises. As a result, the time taken to establish a new business, as well as the costs of establishing new businesses was dramatically reduced. Business registration costs do remain relatively high, however, amounting to more than 10% of GNI per capita.

Since the promulgation of the Enterprise Law in 1999, entrepreneurship education and training has attracted more interest in Vietnam. There are different types of entrepreneurship education and training aimed at boosting entrepreneurship in Vietnam, namely, information exchange and discussion among the government, private and non-government sectors to promote entrepreneurship, simplify business registration procedures, etc. Meetings among the government agencies or local governments, business associations and enterprises are frequently organized to facilitate dialogue, exchange information, and get feedback on draft policies on promoting entrepreneurship. Furthermore, a government task force for implementing the Enterprise Law has been established. Its main tasks are to disseminate information, to organize training courses on business establishment and business registration, and to review regulations and licenses issued by government agencies, ministries or local authorities, in order to eliminate procedures and licenses which obstruct business operations.

In 2007, the Prime Minister approved the SME development plan 2006-2010, which included activities related to training and consulting for SMEs, assistance to increase technical competence, labor productivity, quality of production and services, and SME competitiveness. Many other policies to support SME development were also issued, such as a national trade promotion program, a program on building and developing national trademarks to 2010, an industry stimulation program up to 2012, etc. The plan was also aimed at enhancing the capacity of consultants, training and business development organizations, publicizing and disseminating business information, training on business

establishment and management, assisting to increase both the quantity and the quality of consultants, education and training organizations who work in areas and ethnic regions with difficult conditions. However, today, there remains an inefficient education and training system in secondary schools and high schools. Probably the key medium- to long-term challenge for the Government is to bring about improvements in national education systems, so as to meet the lifelong learning needs of a modern economy. The Government aims to improve the quality, relevance, efficiency, and equity of vocational education systems by working with businesses and others stakeholders to develop appropriate accreditation, assessment, and vocational qualification systems.

Under the under the Prime Minister's program on human resource training and support for SMEs in the period 2004-2008, activities have been implemented in various provinces and with business associations. This has been the first training program financed by the State budget which is aimed at enhancing knowledge on business management for business owners and entrepreneurs. In addition, provinces and cities have actively allocated local budget resources to implement the program, together with a large amount of financial resource mobilized from international development partners, through technical assistance projects. Over four years, the Government has successfully implemented 3,704 training courses for SMEs, including 1,372 courses on starting businesses, 2,304 courses on business management and 28 courses of training for trainers, with 182,870 participants.

Recently, the Government has carried out a support program on intellectual property (IP) development, focusing on organizing, training and guidling enterprises to join in the program. More than 40 projects relating to all areas of IP, including IP propagation and dissemination, using IP information and IP transfer, have been approved. Eight provinces were supported to establish IP libraries which seek to enhance the capacity of gathering and disseminating industrial and IP information. The National Fund for Science and Technology Development was established and began operations in February 2008, with the first financial support for basic research in December 2008. In 2009, the fund signed contracts with 25 enterprises on support for technology renovation. In order to enhance the comptitiveness of SMEs, the Ministry of Industry and Trade (MOIT) has issued policies

promoting the application and development of high technology, improving the technological levels in production of export products, and setting up a pilot model to apply and transfer technology for socio-economic development in rural and mountainous areas in 2010. In addition, some localities organized free training courses for business owners on knowledge, technology and technology transfer.

Currently, electronic commerce is replacing the traditional systems and is a new trend with remarkable advantages, such as no geographical limit, faster pace, greater usefulness, higher efficiency and lower costs. As evidence, in 2009 only 5% of firm capital was invested for e-commerce and IT in the total expenditure of an average enterprise, but with significant results: for instance, 33% of enterprise revenue was generated via online orders, and 28% of expenditure on average is spent online. At present, e-commerce exists not only in Ho Chi Minh City and Hanoi, the two biggest cities of Vietnam, but also in other localities across the country. Recently, the Ministry of Agriculture and Rural Development has introduced an e-commerce market for agriculture, forestry and fishery products at Agromart.com.vn. Notably, the participation rate of SMEs in the e-commerce market is only equivalent to one-third of that of large enterprises. Therefore, the MOIT recommends that e-commerce markets should attract and focus more on SMEs, and that SMEs should pro-actively participate in e-business. A business portal providing information on enterprises in general, and SMEs in particular, was opened by the Agency for Enterprise Development under the MPI in August 2007. The MPI has also been setting up a national database of business registrations, within the framework of the Business Registration Reform Program in Vietnam.

National trade promotion programs have significantly contributed to the support of enterprises, specially SMEs, in enhancing their capacity, promoting trademarks, accessing new business opportunities, and generally enhancing their positions in the world market. Since 2003, the total State budget allocated for national trade promotion programs has amounted to nearly VND 500 billion (equivalent to about US$ 34 million). In 2008, this figure reached VND 80 billion (or about US$ 4.5 million). The 2008 program supported nearly 4,600 participants, with 2,530 signed contracts and memoranda, of an accumulated

value of US$ 1,328.75 million. In 2009, VND 172 billion (or about US$ 9.5 million) was spent on trade promotion activities, i.e. more than twice of that of 2008. In recent years, the MOIT organized numerous delegations with the participation of enterprises from all economic sectors, to promote trade activities in ASEAN, European, African and American markets. The MOIT also guided the People's committees of provinces and cities to design local trade promotion programs. The financial resources for such promotional activities have emanated from local budgets. Trade promotion funds established in provinces and cities have operated effectively to assist enterprises in marketing, conducting market research and establishing business linkages.

The Action Plan of the General Department of Customs for 2008-2015 has been developed with emphasis on reforming customs procedures, and facilitating exports, investment and tourism. Ongoing and proposed reforms will help reduce costs of trade facilitation, thereby providing new opportunities for SMEs to directly engage in foreign trade.

A number tax administration reform measures have also been undertaken in recent years. The Law on tax management effective from July 2007 stimulates more transparent and simplified tax procedures, enhances the inspection and supervision role of the State administration in taxes, helps tax payers, and allows enterprises to save costs and resources in tax management. To minimize the adverse impacts on SMEs from the global economic crisis, and to ease the tax burden on SMEs, the Government issued a number of policies entitling SMEs to exemption of up to 30% of payable income tax in the fourth quarter of 2008 and all of 2009, and extending the deadline for income tax payment in 2009 by nine months for SMEs involved in production, outsourcing, agricultural processing, forestry and fishery products, garments and textiles, leather shoes, and electronic components. The Government also rescheduled import tax payments, reduced import duty rates for some raw materials, and adjusted tax on eight drug treatment groups to reduce business costs and stabilize the market. In 2009, moreover, the Prime Minister issued additional tax measures that allowed refunds of value-added tax payments for export goods.

To facilitate SMEs' access to finance, the Government adopted various policies to support SMEs, including establishing credit guarantee funds for SMEs; supporting financial institutions to increase credit for SMEs; promoting financial consulting, investment management and other assistance services for SMEs; assisting SMEs in enhancing their capacity to prepare projects and business plans to meet the requirements of credit institutions; training for SMEs; establishing SME developmental fund financing by the state and other organizations within the country.

The Government assigned the VDB to provide credit guarantees for SMEs across the whole country. The VDB has signed guarantee contracts with 20 commercial banks and implemented credit guarantee operations since March 2009, and by November 2009 the VDB has guaranteed a total amount of VND 6,686 billion (or about US$ 370 million), across 68 projects and 871 short-term business plans. The VDB has also promoted procedural reform, and thereby reduced the appraisal time for the loan requests of enterprises. So far, 11 provinces have established a credit guarantee fund. The local authorities have also mobilized development investment funds, industrial and agricultural promotion funds, fishery promotion funds, etc, intended to support SME development. The establishment of these funds has increased enterprises' ability in accessing to finance for expanding businesses, upgrading business equipment and machinery, training and recruiting laborers. For example, a development investment fund was established in Tien Giang province to supply capital for enterprises purchasing new equipment. Annually, this fund offers loans for equipment renovation, investment in upgrading and expanding production premises, and contributing to the solution of financial difficulties. In addition, local commercial banks have been active in mobilizing credit products in order to meet the needs for capital from SMEs.

After joining the WTO in 2007, Vietnam has adjusted credit policy in line with WTO commitments, enabling all economic sectors to easily access loans. The 2009 economic stimulus package of the Government, with timely implementation and effective coordination among stakeholders, achieved remarkable results, promoting confidence and motivation for SMEs to maintain and develop production, increase consumption, reduce

joblessness and ensure social security. The Ministry of Finance has been drafting a mechanism for technical and consulting assistance to SMEs, allowing SMEs to hire experts in the field to carry out work that they cannot undertake themselves, as well as a special mechanism for SMEs to access low-interest-rate loans. Recently, monetary, interest rate and exchange rate policies have been regulated in a flexible manner. The SBV continues to supplement and improve policies on credit, capital mobilization, financial leasing, and developing derivative instruments.

To promote SMEs' access to finance in the context of economic recession, the Government implemented a flexible monetary policy, adjusting the exchange rate by market signals so as to encourage exports and maintain economic stability, reducing the required reserve ratio of credit institutions and the basic interest rate, and lowering interest rates to increase access to finance for enterprises, including SMEs. The SBV decreased the refinancing interest rate and rediscount interest rate by 1% per year, and required the state-owned commercial banks to lower their interest rates on loans to no more than 15.5% per year. The Prime Minister's Decision No 131 issued in January 2009 permitted a 4% interest rate subsidy on loans for enterprises and individuals to finance working capital for production and trading activities, with loans up to eight months in tenor. In total, all non-state enterprises including SMEs borrowed about 69.9% of the total loan under the 4%-interest-rate-subsidy scheme. Currently, enterprises of all economic sectors, including SMEs are able to access investment and export credit loans.

In terms of land-use planning, 63 provinces and cities have land use master plans approved by the Government. Depending on their specific development objectives and budget availability, local governments have sought to facilitate SMEs in accessing land and production premises through policies on setting up industrial zones (IZs), industrial clusters and industrial villages. For example, the authorities of Tien Giang province allocated funds to develop IZs, industrial clusters and industrial villages with full infrastructure, including electricity, water supply, drainage systems and transportation, so as to reduce the business costs for investors. For IZs and industrial clusters which are built by investors, the local authority will support those investors with site clearance and resettlement. Hanoi has also

invested in and developed many IZs and clusters to meet the demands of private enterprise. So far there have been 49 industrial clusters and 177 industrial locations set up in Hanoi, and the city is now designing a plan for IZs, clusters and villages in the recently expanded Hanoi. In 2009, the Prime Minister issued a decision on industrial cluster regulations, and, based on this decision, the MOIT is guiding localities in managing industrial clusters in accordance with the decision, as well as building up policies on local industry cluster development.

However, many enterprises have encountered difficulties in accessing production premises. For example, enterprises locating outside industrial parks must often carry out site clearance by themselves, with little support from local authorities, while cumbersome administrative procedures on land ownership remain in place. The local SMEs, which can be only allowed to get production site with annual rent payment rather than lump sum payment for the whole leasing period as foreign companies, have to pay a bigger amount of money compared to foreign ones.

Most recently, the Government issued resolution No. 22/NQ-CP dated May 5, 2010 which includes 6 main measures to assist SMEs in solving problems in the post-recession period. These are: (i) to guide planning and programs for supporting SME development; (ii) to enhance access to finance and to mobilize resources for financial assistance; (iii) to address difficulties on production premises; (iv) to strengthen competition capacity; (v) to promote the implementation of administrative reform; and (vi) to build and to strengthen the system of supporting SME development. Notable solutions in the above are those to enhance access to finance and to mobilize resources for financial assistance, and to address difficulties on production premises. The Government requested the ministries and People's Committees of provinces and cities to implement the following solutions:

(i) To amend credit policy toward prioritizing capital allocation for production, exports, agriculture, rural areas, SMEs.

(ii) To promote the development of financial products and services for SMEs such as factoring, financial leasing.

(iii) To expand the coverage of loan provision, focusing on SMEs, in a national program of job creation; to increase credit limits for projects of enterprises which can create large numbers of jobs.

(iv) To prepare and implement a program on supporting SME development in agriculture and rural development in 2011-2015, seeking to enhance the competitiveness of agricultural enterprises, rural areas and traditional handicraft villages; to provide preferential corporate income tax, exemption or reduction of fees for land use right and land lease for SMEs operating in agriculture associated with rural areas, mountainous areas, coastal areas and remote areas.

(v) To prepare a project for establishing an SME development fund.

(vi) To assist SMEs in applying technological progress, facilitating technology transfer and investment, and improving productivity and product quality.

(vii) To review and adjust plans of land use, reclamation, compensation for site clearance, to create new land areas for lease to SMEs, or to set aside land for building IZs for SMEs and enterprise incubators. Annually, the local governments must publicly notify land areas used for SMEs and IZs for SMEs and enterprise incubators; consult and solve problems for SMEs in finding business premises. The Ministry of Natural Resources and Environment is authorized by the Government to prepare a bulletin on plans for land use, seeking to provide information, and publicize plans for land use to the locality.

4. Conclusion and Recommendation

Capital shortage presents a serious barrier for SME development in Vietnam. This is evidenced by the ERIA study on SMEs in 2009, and further reaffirmed in this study. Nevertheless, some enterprises never use external finance and only nearly half of the surveyed enterprises had access to finance. As explanations, the SMEs may have sufficient

internal funds or they may meet disadvantages from credit providers or there may be some drawbacks inherent to SMEs themselves.

Serious impediments for SMEs, irrespective of whether they have access to formal finance or not, are increases in business costs, tougher competition, lack of skilled laborers, and disadvantages in access to finance. Access to finance ranks only fourth among the serious impediments for those having access to capital, and sixth among those which have never raised external capital. The survey results show that only a small proportion of SMEs encounter impediments or have disadvantages in access to finance, and most of them have had loan requests fully approved. The enterprises encountering impediments in access to finance had their loan requests either rejected or only partially approved. There are two major reasons for this; either the SME could be financed by its own internal capital, or the SME had difficulty in access to external financial sources. The analysis demonstrates that the financially constrained SMEs are those lacking collateral, or belonging to the younger category, or with major owners having insufficient experience in running or owning businesses, or being in the micro group, or not participating in a production network. It seems that net worth of the dominant business owner is seen as an additional factor, but not as decisive as collateral for the approval of loan requests by the financial institutions. The survey results show that credit providers rejected loan requests from both the enterprises with small owner's net worth and those with large owner's net worth. The role of net worth of the dominant business owner really occurs when the enterprises' sound business plan can convince lenders, and a good credit profile is available, or enterprises have collateral. It seems that the financial institutions give preference to enterprises having collateral, or those having good credit profiles and sound business plans. Other factors also matter. For instance, if SMEs are older, larger, or with major owner having more experience in running or owning businesses, or those participating in production networks, their chances of getting loan requests approved would be improved.

In fact, Vietnam has supported SME development for many years via improving legal frameworks, entrepreneurship education and training, simplifying starting a business, providing services for skills development, improving online access to government agencies

and information, expanding market, addressing tax and financial problems, enhancing technological capacity, assisting in the operation of e-business. Thanks to these endeavors, some enterprises have achieved amazing performance, which is also confirmed in this study. Using loans from financial institutions associated with the SME policy and supporting programs of the Government has positively benefited SMEs in their business activities.

Further narrowing the supply-demand gap in the capital market for SMEs or increasing SMEs' access to finance requires more efforts from all related parties, including the supply side, the demand side, and the Government.

From the supply side, banks and other financial institutions should change their traditional mindsets and adopt an appropriate approach to SMEs as a group of borrowers, considering their weaknesses compared to larger enterprises. To promote the establishment of financial institutions supporting loans to SMEs, especially credit guarantee funds, is an equally important measure which the Government needs to focus their efforts on. At this stage, credit guarantee funds are still operating with low efficiency and little experience in Vietnam. Therefore, sharing of experience between the country and other East Asian counterparts should be encouraged.

From the demand side, it is necessary to overcome the drawbacks of SMEs in access to finance, such as: overcoming the lack of collateral or property for mortgage by promoting credit guarantee funds; strengthening SMEs' capacity to prepare loan-financed project documentation in order to meet credit providers' requirements; improving accounting, ensuring transparency in business operations, particularly financial management; ensuring that financial institutions have appropriate confidence in SMEs when approving their loan requests; and improving the quality of human resources, etc.

As for the Government, the participation of SMEs in production networks helps by linking them with large companies including transnational corporations, thereby enhancing the value-added and efficiency of SMEs, and strengthening the confidence of financial institutions in financing SMEs. Therefore, a policy of promoting SMEs' participation in production networks should be promptly considered and enacted in the near future.

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APPENDIX

Table 23. Variables Explanation

No.	Variables	Description
I.	***Dependent***	
	Credit request	1- Enterprise requested for financing; 0- never requested
	Rejected credit request	1- Any credit request rejected, including partially rejected; 0- Credit requests were all approved
II.	***Explanatory***	
	Export	Export status: 1- enterprise having export activity and 0- enterprise wholly sell in domestic market.
	FDI	(1): enterprises with foreign investment; and (0): enterprises wholly invested by domestic investors
	NewPrometh_cat	Adopted a new production method in the past three years (1- yes and 0- no)
	pro_grs	difference of profit to revenue ratio between 2009 and 2008 (1- if pro_growth>0 and 0- if pro_growth <=0)
	Prodline_cat	Network production participation (1- yes and 0- no)
	Profit08	Profitable situation in 2008 (1- yes and 0- no)
	Profit09	Profitable situation in 2009 (1- yes and 0- no)
	Prov_code	Locality of surveyed enterprises ranging from 1 to 6 corresponding to selected provinces (1- Hanoi; 2- Bacninh; 3- Bacgiang; 4- Danang; 5- Dongnai; and 6- Binhduong)
	Q8.a1	met an international standard (1- yes and 0- no)
	Q8.a2	Introduced ICT (1- yes and 0- no)
	Q8.a3	established new divisions (1- yes and 0- no)
	Q18.b1	adopted a new production method (1- yes and 0- no)
	Q8.c	introduced new products or services (1- yes and 0- no)
	Q1.1 (legal status)	1- private company; 2- Ltd, Co.; 3- shareholding company; 4- FDI; and 5- joint-venture
	Qa.17	% of fees associated with obtaining the loan
	Qa.18	Loan guaranteed by a government program (1- yes; and 0- no)
	Qa.19	Credit supplier require collateral (1- yes; and 0- no)
	Qa.20	Credit supplier require co-signatures from individuals other than the business owners (1- yes; and 0- no)
	Qe.1	age of the majority owner in the business (years)
	Qe.2	Gender of the majority owner (1- male; and 0- female)
	Qe.3	Business running experience of the majority owner (years)
	Qe_5	Net worth of the majority business owner (1- less than $25,000; 2- $25,000 - 100,000; 3- 100,000 - 500,000; 4- 500,000 and $1,000,000; and 5- Over $1 million)
	Qf.1	Future intendancy for business expansion (1- yes; and 0- no)
	Qf.2	Financing status for the expansion plans through internal funds only (1- yes; and 0- no)
	Qf_5	Stage of development of surveyed enterprises (1- Start-up; 2- Fast growth; 3- Slow growth; 4- Maturity; and 5- Decline)
	Qg.1a	Commercial or personal loans and lines of credit from financial institutions for keeping business operation (1- yes; and 0- no)
	Qg_2	Way of becoming the majority owners of the business (1- Bought/ acquired from a family member; 2- Bought/ acquired from a non-family member; 3- Started from scratch; 4- Other)
	Size_labor	Business size: 1- micro (1-10 employees); 2- small (11-200 employees); 3- medium (201-300 employees); and large (4- more than 300 employees)
	Num_cred	Number of credit institutions that surveyed enterprises raised their loan request
	Year_cat	Years of establishment divided into groups: (1) less than 3 years; (2) From 3- 5 years; (3) more than 5 to 10 years; and (4) More than 10 years
	Years	The number of years of establishment of the surveyed enterprises

Table 24. Cross Tabulation between Colleteral Requirement and Net-worth of The Majority Business Owner

Colleteral requirement	Net worth of the majority business owner	Less than $25,000	$25,000 - <100,000	100,000 - <500,000	500,000 - $1,000,000	Over $1,000,000	Total
No	Count	1	11	6	3	7	28
	% within colleteral requirement	3.6%	39.3%	21.4%	10.7%	25.0%	100.0%
	% within net worth of the majority business owner	14.3%	35.5%	24.0%	23.1%	38.9%	29.8%
Yes	Count	6	20	19	10	11	66
	% within colleteral requirement	9.1%	30.3%	28.8%	15.2%	16.7%	100.0%
	% within net worth of the majority business owner	85.7%	64.5%	76.0%	76.9%	61.1%	70.2%
Total	Count	7	31	25	13	18	94
	% within Colleteral requirement	7.4%	33.0%	26.6%	13.8%	19.1%	100.0%
	% within net worth of the majority business owner	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

CHAPTER 7

SMEs Access to Finance in Thailand

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This paper examines financial gaps, and factors required for better financial access for small and medium enterprises (SMEs) in Thai manufacturing. It utilizes information from an enterprise survey in 2010 covering various industries. The results indicate that SMEs obtain only 30 percent of their financing from external sources. Most of them use their own funds, and borrowing from friends and relatives to start and run their businesses. They tend to use overdrafts for their working capital requirements. As far as external finance is concerned, small businesses mostly still depend on banks. Despite various measures of support from the government, only 40 percent of Thai firms, mostly small, gain access to credit.

SMEs perceived that important obstacles to their financial access are lack of information and advice from financial institutions, complexity and cumbersome processes in loan applications and inadequate collateral. Financial institutions identify the main obstacles for SME lending as follows: inadequate collateral, lack of business experience, lack of sound business plans, non-performing loan history, and high transaction per loan application. In addition, Thai banks have traditionally had collateral-based lending practices and lack the know-how to differentiate SMEs' risk. These exacerbate the financial gaps and hinder access for SMEs.

SMEs characteristics associated with better access to finance are those that reflect good performance and the value of the firms. Firm characteristics contributing positively to credit access are a high sales to assets ratio, low leverage ratio (debt to equity), experience in the business (higher age of firm or business owner) and collateral to pledge on loans.

1. Introduction

Limited access to finance faced by SMEs has drawn considerable attention from both academics and practitioners for many decades. Literature on this subject suggests that better financial access for SMEs contributes to economic growth, reduced income inequality and reduced poverty (World Bank, 2008; Levine 2005; Rajan and Zingales 1998; Townsend and Ueda, 2003). At the firm level, lowering financial constraints can enhance entrepreneurial activity, contributing to jobs, innovation and income (Beck *et al.*, 2005; Paulson and Townsend 2004). A recent survey has suggested that limited access to finance still remains one of the key constraints for Thai small business (NESDB 2004; Bank of Thailand 2009; Wesaratchakit *et. al.*, 2010) and worldwide (Schiffer and Weder, 2001).

Despite of various past policy efforts, expanding access to financial services for small and medium enterprises (SMEs) remains an important policy challenge for Thailand. In common with other countries, recent Thai policy efforts have focused on both the demand and the supply sides. Policies improving financial access-the demand side- include programs to encourage banks to provide more SME lending via loan guarantees, to provide more financial assistance via subsidized interest rates, innovation funds and micro finance. At the same time, the supply side policies are intended to lessen asymmetric information between banks and investors, to provide information and counseling services to SMEs, to improve loan approvals, and to target minimum levels for SME loans. Yet, only 40 percent of Thai domestic firms, which are mostly small enterprises selling locally, gained access to credit from banks (Bank of Thailand, 2009). And only 58 percent of small Thai exporters can gain access to bank credits. Evidence indicates gaps between demand and supply for financial credit among Thai SMEs. Such a financial gap implies that some firms that ought to receive financing are systematically unable to obtain it. So far, Thai government attempts at broadening SME financial access have not achieved the desired results.

Financial gaps or limited access to finance, in particular bank credits for SMEs, can arise for a number of reasons. Economic theory emphasizes the role of asymmetric information between lender and borrowers, and high perceived risks in lending to SMEs. in

explaining the gap. Literature on gap analyses has shown that both business type and firm characteristic information are important in determining credit access. Identifying key factors contributing to this gap would thus provide insight in formulating financial and development policies for the assistance of SMEs.

This study aims to gain a better understanding of the financial gaps facing SMEs. To achieve this goal, we examine obstacles to SME financing and identify determinants for better access to bank credits. Due to data availability from our survey, we focus on debt financing, in particular bank credits, when examining factors determining a firm's credit access. This study utilizes information from an enterprise survey conducted in 2010. It also reviews recent government financial policies aimed at improving financial access for SMEs.

This paper is organized as follows. Section 2 examines the current status of Thai SMEs, and issues in SMEs financing. We begin with the broad economic significance of manufacturing SMEs, and then describe the financial market landscapes since the 1997 financial crisis. Section 3 analyzes the perceived barriers to financial access by SMEs, from both the demand and supply sides. Then we identify the characteristics of SMEs that gain better access to bank credits. Section 4 reviews recent financial support programs of the Thai government towards SMEs development. The last section concludes and makes some remarks on policy.

2. Status of SME Financing in Thailand

We begin with a quick overview of Thai SMEs in terms of their economic significance. We then review some findings related to SME financing in Thailand, covering financial sources for existing and start-up business, perspectives of SMEs and financial institutions on bank credits, and suggested policies for better financial access.

2. 1. SMEs in Thailand

Thailand is a lower middle-income country and a reasonably open economy. In the 1980s and much of the 1990s, Thailand was one of the fastest growing economies in the world. During the boom period of 1987-1996, real GDP grew by 9.5 percent. During the 1997-1998 financial crises, real GDP growth was negative. Since then, Thailand has begun to recover and grew on average at 4.7 percent till 2007. However, real GDP growth slowed to 2.6 percent in 2008 and -2.2 percent in 2009 due the global financial crisis and domestic political uncertainty. In 2010, Thailand made a successful recovery from recession along with the global economic recovery, with forecasted economic growth of 7.9 percent (see Figure 1).

Figure 1. Thailand Real GDP Growth Rates

Source: Office of National Economic and Social Development Board.

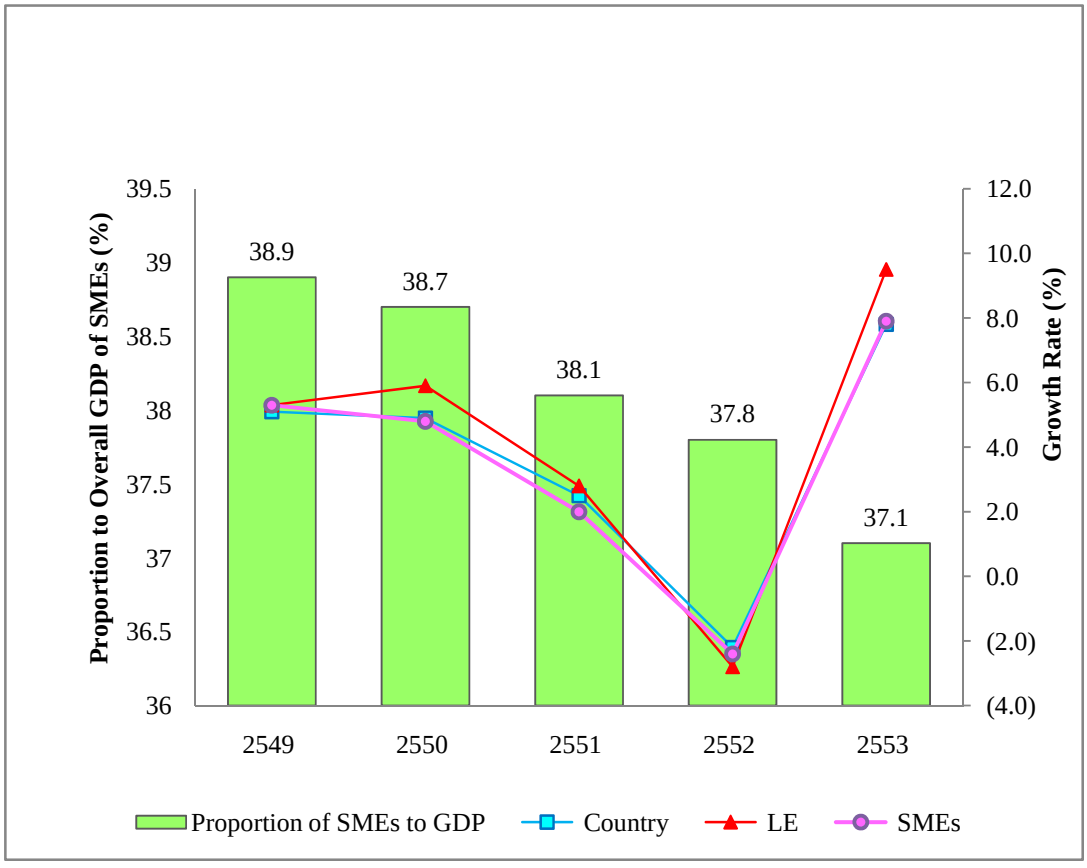
Contraction of the Thai economy in 2009 was driven primarily by the manufacturing sector. Thai Manufacturing SMEs are defined as firms with less than 200 employees and 200 million Baht of fixed assets (excluding land and properties), equivalent to 5.6 million USD. SMEs make up 99.8 percent of companies operating in Thailand (OSMEP, 2010). In 2009, the number of registered establishments in the manufacturing sector was 548,863,

decreasing from 691,926 in 2004. Manufacturing SMEs accounted for 18.9 % of the total. In 2009, manufacturing SMEs generated 34.23 percent of manufacturing value-added. They employed around 3.32 million employees, accounting for 34.2 percent of the SME employment.

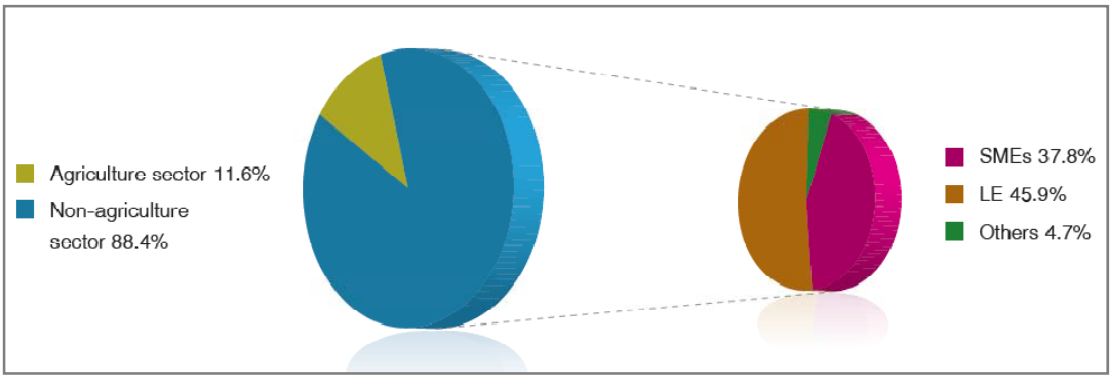
Since 2006, the role of the SME in terms of its valued-added has declined. The SME GDP contribution to the national GDP declined from about 39% to 37.8 % in 2009. The global economic downturn has affected the growth of all sizes of businesses (see Figure 2).

Figure 2. SME's GDP: Proportion to GDP and its Growth Rates by Sizes 2006-2009

(a) Trend



(b) GDP Share in 2009



Source: OSMEP (2010).

In terms of sectoral composition, sectors with the top-three highest shares of SME value-added are Food Products and Beverages (ISIC15), Furniture (ISIC 36) and Chemicals and Chemical Products (ISIC24). SME value-added shares in total Manufacturing in Wearing apparel (ISIC18) and Motor-vehicles and Parts (ISIC34) accounted for only 7.9 percent and 0.8 percent in 2009, respectively.

In terms of exports, the value of exports by SMEs in 2009 was 46,291 million USD a decrease of 8.68 percent from 2008. The share of SME exports to total exports was 30.56 percent, and accounted for 46.5% of the GDP generated by SMEs. The share of SME imports to total imports was 29.9 percent in 2009.

2. 2. Thailand's Financial System: Private Sector Financing

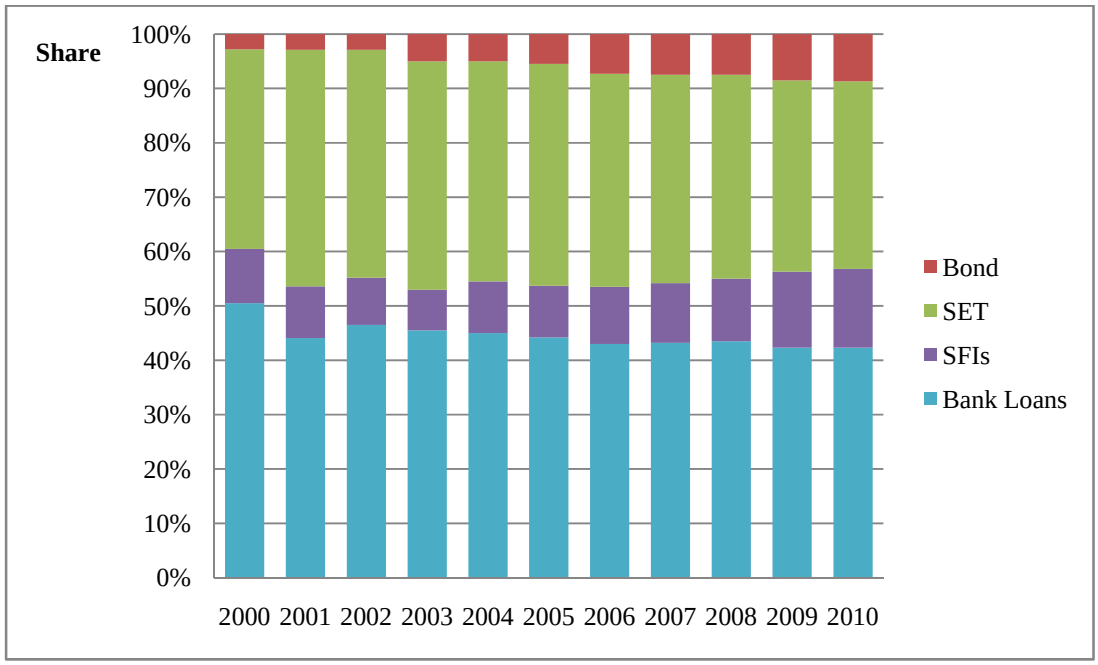
Thailand's financial system consists of four major constituents: commercial banks, specialized financial institutions (SFIs), non-bank financial intermediaries (finance companies, credit foncier companies, life insurance companies, and various co-operatives), and capital markets (including both stock and bond markets).

As of 2010, there are 46 financial institutions, comprising of 32 commercial banks, 8 SFIs, 3 finance and securities companies, and 3 credit foncier companies. Commercial banks are the oldest financial institutions and have long dominated the Thai financial system**,** accounting for 56 percent of total financial sector assets (excluding capital markets)

at the end of 2008. The stock and bond markets began to assume more significant roles after the 1997 financial crises.

The business and household sectors in Thailand still largely rely on bank loans for their finance. In 2008, the share of bank loans to total private sector financing was 42.3%, compared to 34.5% for the stock market and 8.7% for bonds (Wesaratchakit *et al.* , 2010:4) (Figure 3).

Figure 3. Composition of Private Sector Financing (in percentage of total)



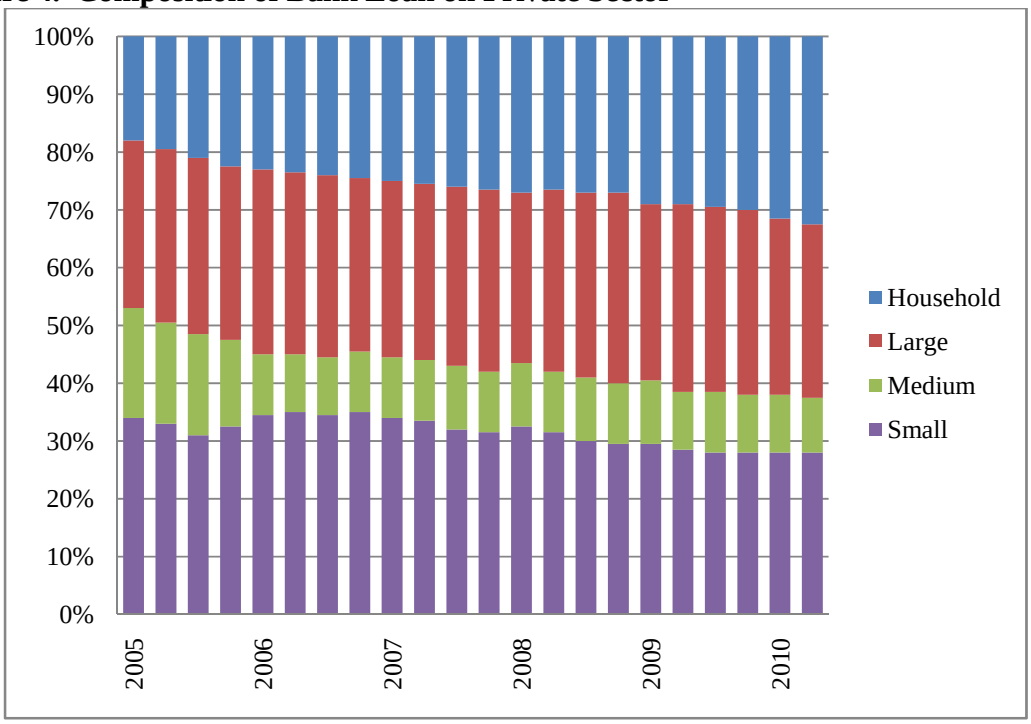
Source: Bank of Thailand (2010).
Note: **Bank Loan:** Claims on Business and Household sectors; **SET:** Set Market Capitalization deflated by SET Index; **Bonds:** Corporate Bond outstanding values; **SFIs:** Claims on business and household sector.

2.2.1. Bank Lending Behavior

Since the 1997 crisis, Thai financial institutions have lent more to smaller enterprises and households, to reduce the banks' vulnerability to the default of larger borrowers. As competition in the financial sector increases and the profitability of lending to large borrowers decreases, banks tend to make more loans to SMEs and households. Statistics

from the Bank of Thailand show that the proportion of loans to small firms in the banks' loan portfolios increased until 2006. However, the trend started to reverse in 2008 due to the global economic and domestic political instabilities (Wesaratchakit *et al.*, 2010). The proportion of loans to small firms has declined from the peak of 35% in 2006 Q1 to 25 % in 2010 Q2, as shown in Figure 4.

Figure 4. Composition of Bank Loan on Private Sector



Source: Bank of Thailand (2010).

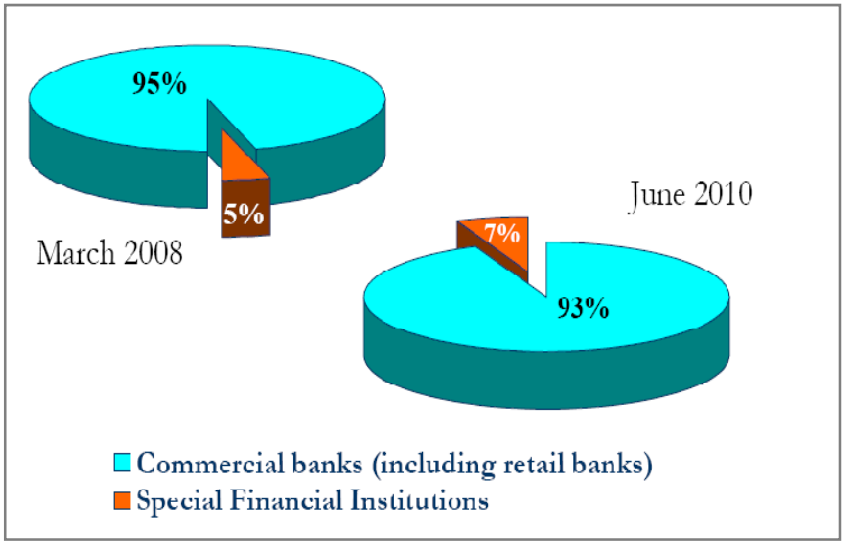
The global financial crisis, beginning in September 2008, had profound impacts on many countries, particularly open economies. As one of the most open economies in the world, where exports account for over 60 % of GDP, the Thai economy witnessed the biggest slowdown for ten years in 2009. Real GDP declined by 2.2% as a result. During the economic downturn, banks tended to cut loans to small firms first. Total loans (claims on business and household sectors) declined by1.8%. Corporate loans declined by 5%. Loans to SMEs, which account for 57% of corporate loans, also contracted, by 8.4 %.

During the same year, more lending from banks went to households. Consumer loans expanded by 8%. In 2009, the share of consumer loans to total loans was 27.1 percent, rising from 13 % in 2005. This evidence indicates that small firms are more sensitive to economic fluctuations. They also face more difficulties in gaining financial access during an economic downturn.

2.2.2. SME's Financial Access and Their Characteristics

As in other countries, Thai SMEs use their own or family funds to start and run their businesses. Few SMEs apply for commercial bank loans. However, if we look at the credit extended to the SMEs, commercial banks still play important roles in Thai SME finance. Figure 5 shows that about 93 percent of loans to the SME sector were from commercial banks (including retail banks) in 2010, while 7 percent was from specialized financial institutions (SFIs).

Figure 5. SMEs Loan Share Classified by Types of Financial Institutions



Source: Bank of Thailand, quoted in Wesaratchakit *et al.*, (2010).

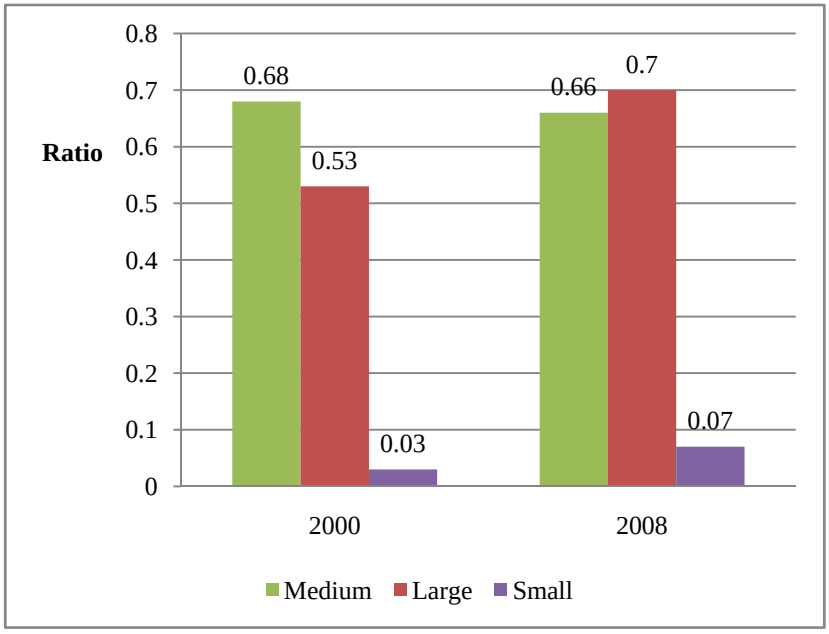
In recent years, the government-owned SFIs have assumed more importance in lending to the small and start-up businesses that usually are not main customers of commercial

banks. An increase in their intermediary roles was one result of the 1997 financial crisis and the 2008 global crisis. The SFIs were then heavily used to stabilize the economy through targeted lending to lower-income groups and SMEs. For example, the Thailand SME bank increased its corporate loans by 121% in 2009, a year of global economic recession. The numbers of entrepreneurs in receipt of credits increased by 30% in the same year. The Small Business Credit Guarantee Corporation (SBCG) is designed as the main mechanism in providing credit guarantees for SMEs with insufficient collateral security. In 2009, the SBCG recorded total guarantee approval of 21,558 million Baht (627.8 Million USD) for 5,783 projects, which is about 7 times higher than that in 2008.

Next, we look at characteristics of small and medium firms from the most recent data. Using the comprehensive database from the Ministry of Commerce, Wesaratchakit *et al.*, (2010) show that 98 percent of firms are SMEs. These firms tend to be young, 3 years old or less. About 70 percent are registered as limited companies and 30 percent as limited partnerships.

When considering firm capital structure, they found that capital structure varies with firm size, age and business sector. Larger firms have higher debt-to-equity ratios, implying that they rely more on external funding. On the other hand, small firms have low leverage, which is close to zero (see Figure 6). This suggests that small firms find it difficult to access external funding. As a result, they rely mostly on internal funding.

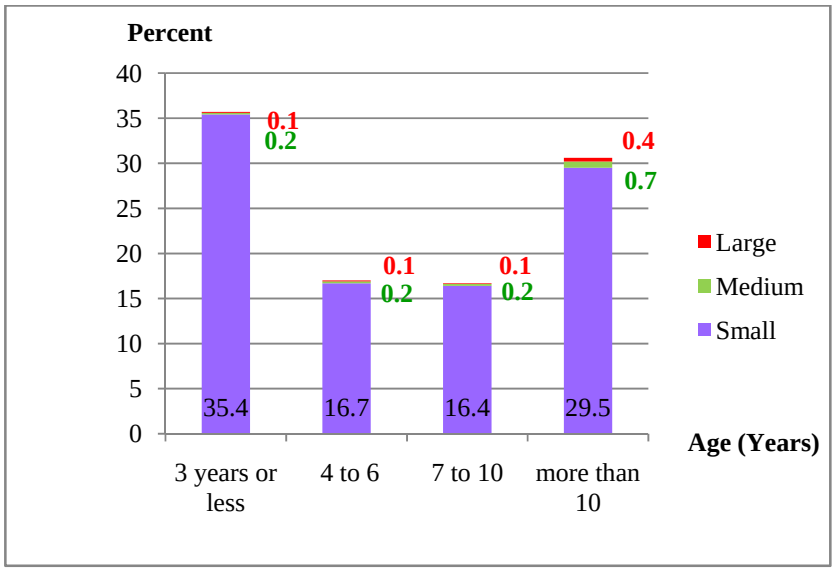
Figure 6. Median of Debt-Equity Ratio in 2000 and 2008 Classified by Size



Source: Ministry of Commerce, quoted in Wesaratchakit *et al.*, (2010).

Moreover, firm age relates to better financial access. Older firms and younger firms tend to have low debt-equity ratios, implying that young firms use their own fund to run the business, and older firm rely less on debt or have more options to finance their businesses (see Figure 7).

Figure 7. Percentage of Firms Classified by Age Group (Average of 1999-2008)



Source: Ministry of Commerce, quoted an compiled in Wesaratchakit *et al.*, (2010).

Moreover, firm capital structure varies across types of business. Manufacturing firms, considered as lower risk, have a higher portion of debt to equity than other sectors.

Other interesting findings from their study can be summarized as follows:

(1) Young firms (age 3 or less) perform less well than older firms in almost every sector. This implies that the start-up firms with less profitability and ability to pay off debt will face more difficulties getting bank credits.

(2) Large firms outperform smaller ones. The ratio of earnings before interest and taxes (EBIT) to total assets, and the interest coverage ratio of large manufacturing firms are about twice as high as those of smaller firms. With all other factors equal, banks will prefer to lend more to larger firms.

2.2.3. Identifying Financial Gaps

Limited access to finance is considered as the key challenge for Thai SME development (OSMEP 2007). The Bank of Thailand (2009) indicated that only 40 percent

of Thai domestic firms, mainly small, are able to gain access to credit (see Table 1). The level of credit access is higher for exporting firms and large firms. That is, only 58 percent of Thai small exporters receive credit from banks, when compared to 83 and 91 percent of medium and large firms, respectively (see Table 2). The results of an earlier survey by the Bank of Thailand indicated that almost 70 per cent of SMEs reported having credit access problems, compared to only 13 percent of large firms (Poonpatpibul and Limthammahisorn, 2005). It should be noted here that the observation that some firms cannot obtain financial credits is not yet conclusive evidence of a financial gap. In the light of the asymmetric information concept, a gap exists when suppliers of financial services have less information than those who demand the services. When this occurs, theory suggests that adverse selection and moral hazard problems may occur and the market may not function well.

Table 1. Credit Access of Firms in Thailand

Financial services	% of Access/ (Level of importance)		
	Thai company (export)	Thai company (domestic)	Multinational company
% Credit access	58	40	86
Current	(4.2)	(4.0)	(3.4)
Next 5 year	(4.3)	(4.4)	(4.0)

Source: Bank of Thailand (2009).

Note:

- Thai company (export) is a company that has > 50% Thai shareholders.
- Export Thai company (domestic) is a company that has >50% Thai shareholders and sell locally.
- Multinational company is a company that has < 50% Thai shareholders.

Table 2. Access to Financial Services of Thai Exporters

Financial Services	% of Access/ (Level of importance)		
	Small	Medium	Large
% Financial access	100	100	100
Level of importance	(4.4)	(4.4)	(4.5)
% Credit access	58	83	91
Level of importance	(4.2)	(4.4)	(4.1)

Source: Bank of Thailand (2009).

2.2.4. Perceived Problems of Financial Access

Table 3 summarizes a recent survey identifying the problems of financial access perceived by SMEs and financial institutions. The main obstacles from the SME's point of view are (a) lack of information and advice from financial institutions; (b) complexity and inconvenience related to the loan application process. Many documents are required by banks and the average loan application process takes longer than 30 days; (c) inadequate qualification of SMEs; (d) Expenses/fees and interest rate charged; (e) lack of collateral.

Table 3. Challenge to SMEs Financial Access

SMEs Perspective	**Bank Perspective**
▪ Lack of Information and advice from FIs ▪ Complexity and inconvenience related to loan application process ▪ Inadequate qualification of SMEs ▪ Expenses/ fees and interest rate charged ▪ Lack of collateral	▪ Inadequate collateral ▪ Lack of business experience ▪ Unreliable SMEs accounting system ▪ Lack of SMEs business planning ▪ SMEs' NPL history ▪ High transaction and operational costs per-SMEs loan application ▪ Strict government rules and regulations ▪ Unlevel playing field.

Source: OSMEP (2007).

From the point of view of the financial institutions the, obstacles for lending to `SMEs, both start-up and existing, include (a) inadequate collateral to secure loan; (b) lack of business experience; (c) inadequate management and unreliable accounting systems; (d) lack of sound business plans; (e) having an NPL history; (f) high transaction and operational costs per SME loan application; (g) strict government rules and regulations regarding loan loss provision, and poor credit history recorded by a credit bureau.

To remedy financial gaps, SMEs and financial institutions are facing the following challenges. First, young SMEs and those with low assets have limited access to bank loans. They need to demonstrate realistic and sound business plans with good potential returns and viability. Moreover, they need to provide a standard accounting book along with some financial calculations. Starting the borrowing process can be a daunting task for a new firm. Secondly, many banks routinely require enough collateral to cover loans, which makes small young firms with good business plans more vulnerable. RAM (2005) indicated that

Thai bank officers lack the necessary knowledge and skills to properly evaluate risk in SME businesses. Moreover, most banks still make their lending decisions based on the availability of collateral, and sometimes lean to subjective assessment. Credit scoring is seen as less important and has limited use if a potential loan is not fully collateralized.

In summary, a review of evidence indicates that there are financial gaps faced by Thai SMEs. These are gaps between SMEs' funding needs and the funding provided by financial institutions. These financial gaps are the outcome of imperfections in capital markets, a result of information asymmetry and high transaction costs associated with SME financing. That is, financial institutions-suppliers of credit- have less information about the SME's owner who is seeking financing. SMEs are considered as high risk borrowers due to a lack of transparency in their accounting practices and inadequate documents. Thus, financial institutions require high value collateral and charge higher interest rates.

3. SMEs Access to Finance: Empirical Analysis

This section identifies firm characteristics leading to better access to bank credits. We first provide empirical evidence by using our own survey data. The logistic regression is used to identify determinants of credit access for Thai firms. We then supplement our analysis by examining other related studies.

3.1. Sample Description

The data in this study are obtained from the survey conducted in 2010. The survey was designed to obtain from SMEs their views of their most important barriers to financial access, their source of funds and business finance. Details of the questionnaire are presented in the appendix. The sample was focused on small and medium firms from 3 industries (textiles and garment, electronics and machinery, and food processing). Nearly 54 percent of the firms in our sample are in the garment industry. Another 40 percent of the firms are in the food-processing industry.

There are 100 firms in the sample, of which 54 are firms with less than 50 employees and 31 have between 50 and 200 employees. Nearly 91 percent of these firms are fully owned by Thais. About 80% of firms are family businesses with a male major shareholder. The average business owner is 53 years old and has 23 years of experience in business. Almost 50% of firm owners or major shareholders also operate in other firms, of which 70% are in a similar business (see Table 4 for details).

Table 4. Descriptive Statistics of Samples

Variable	Garments	Electronics	Others	Total
Access credit (%)	20.4	71.4	73	44.4
Firm age (in years)	18.6	15.3	15.15	16.87
Sale (in 1000 USD)	1242.7	5644.9	4346.9	2736.9
Sale Growth (%)	-2.1	-0.4	9.2	2.2
Number of employees	77.4	115	110	92.7
Value of Assets	942.7	1075.9	746.6	885.1
Age of owners	54	53	54	54
Business experiences (in years)	22.4	23	21.7	22.2
Loan size (in 1000 USD)	64.6	97.76	171.1	107
Management Capability				
ISO met (%)	20.3	85.7	18.9	25.25
Using ICT (%)	72.2	100	89.2	80.8
New plants/division (%)	4	14.3	2.7	4
New Machines (%)	20.4	57.1	45.9	33.33
Improved equipment (%)	63	85.7	89.2	74.7
Improved production method (%)	22.2	28.6	21.6	23.23
Skill Intensity	11.8	70.3	27.2	22.3
Number of Observation	54	7	38	99

Source: ERIA SMEs Survey 2010.

Firms in the sample covered all ranges of value of firm assets. About 30% of sample had assets valued between 1-3 million Baht (0.03-0.09 million USD), 22% between 3-15 (0.09-044 million USD), and 42% more than 30 million Baht (0.87 million USD). Sample firms operating in the electronics and garment sectors reported negative sales growth in 2009, while firms in the food-processing sector reported positive sales growth of 10%.

3.1.1. Firms' Sources of Financing

Table 5 shows the sources of financing for firms in our sample. When considering sources of working capital, more than 90% of firms financed their business from their savings, followed by retained earnings, bank credits, leasing, supplier credits, and family borrowings. Sources of firm finance during business start up are not much different from those used by operating businesses. That is, internal finance remains the most important source.

Table 5. SMEs' Sources of Financing

(a) Own Survey

Sources of Finance	% of Firms Reported as Source for	
	Working capital	Business Opening
Bank credit	80	54
Gov. credit	3	2
Retained earning	86	10
Supplier credit	49	33
Leasing	54	30
Owner's saving	94	90
Family borrowing	33	62
Other borrowing	5	11

Source: ERIA SMEs Survey 2010.

(b) Bank of Thailand Survey

Sources of Financing	Percent
Saving	46.9
Financial institution	24.9
Commercial Bank	17.1
Specialized FI	7.8
Retained earnings	11.8
Borrows from relatives and/or non-formal	7
Trade finance	4.7
Personal loan	1.1
Total	100

Source: Bank of Thailand (2008).

Table 6 shows the sources of financing when firms are grouped by book value of assets and by firm age. The smallest firms, with less than 3 million Baht (0.09 Million USD) in our sample finance often from their profits, saving, supplier credits and loans from their

families. Firms with larger assets tend to use relatively more bank credits and leasing although they still rely mostly on profits and saving.

Table 6. Sources of Financing by Book value of Assets and Firm Age

Book Value of Assets (1 Million Baht)	Source of Borrowing: By Size Fraction Borrowed from Each Source					
	Bank Credits	Gov. Credits	Retained Earning	Supplier Credits	Leasing	Saving
Less than 3	10.5	0.0	26.3	15.8	5.3	26.3
3-15	20.5	0.0	18.1	11.8	14.2	25.2
15-30	22.8	1.1	22.8	9.8	14.1	23.9
Over 30	18.7	1.2	22.3	13.3	13.3	21.1
Total	80	3	86	49	54	94

Source: ERIA SMEs Survey 2010.

Table 7 shows the variation of financing sources with firm age, where age is defined as the number of years since establishment. The young firms (age less than 10 years) rely most heavily on loans from the owners and their families. These firms also use bank loans and leasing. The older firms use more of their saving and profits.

Table 7. Sources of Financing by Firm Age.

Firm's Age (Years)	Source of Borrowing: By Age Fraction Borrowed from Each Source					
	Bank Credits	Gov Credits	Retained Earning	Supplier Credits	Leasing	Saving
Less than 5	22.2	11.1	11.1	22.2	22.2	11.1
5-10	18.1	1.2	19.3	15.7	12.0	22.9
10-20	20.2	0.0	21.5	11.4	15.4	22.8
Over 20	20.2	1.2	23.8	9.5	8.3	26.2
Total	80	3	86	49	54	94

Source: ERIA SMEs Survey 2010.

3.1.2. Bank Credits Access

Only 33% of sampled firms expressed their need for credit extended and/ or for new borrowing within a year preceding the survey. However, 80 percent reported using commercial or personal loans and lines of credit from banks in the past. Because of the

small sample size, further sample statistics should be read with caution. This is far from being a sector-representative sample.

Firms that had been able to borrow paid interest at 8.2% while the minimum overdraft rate (MOR) in 2009 was between 6.125-6.75%.

3.2. Analyses of Determinants of Credit Access

Following CBA (2002), we can hypothesize the possible determinants of better access to bank credits for SMEs as follows:

- Age of business
- Sales volume
- Number of employees
- Value of firm assets
- Types of business, industrial sectors
- Ownership structure of business
- Age of owner
- Business experience or education of owner
- Purpose of loan or loan size
- Leverage (debt-to-equity ratio)
- Having relationships with lenders; new firms
- Measures of collateral availability
- Management capability

The hypotheses states that firms with least access to credit are those that do not have established relationships with lenders, are unable to provide collateral (as a signal of creditworthiness), and those with less management capability. Established relationships with lenders can be proxied by firm ages. The older a firm is, the more information banks could have accumulated. Both sales and assets can signal the creditworthiness of collateral available. Other attributes of firms are not different for those receiving and being denied credit from banks.

We employ a logistic regression to identify factors aiding SME access to loans and credits from banks and SFIs. The dependent variable has the value of 1 if a firm reports that it can gain access to at least one of them, and 0 otherwise. Descriptive statistics of variables are presented in Table 4.

The regression results of determinants of credit access are reported in Table 8. Most explanatory variables have the predicted sign. We find that likelihood of credit access increases with sales, firm size, profit rate, age of owner, business capabilities (Met ISO, using improved or new machines). But only firm size, business capabilities, and profit margins are statistically significant. We also found that older firms and firms with high share of exports in their sales are both statistically significant and negatively correlated with credit access. One possible explanation for the negative relationship between firm ages and access is these firms are able to rely more on their retained earnings and savings for their business finance. Interestingly, firms which export their products or have a large share of exports in our sample had more likelihood of not obtaining credit. When looking at the characteristics of these export-oriented firms, we found that most were firms with the highest value of assets. This conclusion should be taken with caution, however, since firms with exports are only about one-third of our total sample.

Table 8. Estimates of the Logistic Regression

Variable	Coefficient
Log(Sale)	0.15 (0.26)
Log (age of business)	-2.23*** (0.89)
Number of employees	0.01** (0.01)
Get new machines (dummy)	1.08 (0.74)
Improve old machines (dummy)	2.6*** (1.01)
Age of owner	0.001 (0.79)
Met ISO (dummy)	0.3 (1.34)
Export share (%)	-0.09** (0.34)
Profit (%)	8.2** (5.04)
Constant	1.16 (2.67)
Number of observations	71
LR-Chi-squared	37.85
Pseudo R-squared	0.39
** significant at the 5 percent level	
*** significant at the 1 percent level	

Source: Author's calculation.

It should be noted that the question remains to be answered of whether our results are robust or are driven by the macroeconomic conditions present during the sample period. To address this important issue, we look at results of other similar studies that utilized longer sample periods. Wesaratchakit *et al.,* (2010) examine the characteristics of firms that have better access to bank credits. This study employs the special database of the Bank of Thailand, containing information of each borrower's loan details (credit limit, number of transactions, present outstanding and non-performing loans, and collateral pledged). They combine their database with the Ministry of Commerce database containing firms' balance sheets over the period 1999-2007. Since this database does not contain information on firms which had been denied credit, the study uses characteristics of firms which get additional credit from banks to proxy those which get credits. Before discussing their

results, some limitations should be noted here. First, SMEs are under-represented in the database; and secondly, the samples contain only firms whose credit limit exceeds 20 million Baht (0.58 million USD).

Using their panel data, they estimate the fixed-effect model by regressing credit growth on firm characteristics for each industry. Since credit growth also affects a firm's balance sheet characteristics, explanatory variables enter as lagged to avoid the endogeneity problem. The effects of a changing macroeconomic environment and any regulatory changes are captured via time dummy variables.

Table 9 shows the significant variables determining the credit growths for each sector. Their results indicate that firm characteristics leading to lower credits are the default history of firms, and a high existing credit limit. The first reflects inability to repay debt, the latter a high debt burden on the firm. In many cases, high sales or asset growth can sometimes lead to lower credits. One possible explanation is that high sales led to more liquidity and retained earnings, thereby reducing demand for more credit.

Table 9. Factors Affecting Credit Access for Some Selected Industries.

Industry Sector	Factors that Increase Credit Limit	Factors that Decrease Credit Limit
Food and beverage production	• have collateral • high liquidity (quick ratio) • high gross profit margin • high net worth to paid-up capital • high utilization rate	• having high existing credit limit • high earning per share
Cigarettes, cloth, garments, leather, shoes and wood-based, paper-based products and publishing	• older firms • have collateral • high capital to asset ratio • high utilization rate	• having high existing credit limit
Coal, petroleum, chemical, plastic, paint, cleaning agents, glass, cement, ceramics production	• older firms • have collateral • high equity to asset ratio • high utilization rate	• had default history • high retained earnings to asset • high asset growth
Steel, machine, electrical appliances, weapon, ammunition, electronics, medical equipment, watch, automobile, ship, train, motorbike, bicycle, furniture, musical/sport equipment, toy, recycling production	• older firms • have collateral • high return on equity • high equity to asset ratio • high utilization rate	• had default history • high asset growth
Construction	• older firms • have collateral • high cash to asset ratio • high utilization rate	• had default history
Automobile/motorcycle sales, dealers, car repair businesses	• have collateral • high cash to asset ratio • high earning before tax to asset ratio • high utilization rate	• had default history • older firms • high asset growth

Source: Wesaratchakit *et al.,* (2010), Table 3.5.

Firm characteristics leading to increased credit are mostly those reflecting good performance, value and resiliency of firms. Firms with good performance are indicated by high sales to assets ratios, high profit and high return on equity. Resiliency is indicated by a low leverage ratio or debt-equity ratio, or high capital to asset ratio. Additionally, better access to bank credits is also related to the experience of borrowers (firm age) and collateral securities.

Results also indicate that banks prefer to lend more to larger firms, and that new or young firms with less capital and profitability will have more difficulty getting bank credits. These results are consistent with previous studies showing that financial constrains

can reduce the chance of starting a new business, especially in poorer regions of Thailand (Paulson and Townsend 2004).

When considering SMEs' choices of funding, Poonpatpibul and Limthammahisorn (2005), using the Bank of Thailand survey of 2002, indicated that medium and large firms access more funding from the formal sector and less from their own savings and the informal sector. Small firms rely more on equity funding than debt. SMEs' own saving is the most important source of their financing. Lastly, foreign firms tend to be biased towards the equity form of funding (saving and retained earnings) regardless of size.

Another study by the Bank of Thailand (2008) explores demand-side factors determining SMEs' access to credit in the Northeastern region of Thailand. Using the Bank of Thailand survey in 2007, they found that important and significant factors are insufficient collateral, complex and time-consuming processes in loan applications, and value of assets. SMEs with insufficient collateral will access bank credit with less probability of 0.34 times of those with enough collateral. Secondly, SMEs who consider loans as too complicated tend to get credit with a smaller change of 0.36 to those who can manage the loan documentation. Thirdly, SMEs with large value of assets will access credit more easily.

There is therefore plenty of evidence that expanding access to SME financing remains an important challenge for Thailand. Market failure related to information gaps imply that the government has an important role in the creation of a more inclusive financial system. So far, Thai governments have provided a comprehensive range of private and government financing channels that support SMEs. Some initiatives are still new and worth exploring. We now turn our focus to these policies. While a better and more efficient financial system is also very important for broadening access for SMEs and the poor, it is far beyond the scope of this study.

4. SMEs Policies and Government Financial Supporting Programs

In this section, we first summarize SME policies and then describe major financial assistance and support programs for SMEs.

4.1. SME Policies[1]

Before 2000, Thailand did not have a basic law on SMEs which could give coordinated and explicit guidelines for the promotion and long-term development of SMEs. Instead, SME-related policies and measures were articulated and embodied in the National Economic and Social Development Plan and cabinet resolutions. Various ministries then translated these policies into action plans. Due to lack of coordinating agencies, which could supervise the direction of SME development plans, and discontinuing emphases of SME significance for economic growth in the national plan, government programs towards SME development in these periods were fragmented and weak.

When the financial crisis occurred in 1997, reviving SMEs was seen as a good means to stimulate the economy. Due to SMEs' growing importance as an economic and political force, policy formulation for SMEs in particular was called for. In 2000, the first SME Promotion Act was promulgated. The Office of SME Promotion was set up in the same year as a coordination body for SME development among government agencies. The main responsibilities of the new office are (a) Formulating an SME promotion master plan and SME promotional policies; (b) Preparing an action plan for the promotion of regional/sector SMEs as well as micro and community enterprises; (c) Serving as the country's SME information center and the central organization conducting researches and studies on SME-related issues, including SME early warning system; (d) Developing information systems and networks to support the operation of SMEs; and (e) Administering the Venture Capital Fund (VC) for SMEs.

[1] This section borrows heavily from Punyasavatsut (2008).

The First 2002-2006 SME Promotion Plan aimed to create more entrepreneurs and to enable SMEs to reach international standards. In detail, the plan aimed to enhance the efficiency of operators in SME businesses as well as other sectors, to create a business environment which would facilitate the founding and growth of SMEs, to improve market efficiency and competitiveness, and to promote grass-roots businesses so that they could play a more prominent role in income distribution and bring prosperity to the provinces.

In all, the government's first SME promotion policy had three main planks: investment promotion, financial assistance, and technical and management consultancy. Investment promotion for SME and large enterprises is operated under the supervision of the Board of Investment (BOI) agency. The BOI was established in 1977 under the Investment Promotion Act as a tool to help promote foreign and domestic investment. In 2006 there were 582 SME investment projects approved by the BOI. Among these, 443 projects or 76.1 percent of the total were approved for small enterprises. The value of SME investment projects promoted by the BOI was 30.139 million Baht (795 Million USD) in 2006. About 62.5 percent were investment projects by small enterprises.

In compliance with the SME Promotion Act, the Small and Medium Enterprise Development Bank of Thailand (SME Bank) was founded in 2002. The new SME bank is an upgrade of the Small Industry Finance Corporation, a small 50:50 financial joint venture between the government and the private sector. The SME bank then took on the role of assisting SMEs in securing sources of funds, preparing business plans and providing advice on business operations.

Another key SME development in the first plan was the establishment in 2003 of a venture capital fund worth 5 billion Baht (0.12 Billion USD), aimed at creating joint ventures with SME projects. The fund has worked in conjunction with an existing SME venture capital fund worth 1 billion Baht (0.02 billion USD) established by the Democrat-led government. The latter is now managed by One Asset Management Corporation.

As for technical and management consultancy measures, the New Entrepreneurs Creation program (NEC) under the Ministry of Industry in 2002 was another initiative intended to encourage people to create their own businesses. Under the NEC program, the

SME bank provided business counseling and training to resolve problems and further develop their businesses. Combined with other measures, which offer financial, production and marketing training as well as fund accessing advice, the plan led to a gross increase of 226,757 new entrepreneurs, or on average 44,550 per year during the plan. Although impressive, the creation of new entrepreneurs was yet behind the plan target aiming at an additional 50,000 entrepreneurs per annum. During the whole plan, SME employment was increased by 3.8 million persons, well above the target.

At the end of the first plan, SME GDP accounted for 39.8 percent of aggregate GDP, a bit below the target of 40 percent. In addition, growths of both SME value-added and exports were still below those of large enterprises. Judging from these key performance indicators, we could evaluate SME policies overall as having enjoyed a moderate success. During this plan, government contributions to Thai SME development tended to focus in the areas of financial assistance, entrepreneurial activities, and information access.

The current SME policy guideline is the Second SME Promotion Plan 2007-2011. The plan vision is to promote SMEs to grow with continuity, strength and sustainability on knowledge and skill bases. In line with the first plan, the second aims to achieve three economic targets: share of SMEs in GDP becomes 42 % during the plan; SMEs export share grows on average faster than the growth of total exports; and total factor productivity of SMEs increases by 3 % per annum on average during the plan, including labor productivity growing at least 5% per annum. The second plan retains targeting at some sectors for promotion, such as auto and electronic parts, software, logistics, healthcare, education, tourism related industry, health-functional food, and rubber product.

Of many measures employed in this plan, measures related to manufacturing SMEs include (1) product quality improvement ; (2) establishing “business incubators” in regional and local areas; (3) trade fairs; (4) establishing exhibition centers for SME products throughout the country; (5) improving logistics or distribution channels; (6) creation of clustering and networks.

Implementing the second plan involves many government offices and the private sector. Besides formulating and evaluating the plan, the Office of SME Promotion

(OSMEP) acts as the intermediary agency to propel and support the implementation of the plan. Government agencies involved with SME development implementation include the Ministry of Industry (MOI), Ministry of Commerce (MOC), Ministry of Tourism and Sports (MOTS), Ministry of Agriculture and Cooperatives (MOAC), and specialized agencies which focus on technological and human resource development. For example, the SME Development Institute is responsible for training and development workforce.

There are also many supporting agencies involved in SME promotion. On financing, there are the SME Bank, and the Small Business Credit Guarantee Corporation providing credit and credit guarantees, and venture capital. On product standards, there are the Thai Industrial Standards Institute and the ISO Management System Certification Institute. On business consultation, there is the Office of SME Promotion. On business location, there is the Industrial Estate Authority of Thailand (IEAT) which promotes establishment of industrial estates for SMEs. In addition, many private agencies are involved in implementing the SME promotion plan.

During 2007-2009, budgets supporting promotion of SMEs amounted to about 9.863 million Baht (287.2 million USD) from both SME promotion Fund and private agencies budget (OSMEP 2010)

4.2. Financial Assistance and Support Programs

In summary, Thai governments have established a number of initiatives in financing. These include:

(a) Setting up the SME bank in 2002.

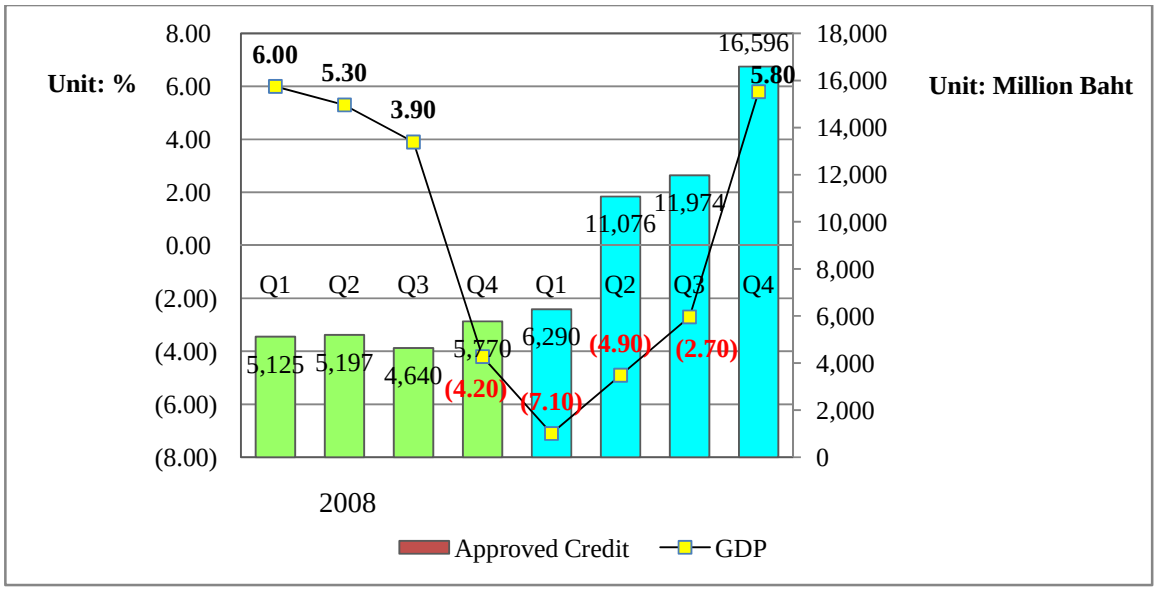
The SME Bank's mandate was to conduct business with the aim of developing, promoting and assisting SMEs to start-up, expand or improve their business, by providing loans, guarantees, venture capital, counseling and other necessary services. As of December 2009, the bank's capital had reached 11.600 million Baht (338 million USD) with total assets of 63,558 million Baht (1,851 million USD).

At the end of 2009, the SME bank had outstanding loans of 56,915 million baht (1657 million USD) and 24,066 debtors (Figure 8). About 70 per cent of the total outstanding

loans went to three major business sectors: manufacturing 32%, retail 21% and hotels and restaurants 17%. The ratio of NPL to total loans was still high at 37.1 %. The SME Bank's profit margin was less than the commercial banks' due to its low interest rate charged. In addition, it incurred the additional expense of developing and guiding the entrepreneur, due to its status as a government policy based institution.

To follow government policy, the SME bank launched a number of loan schemes to support the stimulus plan, and to help SMEs who were affected by the economic crisis in 2009. For example, SME Power, SME Power for Tourism, and Extended Employment Credit. In 2009, approved credit increased by 121.54 percent, helping more debtors by 20% (Figure 8). In addition, many projects were launched to support the business growth and to help SMEs with knowledge development.

Figure 8. SME Bank's Role in 2008-2009



Source: SME Bank (2010).

(b) Setting up the Small Business Credit Guarantee Corporation (SBCG) in 1991.

This is a state-owned specialized financial institution. Its roles are to provide credit insurance to SMEs with business potential but inadequate or no collateral security, and to

extend cooperation with commercial banks. A recent measure to lessen loan collateral requirements is to allow assets owned by households and firms to be used as collateral for loans. These assets include land and property, leasing and hire-purchasing contracts, land utilization permits, intellectual property, and machines. The new Asset Capitalization Bureau was established in 2003 to promote this measure.

In 2009, the SBCG guaranteed credit lines of 21,558 thousand baht (627,781 USD) for 5,763 SMEs. The targeted total guarantees for credit lines in 2009 was 30,000 million Baht (874 million USD) under the new Portfolio Guarantee Scheme. As part of the economic stimulus program, the SBCG waived its fees in the first year for all SMEs granted credit guarantees by SBCG.

Since its establishment, it has contributed to a revolving credit amount of more than 107,486 million baht (3,130 million USD). It also helps maintain employment for a total workforce of 406,615 people as well as job opportunities for an additional 22,795, as of 2009 (SBGC 2010).

(c) Setting up the Venture Capital Fund (5 billion baht, equivalently 0.12 billion USD) under the Office of SME Promotion (OSMEP) in 2003 to assist SMEs.

The goals of this measure are to encourage investors to invest in SME shares, and to help improve SME business capability. The OSMEP promotes this fund via tax incentives. Only corporate SMEs are eligible for assistance. Targeted sectors are fashion and design, information and communication technology, food processing, automotive, and tourism.

(d) Establishing the market for Alternative Investment (MAI) to increase access to capital via equity financing. The MAI was established in 1999 to provide an investment alternative for investors, and funding for SMEs. Mobilizing capital via equity financing for SMEs is expected to lower financing costs and improving firms' debt-equity ratio.

(e) Establishing the Central Credit Information Service Company Limited and the Thai Credit Bureau Company Limited to collect information and facilitate information sharing for SMEs

(f) Financial assistance program from the Bank of Thailand. Past short-term aid measures for SMEs were (a) subsidized and extended credits to alleviate impacts of Baht appreciation among small and medium firms, via commercial banks, finance companies, and SFIs. The program started in 2000; (b) Tax waiver for community enterprises and SMEs in 2008 as a part of economic stimulus programs; (c) establishment of Center for Credit Access Problem Alleviation during 2009-2010. This center acts as an intermediary between commercial banks and borrowers, to help negotiate debt rescheduling, and credit needs among SMEs.

In summary, it is obvious that Thailand has a comprehensive range of financial channels and programs assisting SMEs. Thai governments have explored and implemented alternative financing sources including the equity market, venture capital, and specialized financial institutes. These initiatives are still relatively new and have not achieved their desired results, however. And degrees of success among these initiatives vary to some extent. Although they are important, it is not an aim of this paper to evaluate these policies. We do, however, offer a few observations on some of these initiatives. First, the government initiatives are more successful on the debt-financing side than the equity-funding side (Poonpatpibul *et. al.*, 2005). Venture capital funds and the MAI progress have been somewhat less satisfactory.

Second, the lending activity of SFIs, which has expanded rapidly over the past two years, deserves closer monitoring. They have been very supportive towards SMEs and micro enterprises during the economic downturn, when the commercial banks refused to expand their lending. However, loan risk assessment should not be too lenient, as these SME loans could end up becoming non-performing. The ratio of NPLs to total loans has been rather high reaching 37.16 percent in 2009.

5. Towards Policies for Better Financial Access for SMEs

Our analyses of the key access routes for finance in previous sections helps identify factors contributing to financial gaps. It is concluded that gaps in funding, due to the asymmetric information problem, are related to the following issues:[2]

Collateral Requirement: Lending decisions of Thai financial institutions are traditionally based on the availability of collateral security, a sound business plan with sufficient cash flow, and personal guarantors for loans. Full collateral, using land and buildings are often required by banks to cover losses in case of default. Personal guarantors can be used to supplement collateral. Thus, SME loans are usually fully secured. Our own interviews with FIs confirmed this. That is, having insufficient collateral is rated as very important when banks turn down financial requests. Often, a bank's evaluation of assets is conservative. Collateral requirements reflect the bank's perception of high risk associated with SME loans and the legal requirements for loan recovery. Insistence on collateral is thus a major impediment to SME financing.

Documentation and Financial Literacy: Banks also demand a sound business plan and various documents for loan appraisal and use them to monitor business activities. For example, banks demand cash-flow projections, financial statements, proof of income and tax, lists of assets and proof of ownership, and business licenses. Preparing this paperwork is not an easy task, and can be time-consuming as many SMEs lack financial literacy and proper financial accounting for various reasons. Most banks do assist those borrowers who are found to be acceptable, by preparing the necessary documentation. The average processing time for an SME loan varies from bank to bank, but some banks will take longer than 30 days. Along with a sound business plan, and full collateral, banks also need

[2] Similar conclusions can be found in some previous studies. For example, see Poonpatpibul and Limthammahisorn (2005), Wattanapruttipisan (2003), Reserve Bank of India (2008).

sufficient sales, income or cash flow, which is rated as very important for banks to approve financial requests.

Weak Credit Skills and Practice: Lack of bank expertise and the necessary skills to evaluate and manage an SME is a common problem. Since the information on SMEs is hard to obtain, it is difficult to ascertain if firms have the capacity to pay and/or the willingness to pay. This informational opaqueness undermines lending from banks, which requires transparent information, and proper accounting records. In the past, many Thai bank officers have been trained and equipped to manage large borrowers with proper records. As financing SMEs becomes more important for Thai banks, the skills required to manage SMEs are not sufficiently developed. Rapid stimulus on SME growth has also put a strain on banks' ability to sufficiently fund SMEs. Applying the same techniques used for large borrower evaluation will result in many SMEs not being able to meet bank lending requirements.

It is not clear at present if banks can successfully apply different transaction technologies to SME financing, such as credit scoring, risk-rating tools and processes, and special financial products (asset-based lending, factoring, and leasing). Increases in the loan share of small firms in recent years were in part due to large government subsidies to lending to SMEs.

5.1. Policy Recommendations

Literature on policy recommendations has included three key areas, which can be summarized by as follows:

- Financial Products:
    - Encourage relationship-based lending for small and new firms to address informational asymmetry
    - Encourage financial innovations
    - Encourage usage of credit scoring
    - Improve the credit assessment capability of SME loan officers
    - Simplify the loan application process

- Extend the roles of micro enterprises and microfinance
- Improve the risk management skills of financial institutions
- Strengthen the credit guarantee system to support private sector lending, with attention paid to the moral hazard problem
- Enhance private venture capital for SMEs

- Informational Infrastructure
  - Improve credit information to address the information asymmetry problem
  - Improve availability of information and financial advice for SMEs
- SME capability enhancement
  - Increase SMEs, financial literacy
  - Enhance SME capability through seminars and training
  - Encourage entrepreneurship and innovation through business incubation services and risk sharing." (Sinswat and Subhanij, 2010).

Choosing and/or prioritizing policies for improving access can be a challenge because policies may not be equally effective or universal. Successful policy must be designed within a specific context, and institutional quality level, and should be sensitive to market response. Without a thorough evaluation of these policy options, we offer some practical recommendations that may be appropriate for adoption to improve SMEs, financial access and bridge the financial gaps. Our recommendations are in line with those proposed by Wattanapruttipaisan (2003). In respect of the financial gaps discussed above, three recommendations can be made: two for the supply side, and one for the demand side.

1. Improve the Credit Guarantee Mechanism: Guarantee arrangements are important as a means of helping SMEs with inadequate collateral to gain access to finance. Recent operations of the SBCG during the economic downturn demonstrated some promising progress as a mechanism to broaden financial access for SMEs. Thus, sufficient funding for the schemes should be a key priority at times of crisis.

Successful credit guarantee schemes then require appropriate risk sharing and prudential measures to reduce over-borrowing and moral hazard behavior.

2. Improve financial information disclosure by SMEs. With good record keeping and proper financial accounting, SMEs can provide essential information as loan documentation. Information transparency and disclosure can be viewed as evidence of adequate management and the financial literacy of SMEs. Given that the data and information required in a loan application is not too extensive, this information disclosure will notably help to broaden credit access.

3. Strengthen institutional capabilities in SME credit risk evaluation and management. Credit risk is the assessment of the credit worthiness of a borrower. It involves reviewing the loan applications against the firm's history of borrowing and repayment, assets, and liabilities as well as the soundness of its business plan. Given adequate disclosure of financial information in the SMEs business plan as mentioned above, these capabilities should reduce the opaqueness of the SMEs. In future the availability of and access to credit information on SMES may induce more information-based lending rather than the collateral-based lending seen at present.

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CHAPTER 8

Financing Small and Medium Manufacturing Firms in Malaysia

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Using a stratified random sample, this paper seeks to examine the ease of access to finance among small and medium firms in Malaysia. The results show that there is an obvious bias in the financial environment facing the smaller firms, which is reflected in the strong inverse relationship between access to finance and firm-size. Access to finance was inversely correlated with labor productivity, which shows that the more productive firms have less access, or simply that the cost and other terms of external capital is too high for the better performers. The relationship between firm-size and incidence of participation in R&D activities was also inverse, demonstrating that smaller firms are more dynamic than the larger firms among SMEs in Malaysia. Given that several firms reported having declined to pursue external funds on the basis of the terms and conditions attached, rather than having had difficulty of access to funds, the inverse relationship may actually show that the better performers, who have the option of preferring internal sources, show higher labor productivity than those who have received external funds.

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1. Introduction

The growth of firms depends on many factors, with the availability and cost of funding being an important one (see Storey, 1994). Funding patterns of small and medium firms are considered to vary, *inter alia*, with collateral and credit worthiness, industry affiliation (Galbraith, 1982), reputation and also family background (see Gregory *et al*, 2005). The micro, as well as new firms face, the biggest difficulty obtaining funds from external sources, because of their lack of reputation and the shortage of information about them (see Berger and Udell, 1998). The qualifications and experience of the owner or management are sometimes viewed as important criteria that can help small firms access funds (Diamond, 1989; Fluck, Holtz-Eakin and Rosen, 1997). In the absence of a pronounced record of capabilities, small firms rely considerably on families, relatives and friends for scarce funds (Petersen and Rajan, 1994; Hamilton and Fox, 1998).

On the supply side, the availability of funds for small and medium firms also depends on the environment facing the firms. Strong central bank coordination, financial regulations and supply of liquidity can also ensure that funds are spread to a wider range of small and medium firms. Indeed, Beck, Demirguc and Maksimovic (2005) provided evidence indicating that small firms face the biggest problems accessing funds where the institutions governing them are poorly developed. Micro-finance has evolved successfully in the least developed country – Bangladesh – where small firms lacking collateral face severe disadvantages in access to credit. However, where there is a considerable supply of capital, and market clearing interest rates are low, micro finance may not be the solution for small firms. Information imperfections and the lack of collateral may instead be bigger problems in such locations. It is for these reasons that governments in some middle income countries have launched banks specifically to support the operations of small and medium firms. Where venture capital is dominant, new start ups from reputable labs and universities can often finance higher risk-taking in return for higher returns. Where investment funding for small firms is underdeveloped, new firms tend to rely considerably on the funds of the owners and business 'angels' (Carey *et al.,* 1993). Venture capital

normally accepts intangible assets for funding, as long as the reputation of the "technopreneur" or the organization he or she comes from is known.

Using evolutionary economic theory, this paper seeks to examine the nature, problems and use of funds accessed, and the performance of small and medium manufacturing firms in Malaysia. Existing works on funding SMEs have identified diverse funding structures and contrasting performances. Given the diversity of small and medium firms, and the relationship between productivity and funding structures, a number of variables are examined controlling for industry, employment and ownership. The rest of the paper is organized as follows. Section 2 discusses government policy targeted at supporting the development of SMEs. Section three discusses the methodology and data used in the paper. Section four examines firm's perception of the role of *meso* organizations in their operations. Section five assesses the financial environment facing the sampled SMEs. Section six analyzes the impact of funding structure on firm performance and technological capabilities. Section seven presents the conclusions.

2. Government Policy

SMEs have figured significantly in industrialization initiatives in Malaysia. The earliest can be traced to colonial Malaya when, since the 1950s, the British through the Rural Industrial Development Authority (RIDA) provided small loans to stimulate petty handicraft manufacturing (Jomo, 1986; Rasiah, 1995). The purpose of this initiative was to arrest support for the communist insurgency and hence the program did not achieve much success. The Malaysian government opened the Majlis Amanah Rakyat (MARA) as one of the strategies in the late 1960s to uplift the standard of living of *Bumiputeras*,[2] which *inter alia*, supported the development of Malay entrepreneurship. Such forays by the government were carried out through privately incorporated channels. It was only after

[2] *Bumiputera* literally translated means son or prince of the soil. The term was originally used to refer to Malays, but it has subsequently been extended to include the indigenous peoples of Malaysia, Malaysian Thais and the Eurasians and straits Chinese (Baba Chinese) with lineage to pre-colonial Malaya.

1975, through the Industrial Coordination Act (ICA), and the initiatives of the Malaysian government to implement the New Economic Policy (NEP) of 197 that formal efforts to restructure the economy ethnically using regulatory measures were implemented. Formal SME programs then mushroomed in several ministries before efforts were taken to integrate them under one body in 1996. These programs have had a bearing on the growth and performance of SMEs in Malaysian industrialization.

The ICA of 1975, inter alia, regulated ownership of industrial firms with paid up capital exceeding MYR250,000, and employment size exceeding 50 employees, so that at least 30 percent Bumiputera equity was met. These floor stipulations were raised to MYR500,000 and 75 employees by 1980, and subsequently to MYR1 million and 100 employees before it was raised again to MYR2.5 million by the end of the 1980s (Chee, 1986). The MYR2.5 million has remained unchanged since that time. Foreign firms exporting over 80% of output were, however, to keep 100 percent of foreign ownership. Because of Malaysia's small domestic market foreign firms in manufacturing largely exported and hence did not find the ICA regulations stifling (see Rasiah, 1995). However, the expansion of non-*Bumiputera* local firms was considered to have been hampered by such regulations (see Jesudasan, 1989) many of whom apparently had to provide incentive gifts to attract *Bumiputera* partners (see Yoshihara, 1988).

Government took direct initiatives during the Dr. Mahathir premiership over the period 1981-2003, when government funds and strategies targeted the growth of industrial SMEs. The "umbrella" concept was introduced to nurture particular *Bumiputera* SMEs with Proton (backward linkages) and Perwaja Steel (forward linkages) becoming key targets. Firms offering tenders to supply components and parts to Proton and to use wire rods from Perwaja Steel were required to show at least 51 percent *Bumiptera* ownership. Given that these firms supplied largely the domestic market it came under the regulations of the principal customs area and hence the scrutiny of ICA regulations involving industrial firms selling less than 80 percent of output in Malaysia. The ICA required that industrial firms selling less than 80 percent in the domestic market met the New Economic Policy target of offering 30% equity to *Bumiputeras*.

The role of the Small and Medium Industry Development Corporation (SMIDEC) has been boosted with its the renaming as "SME Corp" and the subsequent opening of the SME Bank after the turn of the millennium. The National SME Development Council was launched in 2004 to strengthen further the government's support in the development of SMEs in Malaysia (Malaysia, 2010: 42). It has introduced a number of initiatives to coordinate the policies and programmes of 15 Ministries and 60 Agencies in the country. The establishment of the SME Bank was one of the highlights of this development program. A total of 162 key programmes, were implemented, with a financial commitment of RM3.05 billion which benefited 603,173 SMEs across all sectors by 2009. In 2009 alone the SME capacity development thrust of government saw the implementation of 119 programmes with a financial expenditure of RM804 million benefiting 289,200 SMEs. The breakdown by focus areas included 38 per cent for entrepreneurial development, 27 per cent for human capital development and 15 percent for marketing and promotions. The largest share of the allocation, amounting to RM2.2 billion, was targeted at enhancing access to financing for SMEs, channeled through 21 programs, benefiting 35,700 SMEs. Interestingly, around 81 percent (17 programs) were for working capital facilities with total expenditure of RM1.6 billion that benefited 8,800 SMEs.

The programmes include:

The special funds that were introduced to finance SMEs and coordinated through Bank Negara Malaysia in 2009 included:

(1) Microfinance schemes such as Micro Enterprise Fund (MEF) by BNM, AgroBank (*Pinjaman Mikro ESP-i*), *Tabung Ekonomi Kumpulan Usaha Niaga* (TEKUN) and *Amanah Ikhtiar Malaysia* (AIM);

(2) Soft Loans for SMEs by the Ministry of International Trade and Industry (MITI) through SME Corp. Malaysia; and

(3) SME Scheme and *PROSPER* Schemes by Perbadanan Usahawan Nasional Berhad (PUNB).

Following criticism raised in the first Industrial Master Plan (IMP) of 1986 and the Second Industrial Master Plan (IMP2) of 1996 over the growth of multinationals in key export-oriented industries, such as electrical-electronics and textiles and garments, as being isolated, with few linkages into the domestic economy, the government introduced the subcontract exchange programme to stimulate linkages. Electronics multinationals in particular took on the project seriously not only to access incentives but also, as an integral part of their policy to cheapen costs and make manufacturing flexible. Using detailed studies of production transitions and the evolution of regional and proximate production networks Rasiah (1988a, 1988b) had argued that the time then was ripe for host-governments to take advantage of these developments to promote the growth of local supplier firms. The key argument is that the multinationals were then seeking to develop suppliers as part of their own self expansion plans. In Penang in particular suppliers to electronics multinationals expanded several folds between 1980 until 1993 (see Rasiah, 1994, 1996). However, only Penang demonstrated a successful expansion of suppliers in the industries of machine tools, plastic molding, and packaging, largely benefiting from a surge in proximate demand from electronics multinationals implementing flexible production techniques.

Government promotion of SMEs expanded in the meantime into other manufacturing industries, including food processing and wood products (Malaysia, 1996). SME products were included in Malaysia's exhibitions and promotions abroad through the activities of Malaysia External Trade Development Corporation (MATRADE). Whereas the depletion of timber, cane and bamboo has led to a relative contraction of the latter, the promotion of food processing has expanded considerably with palm oil and oleo-chemical products becoming important (Gopal, 1999; Rasiah, 2006).

The uneven growth of suppliers with only industries complementary to electronics and only in Penang led the government to review its SME policies. After much deliberation of the IMP2 the government introduced the Small and Medium Industries Development Corporation (SMIDEC) in 1996. It was felt that a corporatist outlook as well as the integration of all SME activities under one body within the Ministry of International Trade

and Industry (MITI) would help rationalize and synergize SME promotion. Because of the problems of funding faced by new start ups and small SMEs, the SME Bank was introduced in 2006 to provide special interest based loans to qualifying SMEs. SMIDEC was subsequently renamed "SME Corporation".

The new initiatives were helpful in that they helped provide both advisory as well as more effective support for SMEs, as connections and coordination between entrepreneurs were linked much better with the *meso* organizations[3] the government launched to stimulate the growth of SMEs. However, the mid-1990s proved a turning point, as the growth of suppliers in Penang plateaued and subsequently began to contract. The lack of human capital, and government indecision over leveraging strategies recommended by the IMP2, caused an hollowing out effect in the electronics industry in Malaysia. Denied the capacity to upgrade into higher value added activities, several foreign firms either relocated operations to lower-cost sites endowed with larger labor reserves such as China and Vietnam, or scaled down their operations in Malaysia. The remaining flagship multinationals began, either to use largely foreign labor in low end assembly activities (e.g. Flextronics and Western Digital) or upgraded into designing activities (e.g. Intel and Motorola) or fabrication activities (e.g. OSRAM). Unfortunately the lack of human capital has restricted the latter to a handful of firms (see Rasiah, 2010).

Nevertheless, proactive support from the government has helped underpin the growth of SMEs in Malaysia. The share of SMEs rose considerably over the period 1996-2008. Both government policies to promote SMEs as well as the slowdown in the foreign MNC-led sector were instrumental in the relative expansion of the SME share in overall manufacturing output, value added and employment (see Table 1). The contribution of SMEs in manufacturing output, value added and employment in Malaysia rose from 22.1, 19.5 and 29.6 percent respectively in 1996 to 29.6, 25.9 and 31.1 percent respectively in 2005 and 30.9, 26.5 and 31.8 percent respectively in 2008. Both the output and value

[3] *Meso* organizations refer to intermediary organizations that deal with collective action problems involving firms.

added of manufacturing SMEs grew faster on average in 2005-2008 than over the period 1996-2005. Only the number of establishments grew more slowly in the latter period.

Table 1. Contribution of SMEs in Manufacturing, Malaysia, 1996-2008

Indicators	1996	2005	2008
Total Output			
Value (RM billion)	51.5	81.9	100.3
% Share of the manufacturing sector	22.1	29.6	30.9
Average Annual Growth		5.3*	6.3#
Added Value			
Value (RM billion)	10.1	16.6	20.5
% Share of the manufacturing sector	19.5	25.9	26.5
Average Annual Growth		5.7*	6.5#
Number	329,848	394,670	420,917
% Share of the manufacturing sector	29.6	31.1	31.8
Average Annual growth		2.0*	1.8#

Note: * Average annual growth rate for 1996-2005;
Average annual growth rate over 2005-2008;
Growth rates computed using 2000 prices.
Source: http://www.smidec.gov.my/pdf/SME_Performance_Report_2005.pdf;
http://www.smecorp.gov.my/sites/default/files/SME%20AR08%20Eng%20Text.pdf.

It can be seen that SMEs have enjoyed considerable support from the Malaysian government with new meso-organizations created to refine the role of government in their development. Increased funds and initiatives to support entrepreneurial development, human capital development and marketing and promotions have also received strong financial support. The next section will examine the ground-level realities of these initiatives against the theory on the funding of SMEs in developing countries.

3. Methodology

This section introduces the methodology and data used for examining the sources, types and structure of funding faced by, and technological capabilities and economic performance of SMEs and in Malaysia generally. Given the usual sequence of examining

differences and relationships statistically, the paper will first examine descriptive statistics followed by two tail tests comparing the means of critical technology and economic performance variables differentiated by the degree of integration in production networks. The subsequent analysis will focus on the influence of size on the key technology and performance variables.

The first exercise uses cross tabulated data to examine the relationship between size, industry, ease of access and sources of finance enjoyed by SMEs in Malaysia. The second exercise examines the influence of firm-size on access to finance. The third exercise examines the impact of access to finance on labor productivity.

3.1. Specification of Variables

The prime focus of the paper is on the ease of access to, and sources and cost of, finance faced by SMEs in the sampled firms, taking account of the business phase of the firms concerned. Data on the following questions and variables and variables were collected and used for analysis.

3.1.1. Firm-level Variables

The variables used in the paper are specified in this sub-section. The firm-level variables defined refer to labor productivity, export intensity and technological intensity. Size is also an important explanatory variable. We began analyzing the data against size, ownership and gender but dropped ownership and gender from the analysis because of the low incidence of foreign ownership and female control of the firms in the sample. Nevertheless, these variables along with age were included in the Probit regressions.

3.1.1.a. Access to Finance

The key differentiating question used in order to analyze ease of access to external financing is whether a request was made to access external finance. Over the long term all firms reported having sought external financing. Of the firms that did not receive external financing, a number reported having discontinued their pursuit owing to disagreements over

the interest rates and other terms and conditions. An attempt to decompose the period did not produce a reasonable mass of responses for analysis. The request for finance was then examined against the requests that were approved in full, and the ones approved partially.

Then, Access to Finance (FA) was estimated as:

Requested and Approved=1;

Requested but not approved=0

3.1.1.b. Sources of Finance

A wide range of source are identified for the assessment of sources of finance, *viz*, banks, trade supplier credit, government loan or grant, retained earnings, personal savings of the owner, leasing firms, loan from employees, support from relatives and friends. Two sets of questions were asked, one, at the start of the enterprise, and two, to sustain operations.

3.1.1.c. Phase in the Business Cycle

Financial needs and performance vary with the point in the cycle in which the firm is. Hence, the results are controlled for the stage of the business, i.e. start, fast growth, slow growth, maturity and decline.

3.1.1.d. Conditions of Approval

The conditions of approval play an important role when firms apply for external sources of finance. The critical conditions are typically the submission of a formal application form, business financial statement, personal financial statement, details of cash flow if the firm is already in business, collateral and guarantors. The chances of approval often rise if the applicant can provide a government guarantee.

3.1.1.e. Cost of Capital

The cost of capital is typically denoted by the interest rate, and is an important determinant of a firms' capacity to compete.

3.1.1.f. Labour Productivity

Labor productivity is used as one of the key economic performance variables. Because the questionnaire used in the survey did not draw upon investment or capital data, no attempt is made to estimate total factor productivity. We believe in any case that the controversy over the efficacy of TFP as a technology variable is real, and therefore do not believe that its avoidance should raise questions on the strength of the arguments.

Labor productivity was measured as:

Labor Productivity = VA/L

Where VA and L refer to value added and workforce respectively.

VA is estimated in US Dollars.

3.1.2. Technological Capabilities

The variable R&D expenditure in investment is the main variable used to proxy Technology. Other technology variables used are best practices such as utilization of International Standards Organization (ISO) standard, age of machinery and equipment, absorption of information communication technology.

New technology (NT) intensity refers to the introduction of new processes, standards, machinery and equipment or organization of production.

NT is measured as follows:

NT= sum[ISO, NME, NICT, NPM, NP, NPR]

Where NT, ISO, ME, ICT, NPM, NP and NPR refer to incidence of new technology, international standards, new machinery and equipment, new information communication technology, new production method, new process and new product introduced by firm i.

RDI is defined as a dummy and is measured as:

RDI = If firm reported yes;

RDI=0 otherwise.

Higher levels of NT and RDI are expected to show stronger technological capabilities.

3.1.3. Size

Size is the key differentiating variable in the paper and is represented by the fulltime workforce number of the firm. Because the simple use of actual employee numbers did not produce a significant result, a dummy variable was used to classify size into four categories, as below.

Size was measured as follows:

S1 = 1-5 employees;

S2 = 6-49 employees;

S3 = 50-99 employees;

S4 = 100 and more employees.

3.2. Other Variables

Three other variables were tested, *viz*., ownership, gender and age. Ownership and gender were dropped because of the low incidence of foreign (8.6%) and female owners (16.6%).

3.2.1. Age

Age is simply measured here as follows:

A_i = Number of years since establishment

Age is expected to be positively related to export performance and technological capabilities as it is believed that firms over time gather the required knowledge and technological know-how to perform better than the new start ups.

However, there are also arguments that new firms will find it more convenient to begin their production with the already existing superior technology or that foreign firms which located recently will bring superior technology with them and will have better access to foreign markets (Rasiah, 2004). In view of conflicting findings in the past, a neutral hypothesis is assumed at this stage.

3.2.2. Data

Two sets of data were collected for analysis. In the first, 12 *meso* organizations with direct interest in implementing and monitoring government policies (e.g. Central Bank, SME Corp and Ministry of International Trade and Industry) in support of SMEs or engaged actively in supporting their activities (e.g. banks and training institutes) were asked to rate, using Likert scale scores, the existence, incidence and effectiveness of SME support programs using the criteria used by the European Union (see Table 2). The second, set of data drew on SMEs' responses. Using the definition of SMEs in Malaysia, only firms with employment size of less than 250 were picked up in the sample. The selection procedure relied on an official list of firms, which typically would not have an exhaustive record of micro firms. The selection of firms from the industries of electrical-electronics, textiles-garment, automotive parts and others was based on the share of the industry's value added in the manufacturing sector. Because the internal details of firms were not obvious we relied only on geographical location to stratify the sample. Whereas a total of 200 firms were sent questionnaires, we managed to collect responses only from 151 firms.

Data were collected over the period September 2010 to December 2011. Using a sampling frame drawn from the Department of Statistics (DOS) the number of firms drawn from each industry was based on the share of value added of the four categories in manufacturing value added. Of the 151 SMEs' data collected, two were dropped because of the lack of sufficient information for analysis. The breakdown is shown in Table 3.

Table 2. Breakdown of Meso Organizations, 2009

Type of Organization	Number
Central Bank	1
Government Bodies	2
Training Institutes	3
Commercial Banks	6
Total	12

Source: ERIA-Malaysia Survey (2010).

Table 3. Breakdown of Firms by Industry, Sample, Malaysia, 2009

Industry	Firms
Automotives	24
Textile and Garments	17
Electric-Electronics	54
Other Products	56
Total	151

Source: ERIA-Malaysia Survey (2010).

Specification of Equations:

$$\textit{Probit}: FA = c + \beta_1 LNEM \quad (1)$$

$$\textit{OLS}: LNVAL = c + \beta_1 FA + \beta_2 A \quad (2)$$

$$\textit{OLS}: LNVAL = c + \beta_1 LNEM + \beta_2 RDI + \beta_3 A \quad (3)$$

$$\textit{Probit}: RDI = c + \beta_1 LNEM \quad (4)$$

The above equations were run with industry dummies. The variables of Gender and export-intensity were dropped because of very low incidence, while problems of colinearity led to the dropping of LNEM from model (2) (see Appendix 1). The model fit was best for equation (4) when industry dummies and age were dropped.

4. Meso Organizations Supporting SMEs

Given the significance of *meso* organizations in supporting SMEs through connectivity and coordination, a separate exercise was conducted with them to assess, from their standpoint the existence and strength of government driven instruments. The *meso* organizations with relationship with SMEs who participated in the survey were Bank Negara Malaysia, three training institutes, three commercial banks, two finance companies, two consultancy firms with wide consultancy experience on SMEs, and one rating firm. Efforts to get the SME Bank and SME Corp to take part did not generate any response. The assessment using Likert scale scores offers their rating of the different instruments targeted at supporting SMEs in Malaysia.

Three *meso* organizations only responded to the section they felt they covered, while the remaining nine answered all questions. The results are shown in Table 4. The response rate was total only for the questions on entrepreneurship education and training, and support mechanisms for SMEs. The least responded questions concerned entrepreneurship education and training, and on the need to have a legislation on electronic signatures (1) and fostering technical and research support for commercial applications (2).

Interestingly the *meso* organizations gave strong ratings for support enjoyed by SMEs in Malaysia with a mean of 4.33 with all 12 of them responding. Information on SMEs is also considered to be published and disseminated well, with a rating of 4.5. The critical question of access to finance received an average rating of 3.25. The lowest ratings were registered for one-line access, craft registration, legislation of regulations and SME-friendly taxation.

Table 4. Rating of SME-related Instruments by Meso Organizations, Malaysia, 2010

	N	Min	Max	Mean	SD
Entrepreneurship education and training	12	1	4	2.08	0.90
Increase firm registration	10	1	4	2.40	1.27
Increase online registration	10	3	3	3.00	0.00
Craft Registration	6	1	1	0.00	0.00
Legislation of regulations	5	1	2	1.80	0.45
Simplify rules	5	2	2	2.00	0.00
Institutional framework	4	2	5	4.00	1.41
Expand skills	5	2	4	3.00	0.71
Improve Online Access to government services	4	1	4	2.25	1.50
Improve online access to information	12	1	4	2.08	0.90
Regional Integration	4	3	4	3.50	0.58
Adapt Taxation favorable to SMEs	8	1	3	2.13	0.64
Access to Finance	8	3	4	3.25	0.46
Promote technology dissemination	10	1	3	2.00	1.30
Foster Technical and Research Support for commercial application	2	2	4	3.00	1.41
Develop Cluster Networks	6	4	4	4.00	0.00
SME support facilities and services	12	3	5	4.33	1.16
Publish Information for SMEs	10	4	5	4.50	0.71
Need for a Law on Electronic Signature	1	1	1	1.00	0.00
SME Networks	9	3	4	3.50	0.71
Public-Private Consultation	12	1	3	2.00	1.16

Source: Compiled from ERIA Survey (2010).

Overall, the responses received average ratings from the *meso* organizations suggesting that SME support organizations in Malaysia have much to catch up with international best practices. Given the importance of *meso* organizations in solving collective action problems it is important for the government to establish strong connectivity between the programmes it launches and the target firms.

5. Financial Environment

This section examines the ease of access, sources and cost of finance facing the SMEs in the sample. In light of the lack of statistically meaningful relationships between the financial variables and the performance variables, the analysis in this section is interpretative. The assessment on the financial variables is then assessed against the performance and capability variables in the next section.

5.1. Ease of Access

In this section we examine the ease of access and sources of finance faced by SMEs in Malaysia by specific size categories. We deploy simple cross-tabulation of statistics to undertake this exercise.

Of the firms responding to the survey, 55.6, 73.9, 73.9 and 83.3% of firms in the size categories of 1-5, 6-49, 50-99, 100-199, and 100 persons and above reported having requested funds from an external organization over the period 2006-09 (see Table 5). Except for the categories 6-49 and 50-99, the requested share of the total increased with employment size.

Firms from the employment group 50-99 enjoyed the highest incidence of full approval in 2009 at 58.8%. Firms with employment of 1-5 persons (58.8%) enjoyed the least incidence of full approval followed by the size category of 6-49 (45.6%). A smaller percentage reported enjoying partial approval, with those of 100 persons and above

enjoying the highest percentage of 26.7%. The overall percentage share shows a structure similar to that of full approvals.

Table 5. Ease of Access of Finance over last Three Years, Malaysian SMEs, 2009

Employment Size	Requested	Full Amount Approved	Partial Amount Approved	Approved	Satisfied*	N1	N2
1-5	55.6	30.0	10.0	40.0	3.6	18	10
6-49	73.9	45.6	11.8	57.4	3.5	92	68
50-99	73.9	58.8	11.8	70.6	3.3	23	17
100 and above	83.3	33.3	26.7	60.0	3.1	18	15

Note: *) Mean of Likert scale scores of 1-5;
N1- total firms in sample;
N2 – total firms responding to the related question.
Source: Calculated from ERIA Survey (2010).

5.1.1. Criteria for Finance Approval

The incidence of firms reporting receiving government guarantees in the approval of loans was 14.3%, 14.7% and 18.2% among firms with employment size 1-5, 6-49 and 50-99 respectively in 2009 (see Table 6). SMEs with employment size of 100 and above did not report receiving government guarantees for the approval of loans. The highest government support for firms with employment size less than 100 may be consistent with government policy for the support of SMEs.

SMEs applying to access loans have to meet a number of criteria before their application is favorably evaluated. The common ones picked up by the survey are shown in Table 6. All firms with employment size of 50 and above reported a formal application with business financial statements as a requirement when applying for credit. The incidence was still high at 85.7% and 94.1% respectively for firms in the 1-5 and 6-49 employment size category. Asset appraisal for collateral was reported as the next most important criterion with the incidence being highest with firms in the employment category of 100 and above (92.3%) followed by firms in the employment size categories of 50-99 (90.9%), 6-49 (88.2%) and 1-5 (85.7%) respectively.

The incidence of firms reporting cash flow as an important requirement when applying for loans fell below 50% in all size categories (see Table 5). The highest incidence was in the employment size category of 6-49 (47.1%) followed by 50-99 (27.3%) and 1-5 (14.3%). The incidence of firms reporting cash flow as a requirement among firms with employment size of 100 and more was a low 7.7%.

Table 6. Conditions for Credit Approval and Application, Malaysia SMEs, 2009

	Government Guarantee	Formal Application	Business Financial Statement	Business Plan	Asset appraisal for collateral	Cash flow
1-5	14.3	85.7	85.7	100.0	85.7	14.3
6-49	14.7	94.1	94.1	91.2	88.2	47.1
50-99	18.2	100.0	100.0	72.7	90.9	27.3
100 and above	0.0	100.0	100.0	46.2	92.3	7.7

Source: Calculated from ERIA Survey (2010).

5.1.2. Phase in the Cycle

The sample breakdown of incidence by phases in the life cycle of firms, showed that none were in the starting stage,[4] while only in the size categories of 6-49 (1.1%) and 50-99 (4.3%) were there firms reporting being in the declining phase (see Table 7). No firms in the employment categories of 1-5 and 100 and more reported being in the declining phase. Most SMEs were in the slow growth and maturity phases. Firms in the employment size category of 50-99 showed the highest incidence of fast growth at 17.4% followed by the employment categories of 6-49 (9.9%) and 1-5 (5.6%). Interestingly the smallest firms were not facing decline. There were no firms reporting fast growth in the employment category of 100 and above. That all of them were in slow growth or maturity phases shows that they have stabilized without major business leaps or crashes.

[4] The sampling procedure may have biased the responses to starting as the statistics department list is for 2008, the data collected are for 2009 and the collection took place in 2010.

Table 7. Business Phase, Malaysian SMEs, 2009

Employment size	Starting	Fast Growth	Slow Growth	Maturity	Decline
1-5	0.0	5.6	50.0	44.4	0.0
6-49	0.0	9.9	47.3	41.8	1.1
50-99	0.0	17.4	47.8	30.4	4.3
100 and more	0.0	0.0	41.2	58.8	0.0

Source: Calculated from ERIA Survey (2010).

5.2. Cost of Finance

Table 8 shows interest rates that the SMEs must pay in order to access funds from external organizations. We included those that requested finance and those that did not as it can be a good proxy of the opportunity cost of capital.[5] Firms with employment size of 100 and more enjoyed the lowest minimum, maximum and mean interest rates in the sample. However, the minimum and maximum involving other size categories varied with the highest maximum faced by a firm in the employment size category of 50-99. The mean interest rate of all sizes was over 5% but the small firms faced the highest rate of 5.4%.

Overall, the interest rates are not high by most developing country standards, and this is a reflection of government policy coordinated by the Central Bank of Malaysia.

Table 8. Interest Rates by Size, Malaysian SMEs, 2009

	N	Min	Max	Mean	SD
1-5	18	4	8	5.44	1.08
6-49	92	3	9	5.36	1.17
50-99	23	4	10	5.36	1.26
100 and more	18	3	6	5.08	1.19

Source: Calculated from ERIA Survey (2010).

5.3. Sources of Finance

The sources of finance are analyzed at the time the business was started and at the time of the study as the conditions and structures can be very different.

[5] Even non-borrowing firms appear to know the kind of interest rates they would have to pay for if they took out a loan.

5.3.1. Start Ups

Trade credit from suppliers enjoyed the highest incidence of access among SMEs who have recently sought to start their ventures (see Table 9). The breakdown by employment size categories of 1-5, 6-49, 50-99, and 100 persons and above was 94.1%, 93.4%, 91.3% and 94.4% respectively in 2009 (see Table 9). Retained earnings followed second with commensurate percentages of 94.1%, 91.3%, 87.0% and 88.9%. The incidence of personal savings of the owner was next highest with the percentages of 83.3.0%, 82.6%, 69.6% and 83.3% respectively. Commercial and personal loans recorded percentages of 56.3%, 40.0%, 34.8% and 44.4%.

Loans from non-related individuals accounted for 6.3%, 35.6%, 39.1% and 44.4% incidence in the employment size categories of 1-5, 6-49, 50-99 and 100 and above (see Table 9). Leasing firms were the next most important source of finance at start up followed by commercial and personal loans. Government funds recorded an incidence of 16.7% and 3.6% in the employment size categories of 100 and more and 6-49, while this was not at all reported by SMEs in the other size categories. Interestingly, at the time of start-up, 6.3%, 7.8% and 4.3% of firms of size of 1-5, 6-49 and 50.99 in 2009 enjoyed micro credit finance.

Table 9. Sources of Finance at Start Up, SMEs, Malaysia, 2009

Size	Commercial & personal loan	Govern ment	Retained earnings	Supplier trade credit	Leasing	Loans from employees	Owner Personal Saving	Loans from non-relative individuals	Micro credit
1-5	56.3	0.0	94.1	94.1	43.8	16.7	83.3	6.3	6.3
6-49	40.0	3.3	91.3	93.4	60.0	4.4	82.6	35.6	7.8
50-99	34.8	0.0	87.0	91.3	47.8	8.7	69.6	39.1	4.3
>99	44.4	16.7	88.9	94.4	66.7	0.0	83.3	44.4	0.0

Source: Calculated from ERIA Survey (2010).

Table 10. Initiation of Start Up, Malaysian SMEs, 2009

	From Family Member	From Non-family Member	Scratch
1-5	20.0	21.4	68.8
6-49	25.3	20.9	53.8
50-99	21.7	21.7	56.5
100 and more	16.7	16.7	72.2

Source: Calculated from ERIA Survey (2010).

5.3.2. Operative Support

Trade credit from suppliers enjoyed the highest incidence of access among SMEs who have recently sought to start their ventures. The breakdown by employment size categories of 1-5, 6-49, 50-99, and 100 persons and above was 83.3%, 87.3%, 92.3% and 78.6% respectively in 2009 (see Table 11). The incidence of personal savings of the owner was next highest with the commensurate percentages of 75.0%, 73.2%, 69.2% and 78.6% respectively. Retained earnings enjoyed the same incidence as trade credit suppliers and personal savings of the owner in the 100 persons and above size category. Government funds recorded an incidence of 16.7% and 3.6% incidence among the 1-5 and 6-49 employment size categories.

Interestingly, loans from non-related individuals accounted for 41.7%, 66.7%, 76.9% and 71.4% in the employment size categories of 1-5, 6-49, 50-99 and 100 persons and above. Leasing firms were the next most important source of finance at start up, followed by commercial and personal loans. Government funds recorded an incidence of 16.7% and 3.6% in the employment size categories of 1-5 and 6-49, while they were not at all reported by SMEs in the other size categories. Apart from a 7.4% incidence in the employment size category of 6-49, micro credit was not reported by any other firm in the sample.

Table 11. Sources of Finance at Maturity State, SMEs, Malaysia, 2009

Size	Commercial and personal loan	Govern ment	Retained Earnings	Supplier trade credit	Leasing	Loans from employees	Owner personal saving	Loans from non-relative individuals	Micro credit
1-5	37.5	16.7	66.7	83.3	41.7	75.0	41.7	8.3	0.0
6-49	34.5	3.6	46.4	87.3	47.3	73.2	66.7	16.4	7.4
50-99	38.5	0.0	38.5	92.3	46.2	69.2	76.9	15.4	0.0
>99	21.4	0.0	78.6	78.6	57.1	78.6	71.4	28.6	0.0

Source: Calculated from ERIA Survey (2010).

Overall, it can be seen that the financial environment in Malaysia is not stifling to the smaller firms. Not only is the incidence of those enjoying approval for loan applications high, but the conditions do not appear to be skewed significantly towards the larger firms. However, despite the presence of major SME support instruments provided by the government, the incidence of firms in the sample accessing government guarantees to qualify for their loans in the sample was low.

6. Statistical Relationships

This section seeks to establish analytically the relationship between firm-size and access to finance, access to finance and labor productivity, and technological capabilities and labor productivity.

6.1. Firm Size and Financial Access

We used the longer term to examine the relationship between firm-size and financial access. Not only were the results for the shorter periods not significant, but the longer period is likely to be more accurate for examining the relationship as a number of firms enjoyed long-term loans. The model fit for the Probit estimation controlling for foreign ownership and industry was significant (LR-stat). Age was dropped because of colinearity problems (see Appendix 1).

The relationship between firm size and access to finance was positive and strong (significant at the 1% level) demonstrating that size has a biasing effect in the approval of external funds. The results show that the larger the firm the higher the probability of its enjoying external finance. Despite government policy to offer special support for SMEs the size bias seems to remain with respect to access to finance.

Table 12. Relationship between Access to Finance and Firm-Size, Malaysia, 2009

Probit: $FA = c + \beta_1 LNEM + \mu$

	Coefficient	Std Error	z-statistic	Probability
C	-0.479	0.514	-0.932	0.351
LNEM	0.363***	0.128	2.829	0.005
LR(stat)	10.525***	FA=0	40	
N	151	FA=1	111	

Note: *** refers to statistical significance at 1%; industry dummies are not reported.
Source: Computed from ERIA Survey (2010).

6.2. Productivity and Access to Finance

We examine economic performance in this section, using the variables of labor productivity, value added growth and export intensity, and technological capabilities using the variables of incidence of new technology introduced and R&D expenditure in total investment in 2009.

We examine the relationship between firms that requested finance (FR) and successfully accessed it (FA=1) and firm-level labor productivity. The model fit of the OLS estimations was statistically significant at the 1% level (F-stats) (see Table 13).

Interestingly the relationship between firms that requested finance and received it and log labor productivity is negative, suggesting that firms that failed to obtain finance enjoy higher labor productivity than otherwise. R&D expenditure as a % of sales was negatively correlated with log labor productivity, showing that firms that accessed finance externally invested less in R&D activities than otherwise.

The results show that, among SMEs in Malaysia, equity-financed and personally funded firms enjoy higher productivity than firms externally funded. The results tend to support Jesudasan's (1989) argument that the entrepreneurial community in Malaysia has

largely been bypassed by government instruments. Some firms reported that they have faced a negative bias in accessing preferential loans because of their ethnic background. Although government policy favors the provision of subsidized loans to the Bumiputeras export-oriented and R&D-based firms can actually seek grants and preferential loans irrespective of their ethnic background. However, according to the owners of the 11 firms we interviewed in 2010, this is often not done.

Table 13. Relationship between Financial Access and Labour Productivity, Malaysia, 2009

OLS: LNVAL= c + β_1FA + β_2RD + β_2A + μ

	Coefficient	Std Error	t-statistic	Probability
C	2.894***	0.439	6.599	0.000
FA	-0.518**	0.262	-1.977	0.050
RD	-0.082***	0.032	-2.559	0.012
A	-0.008	0.011	-0.765	0.445
R^2	0.088			
F-stat	3.910***			
N	151			

Note: *** and ** refer to statistical significance at 1% and 5% respectively; industry dummies are not reported.
Source: Computed from ERIA Survey (2010)

6.3. Productivity and Technological Capabilities

The model fit of OLS regression involving labor productivity and the technological variable of RDI (incidence of participation in R&D) was statistically significant (f-stat) and hence we interpret the results in this section (see Table 14).

The relationship between RDI and LNVAL is statistically insignificant suggesting that firm performance among SMEs does not depend on their participation in R&D activities. An interesting result is the inverse correlation between firm-size and firm productivity demonstrating that smaller firms enjoy higher productivity than larger firms.

The relationship between firm size and labor productivity is negative and statistically highly significant demonstrating that smaller firms are more productive than larger firms. In fact, the results show that for every 1% increase in employment size labor productivity

will fall by 0.45%. Despite the negative bias on access to finance, small firms have surmounted the barrier to be more productive than large firms.

Table 14. Productivity, and R&D Incidence and Firm Size
OLS: LNVAL= c + β_1RDI + β_2LNEM + μ

	Coefficient	Std Error	t-Statistic	Probability
C	3.823***	0.517	7.388	0.000
RDI	-0.070	0.238	-0.295	0.769
LNEM	-0.448***	0.126	-3.824	0.000
R^2	0.146			
F-Stat	7.264***			
N	151			

Note: *** and ** refer to statistical significance at 1% and 5% respectively; industry dummies are not reported.
Source: Computed from ERIA Survey (2010).

6.4. Firm Size and Technological Capabilities

The model fit (LR-stat) in the probit estimation carried out between firm size and incidence of R&D participation was statistically significant and hence the results are interpreted here.

The relationship between log labor productivity and incidence of participation in R&D was inverse and statistically significant demonstrating that small firms are likely to undertake R&D more than large firms. This is interesting and lends evidence to support Audretsch's (2002) observation that small firms can be dynamic.

Table 15. R&D and Firm Size
Probit: RDI= c + β_1LNEM + μ

	Coefficient	Std Error	z-Statistic	Probability
C	0.375	0.367	1.022	0.307
LNEM	-0.248**	0.116	-2.146	0.032
LR(Stat)	4.686**			
N	151	RDI=1	53	
		RDI=0	98	

Note: ** refer to statistical significance at 5% respectively.
Source: Computed from ERIA Survey (2010).

The statistical exercise produced interesting results. Taken together, the results show that small firms remain disadvantaged when it comes to access to finance, but they have not allowed the finance barrier to hamper productivity, nor participation in R&D activities. Indeed, firm size is inversely correlated with labor productivity, and incidence of participation in R&D. The lack of a statistical relationship between incidence of R&D and labor productivity shows that it is not a major influence, but this could also be a consequence of very low export-intensities among the firms.

7. Conclusion

This paper first analysed the assessment of *meso* organizations on government policy and the environment facing SMEs in Malaysia. In the second exercise, it sought to evaluate the financial environment and to interpret its impact on the economic performance and technological capabilities of SMEs in Malaysia. In the firm level analysis, the paper first sought to assess, the ease of access, sources and cost of finance faced by SMEs in Malaysia. We then examined the economic performance and technological capability of the SMEs in the sample.

The assessment by the *meso* organizations suggests that SMEs enjoy above average support from the embedding environment. Arguably the most serious problems reported by the *meso* organizations are the lack of use of electronic transactions for approval, and the absence or lack of coordination with regulatory bodies.

Micro-finance was not reported as important at all in the sample, though the government has through Bank Negara Malaysia (Central Bank), launched a number of instruments to promote it. In fact, a small percentage of firms in the size category of 6-49 reported accessing it, but none of the firms in the size category of 1-5 reported enjoying such an instrument. The categories 1-99 reported using micro-finance at the time of start-up but the incidence in all categories was small.

The results show that there is an obvious bias in the financial environment facing the smaller firms, which is reflected in the strong inverse relationship between access to finance and firm-size. Access to finance was also inversely correlated with labor productivity, which shows that the more productive firms have less access, or simply that the cost and other terms of external capital is too high for the better performers. Given that several firms reported having declined to pursue external funds on the basis of the terms and conditions the inverse relationship may actually show that the better performers who have the option of preferring internal sources show higher labor productivity than those who have received external funds.

Finally, the results show that small firms in Malaysia have been more dynamic than large firms among SMEs of size less than 250. The relationship between firm size, and labor productivity and incidence of participation in R&D were inversely correlated.

The Malaysian evidence shows that governments should review their financial instruments to ensure that preferential credit is matched to the needs of the more entrepreneurial firms, and should take small firms seriously as they have proven to be more dynamic than the larger SMEs in Malaysia. Small size should not be seen as a deterrent to participation in R&D activities.

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Appendix 1: Correlation Coefficient Matrix, Sampled Firms, Malaysia, 2009

	FR	LNEM	LNVAL	FO	A	RDI	IND
FR	1.000	0.224*	-0.136	0.077	-0.012	0.030	0.037
LNEM	0.224*	1.000	-0.277	0.035	0.228*	-0.053	0.056
LNVAL	-0.136	-0.277*	1.000	0.148	-0.022	-0.015	0.195
FO	0.077	0.035	0.148	1.000	0.012	0.014	0.004
A	-0.012	0.228	-0.022	0.012	1.000	-0.113	0.167
RDI	0.030	-0.053	-0.015	0.014	-0.113	1.000	-0.044
IND	0.037	0.056	0.195	0.004	0.167	-0.044	1.000

Note: * - Excessive correlation.
Source: Computed from ERIA Malaysia survey (2009-10).

CHAPTER 9

SMEs' Access to Finance: An Indonesia Case Study

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1. Introduction

One of the biggest problems faced by SMEs in most developing countries is lack of access to financial services, particularly from formal institutions (both banks and non-banks). The problem of access to financial sources for SMEs exists when a business activity that would be internally financed if resources were available, does not get supports from external financial institutions. The absence of financial supports for SMEs is perhaps due to high cost in doing business activities which implies SMEs find too costly in accessing external financial sources. Moreover, some argue that high cost of doing business could finally hinder economic competitiveness. ERIA's SMEs research found that access to finance is the most critical factor for SMEs in determining regional competitiveness (Thanh, *et.al.*, 2009).

Theoretically, the presence of financial barriers is due to informational problems (i.e. principal-agent problems) and transactional costs (Stiglitz and Weiss, 1981). *First*, because of lack of collateral/income, formal financial institutions classify SMEs as "non-bankable" firms as well as high-risk borrowers and hence are likely to exclude them. This is because those firms may be unable to repay their debt and may be unwilling to do so. *Second*, the cost of finance may be so high that financial institutions might be unable to reach such firms, particularly the small and medium ones. Baata (2008) found that the main obstacles for Mongolia's SMEs to access financial services included high interest rate, high collateral requirements, limited access to long terms loan, and weak business plan. Generally speaking, despite requesting financial services, SMEs do not have access to, or get external financing from, formal financial institutions even though resources are available.

SMEs' access to finance is a subject of research interest both in developed and developing countries. There are a number of reasons why this is so. Some argue that improving access to finance may reduce poverty in developing economies. Better access to finance for SMEs leads to reducing poverty, perhaps due to the fact that in most developing countries SMEs are concentrated in rural areas in which high levels of poverty persist. In addition, better access to financial sources for SMEs indicates that the role of financial

institutions in bridging finance to real sector functions. In conclusion, improving financial access for SMEs will enhance the capacity of SMEs to reduce poverty and advance the role of the financial sector.

To address these issues, this study aims to examine the existing situation of SMEs' access to finance in Indonesia. More specifically, this study investigates the internal characteristics of SMEs in Indonesia such as demographics (firm size, number of employees, year of establishment etc), employment education, cost structure, obstacles facing SMEs and financial sources used either for maintaining or starting businesses. Furthermore, the study analyzes comparisons of those characteristics between SMEs that have access (herein referred to as 'Access firms') to financial institutions and those that don't (herein referred to as 'Non-access firms'). To achieve this objective, Institute for Economic and Social Research (herein referred to as, LPEM-FEUI) organized a field survey to collect firm-level information as well as data from formal financial institutions. The firm survey focused on three specific industries: garments and clothing, automotive parts and components, and electronic parts and components. Moreover, the survey included the financial institutions namely banking and non-banking such as cooperative and rural bank (herein referred to as BPR, *Bank Perkreditan Rakyat*).

The research report will be organized in five sections as follows. Section one is an introduction to the study. Section two highlights SMEs' contribution to the Indonesia economy, while financial policies affecting SMEs will be explored in section three. Section four discusses survey report including survey design and methodology, industry profile, and analyzes of survey results that deal with comparison between access and non-access SMEs to finance. The last section summarizes conclusion and policy recommendation.

2. The Role of SMEs in Indonesia

SMEs are considered to have an important role in economic development in terms of providing employment opportunities, being engines of economic growth, and their

contribution to export and trade. Moreover, their flexibility in adapting to changing market situations in terms of demand and supply movement may lead SMEs to be less vulnerable than larger enterprises. According to these positions, SMEs act as a buffer if the economy is in decline.

In Indonesia, SMEs are recognized as a fundamental asset of the economy. They accounted for more than 99 percent of total enterprises in 2009, a slight increase when compared to the previous year of 2008. The definition of SMEs here, however, also included microenterprises so that the ratio of SMEs to total firms looks high. If we exclude microenterprises, they only accounted for less than 1.5 percent of total enterprises in 2008-2009. Moreover, SMEs' contribution to Indonesian economy can be derived from its role in providing employment or job opportunities. Until 2009, SMEs contributed to approximately 97 percent of employment absorption, a slight increase of 2.33 percent compared to the previous year of 2008. (*Ministry of Cooperative and Small and Medium Enterprises*, 2010). In terms of national output, the contribution of SMEs to Gross Domestic Product (GDP) creation was more than 55 percent in 2008/2009, both in current and constant prices.

It is found that SMEs' exports were very small compared to their counterparts, the large enterprises in terms of contribution to non-oil and trade. The SMEs' non-oil exports accounted for approximately 17 percent of total exports in 2009, while exports from the large enterprises comprised 83 percent of the total export in the same year. This percentage decreased slightly from 2005 (20 percent) to 2009 (*Ministry of Cooperative and Small and Medium Enterprises*, 2010). If we split off the value of export by classification of SMEs, the largest contribution of SMEs to export derived from medium enterprises that accounted for 11-15 percent from 2005 to 2009 periods. Tambunan (2007) also found that export-oriented SMEs in Indonesia do indirectly export their products via intermediary parties such as traders, trading houses, and exporting companies.

3. Financial Policies Affecting SMEs

Government policies to address problems of accessing financial support can be divided into two periods: the 'New-Order era' (pre-crisis) and the 'Post-New Order era' (post-crisis). The New Order government's efforts to assist in the development of SMEs, particularly related to financial support, were indicated by various direct special credit programs aimed at bridging SMEs difficulty in accessing financial institutions.

There were at least two types of credit programs initiated by New-Order government, namely the Small Enterprises Development (KIK-*Kredit Investasi Kecil*/ KMKP-*Kredit Modal Kerja Permanen*) Program and the Small Enterprises Credit (KUK-*Kredit Usaha Kecil*) Program. The first program, KIK/ KMKP, was launched in 1973 and ended in 1990. This was a nationwide subsidized credit program directed to small enterprises, namely indigenous[1], including cottage enterprises, and was aimed at providing credit for investment (KIK) and working capital purposes (KMKP) (Thee, 2006). In particular, this program provided interest subsidies to those enterprises. For KIK, the actual provision was managed by five state-owned commercial banks, the Indonesian Development Bank (Bapindo-*Bank Pembangunan Indonesia*), all regional development banks (BPD- *Bank Pembangunan Daerah*) and 14 private banks (Thee, 1994). Because of high a default rate of more than 27 percent, the KIK and KMKP credit programs were stopped in 1990.

To replace the KIK and KMKP programs, in 1990 the government initiated a new credit program, the Small Enterprise Credit (KUK- *Kredit Usaha Kecil*) Program. Under this program, all commercial banks were required to allocate 20 percent of their loans to small enterprises and cooperatives to provide for either investment or working capital. The term 'small' here is attributed to enterprises with net assets of Rp600 million or less, excluding buildings and land. Unlike the previous credit programs (KIK/ KMKP), the KUK was designed to assign interest at market rate rather than at a subsidized rate. Unfortunately, the story of the KUK program was similar to that of the KIK and KMKP

[1] Indigenous is a terms that refers to a business unit operated or owned by local people, so called *pribumi*.

programs. The KUK program did not perform well because the banks either experienced difficulties in meeting the government requirement of 20 percent, or they were simply unwilling to provide 20 percent of their loans to SMEs. It was also found that banks allocated more of their loans to consumption rather than business purposes (Thee, 2006).

After the fall of the New Order regime, the new government implemented a new policy to eliminate problems faced by SMEs by removing barriers to accessing financial support, focused especially on formal financial institutions. Under the Presidential Instruction Number 6 of 2007, the government introduced three policies to accelerate SME development. These were: increasing institutional capacity and access of Micro and SMEs to financing sources, strengthening the loan guarantee system for Micro and SMEs, and optimizing non-banking funds to empower Micro and SMEs. The first policy dealt with strengthening the capacity of SMEs while the last two policies were related to efforts to improve financial access of SMEs. According to attempts to reduce SMEs' financial burden, the government simplified the process of collateral certification in order to facilitate SMEs in accessing external finance from formal institutions such as banks.

By Presidential Instruction Number 6/ 2007, the government introduced a credit scheme for micro and small enterprises, known as micro credit loans (KUR-*Kredit Usaha Rakyat*). These are government-guaranteed loans directed to micro, small, and medium enterprises as well as cooperatives which are productive and feasible businesses, but still un-bankable. The KUR scheme initially requires project or business activity as the principal collateral for the loan. However, since this collateral does not meet with the banks' own requirements, the government initiated a guarantee program for micro, SMEs, and cooperatives so they can access loans from banks. In addition, like the KIK/ KMKP programs in the New Order regime, KUR is intended to provide working capital and investment credit of up to Rp500 million. The credit providers are commercial banks assigned by the government. Yet, the difference between the KIK/KMKP schemes and KUR is that KUR does not provide interest subsidies.

Based on a report from the Coordinating Ministry for Economic Affairs (CMEA), it is claimed that during the period January-December 2010, six banks (BRI, BNI, BTN, Bank

Mandiri, Bank Syariah Mandiri, and Bank Bukopin) and 13 regional development banks (BPD) disbursed approximately Rp17.23 trillion to 1.437.650 debtors. Based on this "success" story, however, some banks are still facing several constraints in distributing the loans under the KUR scheme. For example, they inform that many applicants failed to meet criteria set by the banks in order to make sure that they are able to pay back the loans. Moreover, though KUR loans are aimed at providing business financing to enterprises, many applicants request the loan for consumption purposes. In addition, it is also found commonplace for banks to still demand additional collateral from prospective customers (i.e. 30 percent of total loan). Not unimportantly, there exists some sectoral bias in loan disbursement, with the majority of loans granted to the trade service sector.

4. Survey Report

4.1. Survey Design and Methodology

This study employs small and medium enterprises as our respondents, with Micro, Small, and Medium Enterprises defined according to Law No. 20/ 2008. The criteria for a firm to be classified as a 'small enterprise' are having net assets, excluding land and buildings, of between Rp 50 million and Rp 500 million, or having annual sales of between Rp 300 million and Rp 2.5 billion. The criteria for medium enterprises are having net assets, excluding land and buildings, of between Rp 500 million and Rp 10 billion, or having annual sales between of Rp 2.5 billion and Rp 50 billion.

This survey was focused on three pre-determined industries. Those industries were clothing and garment (CG), parts and components of automotive (PCA), and parts and components of electronics and machineries (PCEM)[2]. The survey was administered by LPEM-FEUI from October to December 2010 using the latest Indonesian Economic

[2] The Clothing and Garment industry (CG) comprises Indonesian Standards of Industrial Classifications (ISIC) code 17 and 18, the Parts and components of automotive industry (PCA) consists of ISIC code 34 and 35, and the Parts and components of machinery and electronics industry (PCEM) contains ISIC code 29-32.

Census (from 2006), published by the National Statistic Office (herein, BPS-*Badan Pusat Statistik*) to construct sampling frames. The census suggests that West Java, Central Java, and East Java together account for 55 percent of total number of manufacturing SMEs in Indonesia. This survey applied a random method of selecting companies as respondents from these three provinces.

Table 1. Distribution of Respondents

Province	Industry			N
	CG	PCA	PCEM	
West Java	24	21	18	63
Central Java	38	19	23	80
East Java	11	4	3	18
N	73	44	44	161

Source: Author's calculations.

Among the selected respondents, LPEM FEUI utilized respondents from the previous survey of SMEs Production Networks. However, not all of the old respondents can be surveyed due to several reasons: some had closed, some had moved, and others were unwilling to participate. Around 70 percent of the previous survey's respondents participated in this new survey.

The survey utilized a structured questionnaire that was applied among country members of the ERIA-SMEs working group. Technically, this questionnaire was translated from English into Indonesian to ensure all respondents are able to answer it. Since this questionnaire asks for extensive information, including sometimes sensitive company financial data, the target respondents were middle managers and above, or the owners of the companies.

4.2. Profile of Respondent

Companies operating in all three industries were mostly established before 1990. This illustrates that the majority of companies in these industries are mature, and the survival rate in these industries is high. During this period (before 1990), companies in the Clothing and Garment Industry (CG) and in Parts and Components of Electronics and Machinery

(PCEM) are concentrated in Central Java, while companies in Parts and Components of Automotive industry (PCA) are distributed evenly in West and Central Java.

Table 2. Companies' Year of Establishment

Province	Industry	Year of Estalishment				N
		<1990	1990-1995	1996-2000	>2000	
West Java	CG	1	7	11	5	24
	PCA	7	5	4	5	21
	PCEM	5	4	4	5	18
Central Java	CG	17	10	6	5	38
	PCA	7	5	5	2	19
	PCEM	9	4	7	3	23
East Java	CG	3	2	4	2	11
	PCA	3	0	0	1	4
	PCEM	2	0	1	0	3
N		54	37	42	28	161

Source: Author's calculations.

On average, the Clothing and Garment Industry (CG) employs the highest number of people, when compared to other industries. On the other hand, the average number of people employed by the Parts and Components of Electronics and Machinery (PCEM) industry is the lowest, at nearly the half of the Clothing and Garment industry's number. These figures show that the technical process of the CG industry to be labor intensive, while the PCEM's technical process depends more on machinery. In terms of education, all of these industries depend heavily on workers with high school education or lower.

Table 3. Employment and Education of Labor

Description	**Degree of education**	**Industry**		
		CG	**PCA**	**PCEM**
Employment[3] (average)		109	103	40
Worker Education (%)	Tertiary or higher	4.2	3.7	6.7
	Vocational	9.5	24.6	33.2
	High School or less	86.2	72	60

Source: Author's calculation.

[3] Total number of employment both full-time and part-time employee.

Table 4. Full-Time Employment by Industry

Industry	Number of Employee					n
	1-5	6-49	50-99	100-1999	>=200	
CG	13	46	6	0	8	73
PCA	16	21	2	1	4	44
PCEM	8	28	3	3	2	44

Source: Author's calculation.

A comparison between Table 3 and 4 above reveals an interesting pattern. On average, only a small number of employees are full-time employees, while the rest work part-time. As clearly shown by Table 4, the majority of SMEs in all industries hire only 6 to 49 full-time employees.

Companies that are owned by domestic owners as account for 93 percent of the total companies surveyed, or 149 out of 161 companies. The rest of the companies are either owned entirely by foreigners or are joint ventures between foreign and local owners. A large proportion of foreign owners are from Japan and South Korea. Other foreign owners identified are from Hongkong and Singapore. Among the companies surveyed, their targets involve the domestic and export markets. However, 147 companies (about 91 percent of these companies) still rely on the domestic market alone.

Table 5. Ownership and Proportion of Production

Industry	N	Status of SME			Proportion of Production		
		Domestic	Foreign	Join-Venture	Domestic	Export	Domestic&Export
CG	73	68	5	0	65	3	5
PCA	44	41	2	1	42	0	2
PCEM	44	40	3	1	40	2	2

Source: Author's calculations.

With further analysis of the ownership status of SMEs, this survey identifies that whether or not the companies are domestically- or foreign-owned, most of them do not participate in production networks. CG companies are in a production network if they sell their products in both domestic and export markets. They usually sell their products to the final consumers directly.

Table 6. Production Network

Status of SME	Production Network?	N	Industry		
			CG	PCA	PCEM
Domestic	Production Network	5	5	0	0
	No-Production Network	144	63	41	40
Foreign	Production Network	2	0	1	1
	No-Production Network	8	5	1	2
Join-Venture	Production Network	1	0	1	0
	No-Production Network	1	0	0	1

Source: Author's calculations.

In terms of profit in 2008 and 2009, companies in the clothing and garment industry (CG) mostly acquired 10-20 percent of total sales. A similar pattern is seen in the parts and components of electronics and machinery industry (PCEM). However, a smaller profit ratio is seen in the parts and components of automotive industry (PCA), at 0-10 percent. There seems that most SMEs in CG and PCEM industries experienced a high profit during 2008 to 2009.

Table 7. Profit

Profit (%)	Industry (n)					
	Garment		Automotive		Electronic	
	2008	2009	2008	2009	2008	2009
Missing	3	3	5	5	2	1
Loss	0	1	0	0	0	0
0-10	20	20	14	17	12	11
>10- 20	34	29	13	10	12	14
>20- 30	11	14	8	8	11	11
>30	5	6	4	4	7	7
N	**73**	**73**	**44**	**44**	**44**	**44**

Source: Author's calculations.

Material costs represent the largest proportion of costs for all of the industries, which is on average about 50-60 percent, followed next by labor costs(around 30 percent on average). Moreover, sales growth from 2008-2009 is, on average, the highest in the parts and components of electronics and machinery industry (PCEM) at 12.3 percent. The second highest is in the Clothing and Garment industry (CG) at 10.7 percent and the lowest is seen

in the parts and components of automotive industry (PCA) which, at 2.1 percent, differs significantly from the other two.

Table 8. Cost Structure

Cost of Production as % of total cost (on Average)	Industry					
	Garment		Automotive		Electronic	
	2008	2009	2008	2009	2008	2009
Labor	30,8	32,0	31,4	31,2	30,3	29,2
Raw material/intermediate goods	55,2	57,1	57,0	57,7	56,4	58,6
Electricity,fuel,and water	6,8	6,6	7,2	7,1	7,5	7,2
Interest payment (loan)	3,4	3,3	2,6	2,4	2,8	2,4
Others	0,9	1,0	1,8	1,7	2,9	2,6
Growth of Sales (mean)		**10,1**		**2,1**		**10,7**

Source: Author's calculations.

4.3. Accessibility of Finance

There are various sources of finance for SMEs, but at least three major sources are commonly acknowledged, namely formal external sources (e.g. commercial banks, cooperatives, micro finance institutions (MFI), credit unions, government, suppliers), informal external sources (e.g. loan sharks, friends or relatives) and internal sources (e.g. retained earnings, owners private savings, loans from employees). While these sources vary in their characteristics, features, advantages and disadvantages, this study focuses only on formal external source of finance. Hence, only SMEs that are actually able to acquire finance from external institutions like commercial banks, micro finance institutions (MFI), credit unions, cooperatives, suppliers, government or other formal institutions are defined as firms with access to finance. This distinctness or delineation is very important as it leads to the notion of "*financial gaps*" which serves as the theoretical framework of the study.

By taking this definition into account, more than half of the total 161 (90 firms, or 55.9 percent) SMEs surveyed have access to finance. Table 9 below presents the distribution of SMEs among our three key industries. Across these industries, an interesting distribution pattern appears. Parts and Component of Automotive (PCA) is the only industry in which majority of SME have no access to finance. In contrast, the majority of SMEs in others two industries have access to finance.

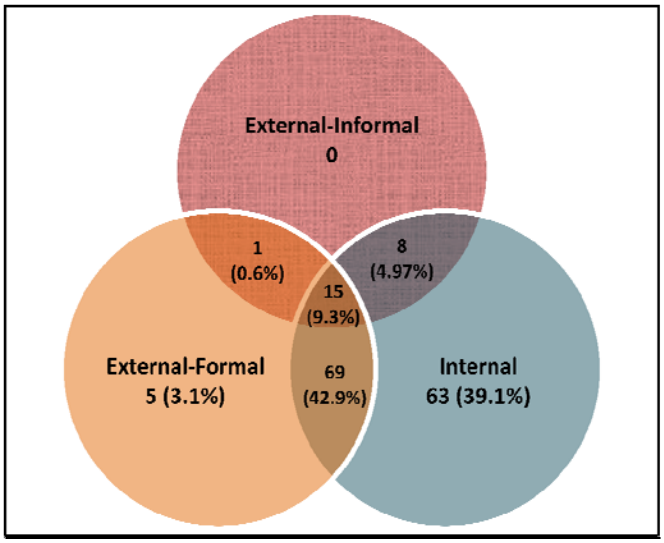
Table 9. Distribution of SMEs by Accessibility of Finance and by Industry

Category of SME	Industry			N
	CG	PCA	PCEM	
No Access	33	23	15	71
Have Access	40	21	29	90
N	73	44	44	161

Source: Author's calculations.

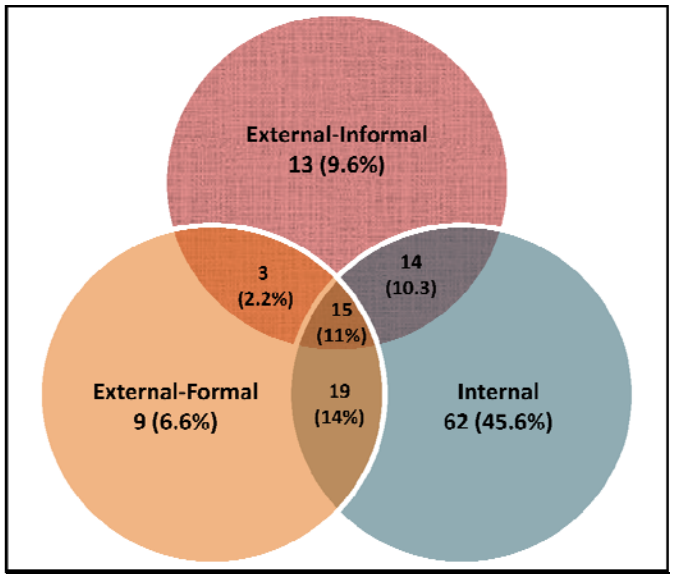
Taking a further look into financial accessibility of these SMEs, some unexpected patterns emerge. Graphs 1 and 2 attempt to portray this pattern.

Graph 1. Sources of Finance for Maintaining the Business



Source: Author's calculations

Graph 2. Source of Finance for Start up Businesses



Source: Author's calculations.

Graphs 1 and 2 provide a diagram of SMEs with their financial sources for both maintaining and starting up a business. It is implied that information from maintaining and starting up businesses (questions in part G) reflects the actual finance obtained from their sources, rather than just a request (questions in part A).

It is clearly shown from graph 1 that even for SMEs with access to finance (able to acquire from external formal sources), reliance on internal sources (e.g. personal/owners savings, retained earnings) and external informal sources (loan from friends or relatives) still prevails. The graph also shows that the number of SMEs that rely only on external formal sources is very small, at 3 percent of total respondents. The dependency on internal and/or informal financial sources along with external-formal sources (i.e. using joint financial sources) for maintaining their businesses may reflect not only the presence of uncertainty but also high opportunity cost of accessing external sources. Overall, this picture may indicate that despite having access to external formal sources of finance, the majority of SME respondents in Indonesia still have traditional mindsets in their way of doing business. This also explains the low share of loan interest payments in the cost structure.

In add, for those with access to finance, the type of formal external sources commonly used include commercial/personal loans from financial institution (e.g. banks, cooperatives), trade credit from suppliers and micro-credit from micro-finance institutions. All of these sources reveal that the majority of SMEs in Indonesia still rely on borrowing, rather than alternative source like leasing and venture capital.

Those with no access to finance mainly rely on internal sources, i.e. personal/owners savings, retained earnings, and loans from employees. Exposure to external sources of finance for these SMEs, if any, is limited only to informal borrowing from friends or individuals unrelated to the business/owners.

A reasonably similar composition also appears in type of financial sources for business start up as presented in Graph 2. It is natural to heavily rely on internal sources for starting up a business, since they have no experience and credit history yet. Interestingly, there seems to be a gradual shift in financial sources from internal to external-informal and then to external-formal, as shown by the number of SMEs: 45,6 percent of total respondents utilize internal sources only, 9,6 percent use external-informal sources only, and 6,6 percent use external-formal sources only.

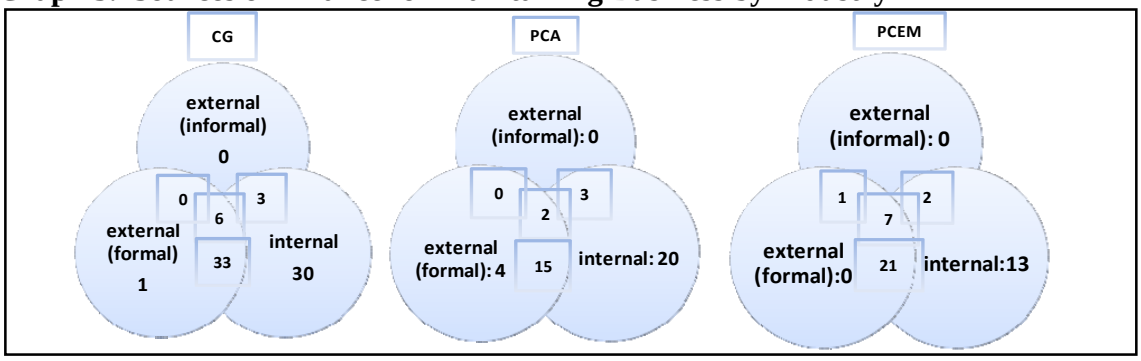
Similar to maintaining business, utilizing a combination of financial sources is also common for start up businesses. As shown in graph 2, amongst these hybrid types of financing, dependencies on internal sources is still present. 14 percent of total respondent utilize a combination of external-formal and internal sources, 11 percent utilize a combination of all three, and 10 percent use a mixture of external-informal and internal sources. By contrast, only 2 percent of total respondents use a combination of external-formal and external-informal sources.

Although having access to finance, a pattern of heavy reliance on internal sources is also clearly seen for maintaining businesses across the industries. This type of source, in particular personal/owners saving and retained earnings, are still the two major financial sources for all SMEs across all industries. However, the external sources vary across industries. While both the Clothing and Garment (CG) and Parts and Components of Electronics and Machineries (PCEM) Industries rely on loans from banks and micro credit,

the Parts and Components of Automotive (PCA) Industry depends on trade/ supplier credit and loans from banks. Such variation may perhaps reflect the different nature of the industries. Graph 3 below presents this pattern.

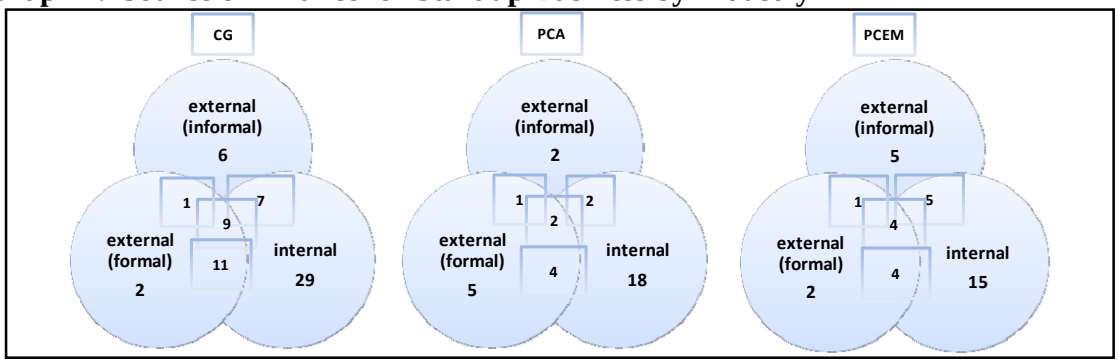
Graph 4 shows a similar pattern for start up businesses. Undisputedly, the major financial source for these companies is personal/owners savings. Some variation across industries appears for the next source. While SMEs in the garment industry rely on loans from friends and relatives (informal external source), those in electronics industries get it from commercial/personal loans from financial institutions (formal external source) as their source of financing.

Graph 3. Sources of Finance for Maintaining Business by Industry



Source: Author's calculations.

Graph 4. Source of Finance for Start up Business by Industry



Source: Author's calculations.

4.3.1. Owner Characteristics

It is a standard practice in the financial sector for at least five important factors to be considered before a decision to approve a commercial loan is made. These factors are commonly known as 5C, and one of these factors is characteristics of the business owners.[4] Tables 10, 11 and 12 below present some elements of owner characteristics, such as age, sex, years of experience, net assets and information on how they run the business.

Table 10. Age Group

Category of SME	Age of Majority Owner					Total
	Don't Know	<=30	31-40	40-50	>50	
No Access	2	4	19	22	24	71
Have Access	5	2	22	29	32	90
Total	7	6	41	51	56	161

Source: Author's calculations.

Table 11. Gender of Owner

Category of SME	Sex of Majority Owner			Total
	Don't Know	Female	Male	
No Access	0	8	63	71
Have Access	3	13	74	90
Total	3	21	137	161

Source: Author's calculations.

Table 12. Years of Experience

Category of SME	Year of Experience of Majority Owner				Total
	Don't Know	0-10	>10-20	>20	
No Access	8	19	28	16	71
Have Access	19	21	35	15	90
Total	27	40	62	32	161

Source: Author's calculations.

For the most part, it is revealed that responding SMEs are owned by males aged 40 years and above with business experience of around 10 to 20 years. The owners' business experience is highly correlated with the fact that most of the SMEs surveyed were

[4] The other factors are: capital, collateral, cash flow and business condition.

established before the 1990s. This pattern holds for both SMEs with access and without access to sources of finance.

Interestingly, although there are far fewer female business, the proportion of them who have access to finance is slightly larger than that of male business owners, 13 of 90 (14.5 percent) as opposed to 8 of 71(11.3 percent) respectively.

Table 13. Net Asset of Owner

Category of SME	Industry	Net Asset of Majority Owner (000,000)						n
		Missing	<250	>=250-1000	>1000-5000	>5000-10000	>10000	
Non-Access	Garment	5	10	13	2	1	2	33
	Automotive	4	10	7	2	0	0	23
	Electronic	3	1	6	3	0	2	15
	N	**12**	**21**	**26**	**7**	**1**	**4**	**71**
Access	Garment	6	15	12	5	0	2	40
	Automotive	7	2	2	3	4	3	21
	Electronic	3	5	7	9	3	2	29
	N	**16**	**22**	**21**	**17**	**7**	**7**	**90**

Source: Author's calculation.

Another important element of 5C is capital which sometime can be replaced by net assets of the owners as a proxy. The higher the capital (the net assets of the owner) is the greater the possibility of securing finance from the credit lender institutions. From the view of credit lenders, higher capital signals greater ability of borrowers to pay back his/ her loan, hence the lenders are more likely to offer loans.

The general pattern from the Table 13 above presents that that majority of both SMEs with and without access to finance are owned by people with net assets of less than Rp. 1 billion, 43 of 90 and 47 of 70 respectively. However, owners with net assets of Rp. 1 billion and above are more prevalent in SMEs with access to finance rather than those without access, 31 of 90 against 12 of 71 respectively. To some extent, the latter pattern seems to support the above hypothesis higher capital results in better prospects of access to finance.

Variations in owners' net assets ownership exist in some industries. Among firms without access to finance, large proportion of SMEs in garment and parts & component of automotive industries are owned by people with net asset less than Rp. 1 billion, while

more than one third of SMEs in the parts & component of electronics industry are owned by people with net asset more than Rp 1 billion and about 40 percent have net asset between Rp 250 million and Rp 1 billion. But for those with access, the composition changes, where only SMEs in the garment industry are still mostly owned by people whose net asset are less than Rp. 1 billion. The other two industries have more variation in net asset value of their owners. This may indicate that investment in the parts and component of automotive and electronics industries might require more capital, and hence companies in these industries are more likely to be financed externally.

4.3.2. Owner's Attitude toward their Business

The attitude suggests that SME owners are more focused on their core business and are not very enthusiastic about investing in unrelated business lines (only 39 of 161 respondents answer yes). If any, only a small number of owners are involved in managing these businesses (only 36 of 161 answered yes). Moreover, their involvement is primarily due to the fact that these businesses are owned or operated by friends or relatives (only 34 of 161 answered yes). Owners who actually invest in independent business lines are even smaller in number (only 30 of 161 answered yes). This overall configuration supports that majority of SMEs in Indonesia, regardless of whether they have financial access or not, are still traditional or conventional in their way of doing business.

4.3.3. Firms' Characteristics

Some important characteristics of firms involve their technological and innovation capabilities, which can be shown from their R&D expenditure or patent holdings. Table 14 and 15 below shows these capabilities.

Tabel 14. R&D Expenditure

Category of SME	Expenditure of R&D (in %)					Total
	Missing	0	>0-10	>10-20	>20	
No Access	20	50	0	1	0	71
Have Access	46	35	6	2	1	90
N	66	85	6	3	1	161

Source: Author's calculations.

Tabel 15. Patent Ownership

Category of SME	Missing	No-Patent	Have Patent	Total
No Access	0	65	6	71
Have Access	5	67	18	90
N	5	132	24	161

Source: Author's calculations.

It is surprising that the number of missing values for proportions of R&D expenditure is large (Table 14). This is mainly due to the incapability of respondents to answer the questions because he/she is only a low-level manager, rather than the owner of the firm. Despite this, Table 14 shows that slightly more than half of all SMEs (85 of 161) surveyed spent nothing (0 percent) on R&D, of which a larger proportion is found among SMEs with no access to finance relative to those with access, 50 of 71 as opposed to 35 of 90 respectively. Unlike SMEs with no access to finance, some variations in R&D expenditure appear for those with access to finance. This may suggest that there is a positive correlation between having R&D expenditure and the existence of financial access.

A rather similar composition also emerges with regard to the number of patents held by SMEs. While a large number of SMEs (132 of 161) do not hold patents, patent-holding SMEs are likely to be those with financial access (18 of 90 as opposed to 6 of 71).

It can be inferred that SMEs that spend money on R&D or hold patents are likely to have better chance of securing finance from external sources. Apart from showing the technology and innovation capabilities of the firms, these two aspects may send a signal to the credit lenders that they have good product and good market, and hence, better capability to repay the loan if they borrow money. In this case, the most common type of patent held by SMEs is in the form of trade mark.

The presence of potential business plan is another crucial element in obtaining access to finance from formal institutions. A business plan simply represents the vision and strategy of the owners toward the business and the industry. Table 16 and Graph 5 below try to capture business expansion plans issue.

Table 16. Business Expansion Plans

Category of SME	Business Expansion in the next 2 years?			Total
	Missing	No	Yes	
No Access	5	18	48	71
Have access	4	17	69	90
N	9	35	117	161

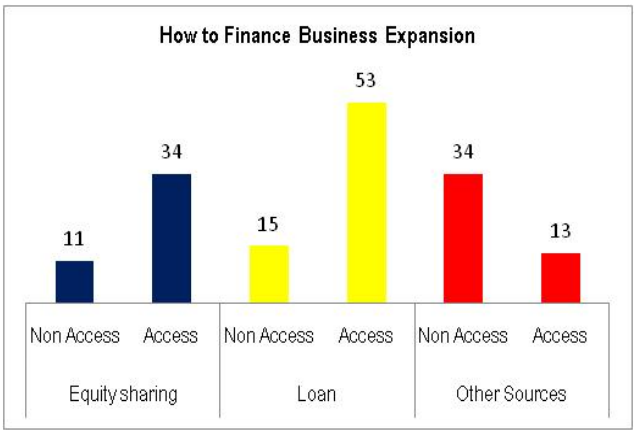
Source: Author's calculations.

Table 17. Sources of Funding

Category of SME	Is internal fund sufficient ?			Total
	Missing	No	Yes	
No Access	10	24	37	71
Have access	15	49	26	90
N	25	73	63	161

Source: Author's calculations.

Graph 5. How to Finance Business Expansion



Source: Author's calculations.

While Table 16 shows that most of the SMEs surveyed (117 of 161) have plans to expand their business in the next two years, of which a greater proportion these SMEs have access to finance. Table 17 illustrates that the majority of them perceive internal sources are insufficient to finance their expansion, hence Graph 5 presents that instead of equity or other sources, borrowing is the likely preference to be used by owners to finance their expansion plan. This is particularly true for SMEs with access to finance.

The firms' stage of development also affects the likelihood of having financial access, and is highly correlated with the year of establishment. Young firms or start up businesses are likely to be at a disadvantage in having access due to limited credit record, or perhaps higher probability of default. By contrast, an older SME has proven its ability to survive, and hence is more likely to have financial access. Table 17 and 18 portray stages of SME business development both by industry and by financial accessibility.

Table 18. Stage of Business Development by Industry

Industry	Business stage of development						Total
	Missing	Start-up	Fast growth	Slow growth	Maturity	Decline	
CG	2	1	7	30	19	14	73
PCA	2	0	3	17	8	14	44
PCEM	2	0	5	18	10	9	44
N	6	1	15	65	37	37	161

Source: Author's calculations.

Table 19. Stage of Business Development by Accessibility of Finance

Category of SME	Business's Stage of Development						
	Missing	Start-up	Fast Growth	Slow Growth	Maturity	Decline	Total
No Access	1	1	3	29	17	20	71
Have Access	5	0	12	36	20	17	90
N	6	1	15	65	37	37	161

Source: Author's calculation.

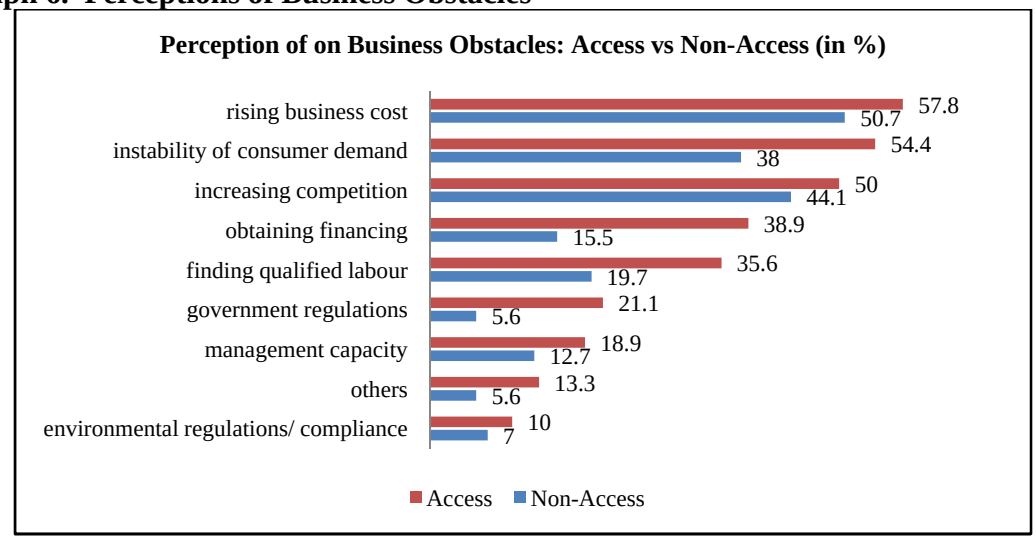
Considering that the majority of SMEs surveyed were established before the 1990s, it is unsurprising to find that a large proportion of these SME are concentrated in the stage of slow growth (sales increase with diminishing rate). This pattern can be found for both tables; business development stage by industry and by accessibility of finance.

Some variation across industries exists. Relative to the garment and parts & components of electronics industries, the parts & component of automotive industry seems to be entering the "sunset" period, as shown by the large proportion of SMEs which are declining, and the smaller proportion of fast-growing SMEs.

With respect to accessibility of finance, SMEs with financial access are more likely to be at the fast-growth stage, and a smaller proportion in the declining stage. However, SMEs in the parts & components of automotive industry with financial access seem to have different characteristics compared to SMEs in two other industries. This implies that SMEs in the parts & components of automotive is less developed than the other industries with regard to financial access. This is confirmed by Table 8.

4.3.4. Perceptions of Obstacles

Graph 6. Perceptions of Business Obstacles



Source: Author's calculations.

A slight variation in perception of obstacles to business growth, between SMEs with and without access to finance exists. Interestingly, both SMEs with and without access to finance perceive rising business costs as their number one obstacle to growth. Meanwhile the rest of the obstacles are similar, varying only in sequence. For SMEs with financial access, the top five perceived obstacles to growth are: 1) rising business costs; 2) instability of consumer demand; 3) increasing competition; 4) obtaining financing; and 5) finding qualified labor. While the top five obstacles to growth perceived by SMEs without financial

access are: 1) rising business costs; 2) increasing competition; 3) instability of consumer demand; 4) finding qualified labor; and 5) obtaining financing.

4.4. Financial Institutions

Financial institutions in Indonesia are still largely dominated by the banking industry, although the development of other institutions such as leasing companies and cooperatives has also been quite significant recently. The existence of non-bank financial institutions creates a larger market, and offers a wider variety of products, and terms and conditions, all of which will make the financial industry more flexible for Indonesian customers.

In general, credit supply in Indonesia through banks increases from year to year. The Central Bank (Bank of Indonesia, or BI) records that credit in the banking sector until February 2011 grew by about 24.6 percent or about Rp 1,772.4 trillion relative to the year before. On the other hand, demand for credit is still dominated by large credit (more than Rp 5 billion) which accounts for about 47 percent. However, demand for micro, small and medium credit presents an increasing trend from time to time and in 2010 these represented about 20 percent of total demand for credit. Some commercial banks have entered the SME segment in order to enlarge their business. This recent development in the banking industry illustrates the efforts of commercial banks to improve their function as SME credit suppliers. However, the development of credit demand from non-bank financial institutions in Indonesia is not well recorded and governed.

The survey manages to obtain responses from eleven (11) financial institutions. However, some of the information obtained is incomplete due to a number of reasons, but mainly because of confidentiality restrictions. Even if they do disclose, they only share the total number or percentage rather than detailed information required by the questionnaire. Hence, the information presented in this section is somewhat limited and must be carefully interpreted. The distribution of financial institutions across provinces is presented in Table 20 below.

Table 20. Name of Financial Institution and Provinces

Type of Institutions	Province			Total
	West Java	Central Java	East Java	
Commercial Bank	1	2	2	5
Cooperative	2	0	0	2
Leasing Company	1	0	0	1
Rural Bank	0	3	0	3
Total	4	5	2	11

Source: Author's calculations.

Of eleven institutions, five of them are located at Central Java, four in West Java and the rest are in East Java province. Three of these five institutions in Central Java are the rural credit bank (BPR), while the other two are branches of national commercial banks. Those in West Java are comprised of one branch of a commercial bank, two cooperatives and one multi-finance company. The financial institutions in East Java consist of two commercial banks.

With respect to total assets, these financial institutions present wide variations, ranging from Rp. 260 million (the cooperative); Rp. 13 billion (the rural credit bank) in the middle; to Rp. 2 trillion (one of the national commercial banks), which is the highest. However, it should be carefully noted, especially for the commercial bank, that such a huge amount of assets refers to total assets of the bank, rather than assets of the branch.

Table 21.Type of Institution and Type of Financing Facility

Type of Institutions	Type of Finance				Total
	Loan	Factoring	Leasing	Loan & Factoring	
Commercial Bank	3	1	0	1	5
Cooperative	2	0	0	0	2
Leasing Company	0	0	1	0	1
Rural Bank	2	0	0	1	3
Total	7	1	1	2	11

Source: Author's calculations.

Table 21 above describes type of institution and its type of financing facility. As many of the institutions are in the banking sector, both commercial as well as rural credit banks, the majority offer loan financing facilities. Furthermore, cooperatives also offer similar

facilities. There are only few that offer other services like leasing or factoring and both facilities.

Table 22. Reasons for Refusal of Financial Requests by Type of Institution

Reasons for turning down financial requests		Type of Financial Institutions			
		Commercial Bank	Cooperative	Leasing Company	Rural Bank
Insufficient Sales, Income, or Cash Flow		4,8	4	5	4,3
Insufficient Collateral		4,6	3	1	4
Poor Business Plan		4,8	4	4	4,7
Poor Credit History		4,6	4,5	5	4,7
Unstable types of Business		4,2	2	4	4
Age of Business		4	2	4	1,3
Gender of Owner		1,8	1	1	1
Other Reasons	Customer Characters and Recommendation	5	0	0	0
	Legality of Business Ownership	0	0	4	0

Source: Author's calculations.
Note: Figures are average values. The higher the number, the more important the reason is.

Overall, regardless of the type of financial institution, the bottom line is that these institutions are looking for SME that are capable of repaying the loans they offered, as shown by having projected cash flow, credit history, and business plan. Failure to comprehend these aspects is likely to end in a refusal to get financed. However slight variations in reasons appear among these institutions. For instance, for commercial banks, owners' characteristics, availability of a business plan, and projected cash flow are important aspects to be assessed. For cooperatives, slightly different aspects count. The availability of credit history, business plan, and projected cash flow does matter. Leasing companies pay more attention to projected cash flow and credit history, while rural banks are looking for credit history, business plan and projected cash flow.

Of these reasons, the least important aspects which are considered are gender of owner and age of business. This implies that issue of male versus female owner or issue of start up versus mature business is irrelevant in getting financial access as long as they have capability to repay the loan.

5. Conclusion and Policy Recommendations

5.1. Conclusion

It is inevitable that firms need financing to grow and expand their business, including small and medium enterprises (SMEs). However, in order to do so, SMEs often encounter difficulties, in particular limited sources of finance, and hence a financial gap is created.

The survey attempts to shed light on this issue and illustrate the current situation for Indonesian SMEs. It reveals that about 56 percent of SME respondents have access to finance, which is defined as the ability to acquire financial sources from external formal institutions. Such institutions may include banks, cooperatives, micro finance institutions, the government, and suppliers. Interestingly, although having the ability to acquire finance from external sources, reliance on internal financial sources, particularly personal savings and retained earnings, still prevails and plays a crucial role.

In addition, there are only a few firms that just rely on external formal sources, namely only 3.1 percent of SMEs with access use external formal finance. This might be because either non-technical reasons such as cultural aspects or they do not see any need. Some of them might have access, but they choose not to use external financial services. To a large extent such a situation may reflect the fact that the majority of Indonesian SMEs are still considered to be traditional or conventional in doing business. From police makers' view the findings do not really constitute to a problem of asymmetric information because their lack of demand, rather, drives them to not using external financial supports.

Conversely, the survey found that almost half of SMEs have no access to finance even though external financial sources are available. There are possible explanations of why financial problem for such SMEs exists. *First*, SMEs are unable to reach external sources because they perceive that transaction costs in terms of administration and provision costs are too high. *Second*, collaterals to meet financial institution requirements are insufficient mostly because assets provided for loan guarantee are not yet certified. Because they need quick financial support in order to maintain their regular activities, SMEs rather do use external sources with high interest rate particularly from informal institutions. *Finally*,

SMEs are lacked of good administration, hence they could not produce good business plan as required by formal institutions.

Having said that, it is not an easy task to identify significant differences between SMEs with access to finance and those without access. Except for a few characteristics, the analysis of patterns for the majority of firm characteristics produces a rather similar result. These characteristics include owners' characteristcs, capital, firms' technological characteristics, stages of development and even their perception of business obstacles. If any, variations are not very significant. As an illustration, there is no significant difference in owner characteristics between SMEs that have access to finance and those without access. A similar result is also found with percepetions of business obstacles. Both SMEs with access and without access perceive rising business costs as the main obstacles to expand their business. The other obstacles are also the same, but only differ in rank. This may indicate there are other factors other than those commonly applied to get credit approval, namely the '5Cs', that enable SMEs to access finance.

The survey also manages to interview eleven (11) financial institutions, which mainly consist of banking-sector companies. There is not much information gathered from this side as they are reluctant to provide detail information due to confidentiality issues. Despite very little information, there is valuable information obtained concerning reasons for rejection of credit application. From the lenders' perspective, the three most important reasons to turn down applications are: (i) poor credit history; (ii) poor business plan; and (iii) insufficient sales, revenue and cashflow.

5.2. Recommendations

Reflecting on the survey's findings, some broad policy recommendations to improve access to finance are as follows:

1. In order to meet the criteria for credit approval, there must be some assistance for SMEs to improve their capacity building, such as preparing simple business plans, and developing simple accounting standard operating procedures and cash flow management systems. This could be conducted by the financial institutions

themselves, or through third parties such as private sector, for instance through business development services (BDS).

2. At he same time, given the nature of SMEs, financial institution must also adjust their standard operating procedures when dealing with SMEs. To this end, some prudential banking regulations must be relaxed to some extent. The role of Central Bank as the main authority of banking supervision is important here.

3. Some incentive for banking institutions to channel the credit to productive sectors, rather than consumer credit, should be provided.

4. The use of alternative institutions as a source of finance for SMEs, particularly in remote areas, should be promoted and socialized. One of the potential candidates is cooperatives that provide deposit and credit services (*koperasi simpan pinjam*) to members. These institution are not only in accordance with our basic law (UUD-*Undang-Undang Dasar*, 1945) but also because they are typically established based on member interest (a 'bottom up' approach) and provide services for members. Thus, the owners of SMEs become cooperative members and hence can borrow money from these institutions.

5. Promoting the establishment of forums or associations for these cooperatives. This in turn may lead to development of secondary markets for these cooperatives.

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CHAPTER 10

SMEs Access to Finance: Philippines

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This paper examines the access to finance issues confronting Philippine SMEs based on a survey of firms and commercial banks. The firm survey covering the garments, textiles, automotive, electrical and electronics, and food manufacturing industries highlights the difficulties faced by small and medium enterprises (SMEs) in accessing finance. Financing obstacles posed one of the top four most serious problems for the growth of their businesses. The survey indicates the continued dependence of SMEs on internal sources of financing, not only during their start-up phase but also in the ongoing operations of the business.

Close to 41% of the respondents intend to expand the size and scope of their businesses in the next two years. 67% said that internal funds alone are not sufficient to finance the expansion, with the same proportion of firms indicating that they would seek to finance their expansion using a loan. Previous surveys had also showed a substantial proportion of firms that planned to borrow in the future. However, the continuing dependence of firms on internal sources of financing seems to suggest a gap between the plans of firms to borrow and the actual amount of funding made available by banks.

SMEs, particularly the smaller ones, have been unable to access funds due to their limited track record, limited acceptable collateral, and inadequate financial statements and business plans. The bank survey showed the same reasons for turning down financial requests: firms' poor credit history, insufficient collateral, and insufficient sales, income or cash flow, unstable business type, and poor business plans.

To improve micro, small and medium enterprises' (MSMEs') access to finance, the paper suggests the implementation of a Central Credit Information Corporation in order to address informational asymmetries. Changing the mindsets of banks and introducing non-traditional approaches to SME lending would also be important, along with training and capacity building programs for SMEs to improve their financial literacy and management capacity.

1. Introduction

Given their dynamic and productive characteristics, small and medium enterprises (SMEs) are seen as crucial for a country's economic growth, employment creation and innovation. Their lack of access to financing has often been cited as one of the major constraints affecting their performance and competitiveness. Lack of access to financing implies that a substantial number of SMEs cannot obtain financing from banks and other sources in order to start up, innovate, grow and develop their enterprises. In a recent Philippines Institute for Development Studies (PIDS)-Economic Research Institute for ASEAN and East Asia (ERIA) survey of the barriers faced by 101 SMEs from the electronics, automotive, garments, and food sectors, Aldaba *et al.*, (2010) indicated that financing constraints have remained one of the most critical barriers affecting SME growth. The surveyed firms cited the following financing problems: shortage of working capital to finance new business plans, difficulties in obtaining credit from suppliers and financial institutions, insufficient equity, and expensive cost of credit.

As of 2008, the Philippines had a little over 761,000 registered enterprises with 91.6% being micro enterprises. Small enterprises had a share of 7.7% while medium enterprises accounted for a share of only 0.4%. The wholesale and retail trade sector dominated the total with a share of almost 50%, followed by manufacturing and hotels and restaurants, with shares of 14% and 12%, respectively. Total employment of around 5.54 million was registered during the same year with micro enterprises accounting for a share of 30%. SMEs contributed roughly the same with a share of 31.2%. Wholesale and retail trade generated 35% of the total; manufacturing followed with a share of 19%.

Within the manufacturing industry, a total of 112,377 enterprises were registered in 2008. Micro enterprises accounted for about 90% of the total, while SMEs had a share of 9.5%. Total employment was about 1.4 million, with SMEs contributing 28% of the total, while micro enterprises had a share of around 17.8%.

From the seventies to the present, overall SME policies and programs in the Philippines have evolved, with their focus shifting from inward-looking towards a more externally-oriented approach. In the 1990s, government policy on SMEs concentrated

on improving market access, export expansion, and increasing competitiveness. In 1991, the Magna Carta for Small Enterprises was passed to consolidate all government programs for the promotion and development of SMEs into a unified framework. The Magna Carta also mandated all lending institutions to set aside 8% of their total loan portfolio to SMEs.

Finance is a critical factor for competitiveness and the ability to exploit and participate in the global economy, as well as taking opportunities arising from regional integration. The paper focuses mainly on the access to finance issues confronting SMEs in the Philippines. A survey of both firms and commercial banks was conducted for an in-depth understanding of the issues. The paper is divided into five sections. After the introduction, section two reviews SME performance and structure. Section three discusses the policies and programs of the government for SMEs, current sources of SME finance, and the finance issues and constraints faced by SMEs. Section four analyzes the survey results and supplements this by incorporating the results of similar SME access to finance surveys conducted by other organizations in the past. The final section presents the policy implications of the paper.

2. SME Performance and Structure

The Philippines has two operational definitions of small and medium enterprises. Based on employment, which is the most commonly used definition in the country, the different size categories are classified as follows:

Micro enterprises	: 1-9 employees
Small enterprises	: 10-99 employees
Medium	: 100-199 employees
Large	: 200 or more employees

In terms of assets, SMEs are defined as follows:

Micro enterprises	: P3 million or less
Small enterprises	: P3-15 million
Medium	: P15-100 million
Large	: P100 million or more

In terms of number of establishments; micro, small, and medium enterprises (MSMEs) dominate the economy and accounted for almost 99.6% of the total number of establishments in 2008. With a share of about 92%, micro enterprises are more predominant than small and medium enterprises, which account for only 8% of the total number of establishments. Geographically, both micro and SMEs are highly concentrated in the National Capital Region (NCR) and the Calabarzon area.

Table 1a. Number of Establishments, by Size and Industry, 2008.

	TOTAL	Micro	Small	Medium	Large
PHILIPPINES	**761,409**	**697,077**	**58,292**	**3,067**	**2,973**
Agriculture, Hunting and Forestry	3,985	2,526	1,197	131	131
Fishing	1,306	897	358	25	26
Mining and Quarrying	340	209	102	10	19
Manufacturing	112,377	100,605	9,763	940	1,069
Electricity, Gas and Water	1,388	479	688	117	104
Construction	2,202	1,184	832	98	88
Wholesale and Retail Trade	379,005	360,798	17,468	448	291
Hotels and Restaurants	93,405	85,764	7,382	198	61
Transport, Storage and Communications	8,647	6,366	2,016	151	114
Financial Intermediation	25,766	20,733	4,794	120	119
Real Estate, Renting and Business Activities	45,060	40,115	4,016	366	563
Education	13,562	7,242	5,802	293	225
Health and Social Work	31,113	29,633	1,261	116	103
Other Community, Social and Personal Service Activities	43,253	40,526	2,613	54	60

Source: National Statistics Office.

Table 1b. Percentage Distribution

Industries	TOTAL	Micro	Small	Medium	Large	SMEs
Agriculture, Hunting and Forestry	0.52	0.36	2.05	4.27	4.41	2.16
Fishing	0.17	0.13	0.61	0.82	0.87	0.62
Mining and Quarrying	0.04	0.03	0.17	0.33	0.64	0.18
Manufacturing	14.76	14.43	16.75	30.65	35.96	17.44
Electricity, Gas and Water	0.18	0.07	1.18	3.81	3.5	1.31
Construction	0.29	0.17	1.43	3.2	2.96	1.52
Wholesale and Retail Trade	49.78	51.76	29.97	14.61	9.79	29.2
Hotels and Restaurants	12.27	12.3	12.66	6.46	2.05	12.35
Transport, Storage and Communications	1.14	0.91	3.46	4.92	3.83	3.53
Financial Intermediation	3.38	2.97	8.22	3.91	4	8.01
Real Estate, Renting and Business Activities	5.92	5.75	6.89	11.93	18.94	7.14
Education	1.78	1.04	9.95	9.55	7.57	9.93
Health and Social Work	4.09	4.25	2.16	3.78	3.46	2.24
Other Community, Social and Personal Service Activities	5.68	5.81	4.48	1.76	2.02	4.35
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Based on Table 1a.

In terms of distribution by sector, most establishments are in the wholesale and retail trade sector, notably in the micro category. As Table 1b shows, this sector accounted for almost 50 percent of the total number of establishments, followed by manufacturing with a share of about 15 percent. The hotels and restaurants sector is third with a share of 12 percent.

Among SMEs, wholesale and retail trade also dominates, with a share of around 30 percent, followed by manufacturing with a share of 17 percent of the total number of SMEs. On the other hand, among large enterprises, manufacturing comprised the bulk, at 36 percent of the total number of large enterprises.

In terms of employment, Table 2 shows that SMEs contributed 31 percent of the total number of workers in all establishments. Among SMEs, manufacturing and wholesale and retail trade accounted for about 22 and 23%, respectively. Among large enterprises, manufacturing jobs also comprised the bulk, with a share of 37 percent of the total. Meanwhile, for micro-enterprises, jobs generated by the wholesale and retail trade comprised the bulk with a share of 47 percent while manufacturing jobs contributed only 15 percent of the total.

Table 2a. Employment Distribution by Size and Industry, 2008

Industry Sector	TOTAL	Micro	Small	Medium	Large
PHILIPPINES					
Agriculture, Hunting and Forestry	5,544,590	1,663,382	1,314,065	418,058	2,149,085
Forestry	146,696	9,371	32,256	18,086	86,983
Fishery	27,654	3,404	8,228	3,710	12,312
Mining and Quarrying	20,732	820	2,660	1,340	15,912
Manufacturing	1,429,370	255,021	251,146	128,853	794,350
Electricity, Gas and Water	89,425	2,419	20,000	16,840	50,166
Construction	116,254	4,752	23,822	13,908	73,772
Wholesale and Retail Trade	1,323,518	789,758	341,545	60,412	131,803
Hotels and Restaurants	452,068	222,931	174,327	25,983	28,827
Transport, Storage Communications	192,111	23,802	50,987	20,559	96,763
Financial Intermediation	395,346	77,935	86,061	14,857	216,493
Real Estate, Renting and Business Activities	694,549	99,582	95,463	49,448	450,056
Education	329,681	29,833	147,259	40,310	112,279
Health and Social Work	145,235	49,068	30,342	16,432	49,393
Other Community, Social & Personal Service	181,951	94,686	49,969	7,320	29,976

Source: National Statistics Office.

Table 2b. Percentage Distribution

Industries	TOTAL	Micro	Small	Medium	Large	SMEs
Agriculture, Hunting and Forestry	2.65	0.56	2.45	4.33	4.05	2.91
Fishing	0.5	0.2	0.63	0.89	0.57	0.69
Mining and Quarrying	0.37	0.05	0.2	0.32	0.74	0.23
Manufacturing	25.78	15.33	19.11	30.82	36.96	21.94
Electricity, Gas and Water	1.61	0.15	1.52	4.03	2.33	2.13
Construction	2.1	0.29	1.81	3.33	3.43	2.18
Wholesale and Retail Trade	23.87	47.48	25.99	14.45	6.13	23.21
Hotels and Restaurants	8.15	13.4	13.27	6.22	1.34	11.56
Transport, Storage and Communications	3.46	1.43	3.88	4.92	4.5	4.13
Financial Intermediation	7.13	4.69	6.55	3.55	10.07	5.83
Real Estate, Renting and Business Activities	12.53	5.99	7.26	11.83	20.94	8.37
Education	5.95	1.79	11.21	9.64	5.22	10.83
Health and Social Work	2.62	2.95	2.31	3.93	2.3	2.7
Other Community, Social and Personal Service Activities	3.28	5.69	3.8	1.75	1.39	3.31
Total	100	100	100	100	100	100

Source: Based on Table 2a.

Note that medium enterprises constitute a small share not only of the SME sector but also of the total Philippine industrial structure. As such, the country's industrial structure has often been characterized as "hollow" or missing in the middle. The same is true for manufacturing industry.

Table 3. Distribution of Number of Enterprises and Employees by Size Structure

Year	Micro	%	Small	%	Medium	%	Large	%	Total
1995	1,345,175	31	945,401	22	366,890	8	1,664,076	39	4,321,603
2000	2,165,100	37	1,522,227	26	416,686	7	1,798,173	30	5,902,256
2003	2,214,278	34	1,556,206	24	485,891	8	2,218,419	34	6,474,860
2006	1,667,824	33	1,279,018	26	381,013	8	1,657,028	33	4,984,950
2007	1,661,884	32	1,297,792	25	396,066	8	1,832,051	35	5,187,793
2008	1,663,382	30	1,314,065	24	418,058	8	2,149,085	39	5,544,590
2009	1,731,082	30	1,449,033	25	415,526	7	2,094,298	37	5,689,939

Source: National Statistics Office.

In terms of value added, the MSME sector contributed 35.7% of the total with manufacturing contributing the largest share of 6.87%. Wholesale and retail trade and repair contributed 6.58% followed by financial intermediation with a share of 6%. Within the sector, small enterprises accounted for the largest share of 20.5%. Medium enterprises followed with a share of 10.3% while micro enterprises registered a share of 4.9%. Among small enterprises, wholesale and retail trade and repair contributed the most with a share of 4.07% followed by manufacturing with a share of 3.82% while financial intermediation was next with a share of 3.35%. For medium enterprises, manufacturing accounted for the biggest share of 2.77% followed by electricity, gas and water with a share of 1.92% and financial intermediation with 1.87%. For micro enterprises, wholesale and retail trade and repair represented the largest contribution of 1.73%.

Table 4. Value Added Structure, 2006

Total (in million pesos)	Total 2,108,546	Micro 103,918	Small 431,340	Medium 216,685	Large 1,356,603	MSMEs 751,943
Agriculture; hunting and forestry	0.79	0.01	0.22	0.09	0.47	0.32
Fishing	0.15	0	0.02	0.02	0.1	0.04
Mining and quarrying	1.86	0.92	0.01	0.4	0.53	1.33
Manufacturing	32.91	0.28	3.82	2.77	26.05	6.87
Electricity; gas and water	8.35	0.02	2.92	1.92	3.49	4.86
Construction	1.64	0.02	0.46	0.23	0.92	0.72
Wholesale and retail trade; repair of motor vehicles; motorcycles and personal and household goods	8.24	1.73	4.07	0.78	1.66	6.58
Hotels and restaurants	1.91	0.16	1.1	0.2	0.46	1.46
Transport; storage and communications	14.09	0.11	1.58	0.65	11.76	2.33
Financial intermediation	16.21	0.8	3.35	1.87	10.19	6.02
Real estate, renting and business activities	7.67	0.62	1.56	0.71	4.78	2.88
Education	3.15	0.08	0.84	0.45	1.78	1.37
Health and social work	1.18	0.08	0.18	0.13	0.79	0.4
Other community; social and personal service activities	1.85	0.09	0.34	0.06	1.36	0.49
Total	100	4.9	20.5	10.3	64.3	35.7

Source: National Statistics Office.

Within manufacturing, the large bulk of Philippine enterprises are micro-enterprises, which comprised 90% of the total in 2006, while SMEs and large enterprises accounted for 10% and 1% of the total number of manufacturing enterprises, respectively. Firms in the food and beverages sector dominated, with a share of 47%, followed by wearing apparel (13%) and fabricated metal products excluding machinery and equipment (11%).

Table 5. Manufacturing Establishments by Size and Sector, 2006

Manufacturing Sub-sector	Total	%	Micro	%	SMEs	%	Large	%
Food Products and Beverages	55189	47.03	51882	44.21	3125	2.66	182	0.16
Tobacco Products	26	0.02			15	0.01	11	0.01
Textiles	1497	1.28	1122	0.96	342	0.29	33	0.03
Manufacture of Wearing Apparel	15759	13.43	14379	12.25	1244	1.06	136	0.12
Tanning and Dressing of Leather, Manufacture of Luggage, Handbags and Footwear	1590	1.35	1240	1.06	333	0.28	17	0.01
Wood, Wood Products & Cork, except Furniture; Articles of Bamboo, Cane, Rattan & the like	3440	2.93	3004	2.56	416	0.35	20	0.02
Paper and Paper Products	559	0.48	252	0.21	285	0.24	22	0.02
Publishing, Printing and Reproduction of Recorded Media	3887	3.31	3023	2.58	850	0.72	14	0.01
Coke, Refined Petroleum and Other Fuel Products	18	0.02			15	0.01	3	0
Chemicals and Chemical Products	1133	0.97	485	0.41	601	0.51	47	0.04
Rubber and Plastic Products	1291	1.1	651	0.55	589	0.5	51	0.04
Other Non-Metallic Mineral Products	5179	4.41	4693	4	450	0.38	36	0.03
Basic Metals	1050	0.89	658	0.56	361	0.31	31	0.03
Fabricated Metal Products except Machinery and Equipment	13024	11.1	12304	10.49	682	0.58	38	0.03
Machinery and Equipment Not Elsewhere Classified	3020	2.57	2428	2.07	570	0.49	22	0.02
Office, Accounting and Computing Machinery	73	0.06	9	0.01	43	0.04	21	0.02
Electrical Machinery and Apparatus, nec	290	0.25	67	0.06	183	0.16	40	0.03
Radio, Television and Communication Equipment and Apparatus	263	0.22	24	0.02	119	0.1	120	0.1
Medical Precision and Optical Instruments, Watches and Clocks	122	0.1	42	0.04	55	0.05	25	0.02
Motor Vehicles, Trailers and Semi-Trailers	703	0.6	536	0.46	139	0.12	28	0.02
Other Transport Equipment	425	0.36	330	0.28	82	0.07	13	0.01
Manufacture and Repair of Furniture	7227	6.16	6624	5.64	564	0.48	39	0.03
Recycling	92	0.08	58	0.05	34	0.03	0	0
Manufacturing, Not Elsewhere Classified (nec)	1489	1.27	1263	1.08	207	0.18	19	0.02
Total	117346	100	105074	89.54	11304	9.63	968	0.82

Source: National Statistics Office.

Table 6 indicates that from 1999 to 2006, the total number of SMEs in manufacturing declined from 15,748 to 11,278. The share of SMEs to the total also dropped from 12% in 1999 to only 9.6% in 2006. Table 7 shows that in terms of employment contribution, the number of workers in SMEs also declined between 1999

and 2006 from 516,506 workers to 385,263. The share of SMEs declined from 31% in 1999 to 28% in 2006.

Table 6. Number of Manufacturing Establishments by Size, 1999-2006

Year	Micro	%	SMEs	%	Large	%	TOTAL
1999	113861	87	15748	12	1322	1	130931
2000	108998	86.9	15231	12.1	1238	1	125467
2001	108986	88	13615	11	1194	1	123795
2002	108847	88.5	13148	10.7	982	0.8	122977
2003	107398	88.6	12763	10.5	1024	0.8	121184
2004	103926	88	13081	11.1	1120	0.9	118127
2005	103982	88.6	12392	10.6	1008	0.9	117382
2006	105083	89.5	11278	9.6	985	0.8	117346

Source: National Statistics Office.

Table 7. Manufacturing Employment by Size, 1999-2006

Year	Micro	%	SMEs	%	Large	%	TOTAL
1999	366689	21.9	516506	30.8	791277	47.3	1674472
2000	354025	22.3	505062	31.8	730127	45.9	1589214
2001	353415	23	446600	29.1	734088	47.9	1534103
2002	353255	24.1	437490	29.8	676443	46.1	1467188
2003	360576	24.7	403923	27.6	698173	47.7	1462672
2004	327112	21.3	432869	28.2	775969	50.5	1535950
2005	323510	22.1	408100	27.9	731736	50	1463346
2006	259664	18.9	385263	28.1	727984	53	1372911

Source: National Statistics Office.

In terms of value added, the share of small and medium enterprises (SMEs) increased from 23 percent of the total manufacturing value added in 1994 to 28 percent in 1998 (see Table 8). However, this fell to 21 percent in 2003. Large firms contributed 79 percent of the total, an increase from their 72 percent contribution in 1998.

Table 8. Manufacturing Value-added Contribution by Size, 1994, 1998, 2003 and 2006

Year	1994		1998		2003		2006 *	
Size	SMEs	Large	SMEs	Large	SMEs	Large	SMEs	Large
Total	23	77	28	72	21	79	20	80
Value-added current prices (in billion Php)	324.2		664.2		738.95		688.06	

Source: National Statistics Office

Note: *2006 covers only the formal sector of the economy.

Table 9 presents the contribution of the different manufacturing sub-sectors to total value added in 2003. Among SMEs, the largest contribution was posted by the food processing and manufacturing sub-sector with a share of 21 percent. This is followed by industrial chemicals and other chemicals with a share of 16 percent. Non-electrical and electrical machinery is next with a share of around 10 percent. Transport and garments registered the same share, of about 5 percent each.

Table 9. Manufacturing Value Added Contribution by Sector (in %), 2003

Manufacturing Sector	Micro	SMEs	Large	Total
Total(in million pesos), 2003	24298	155072	583878	763248
2006*	5965	138869	549187	694021
Food Processing	9.96	10.12	7.81	8.35
Food Manufacturing	24.56	10.76	5.45	7.13
Beverages	4.54	5.23	6.29	6.02
Tobacco	0	0.05	2.99	2.3
Textiles	0.4	3.43	1.15	1.59
Wearing Apparel ex Footwear	13.65	4.7	2.82	3.55
Leather and Leather Products	0.03	0.35	0.68	0.59
Leather Footwear	3.05	0.24	0.04	0.17
Wood and Cork Products	3.37	1.95	0.38	0.79
Furniture except Metal	6.01	3.11	0.45	1.17
Paper and Paper Products	0.16	4.05	1.25	1.78
Printing and Publishing	5.29	2.94	0.65	1.26
Industrial Chemicals	0.6	8.99	1.29	2.83
Other Chemicals	1.01	7.21	6.86	6.75
Petroleum Refineries	0	0	18.38	14.06
Petroleum and Coal Products	0.03	0.1	0	0.02
Rubber Products	3.2	1.05	0.66	0.82
Plastic Products	0.63	4.54	1.22	1.87
Pottery, China and Earthenware	0.25	0.35	0.32	0.32
Glass and Glass Products	0.04	0.85	0.64	0.66
Cement	0	0.03	2.32	1.78
Other Nonmetallic Mineral Prods	3.76	1.99	0.42	0.85
Iron and Steel	1.02	4.41	0.88	1.6
Nonferrous Metal Products	0.03	1.01	1.16	1.1
Fabricated Metal Products	11.2	4.36	1.09	2.08
Machinery except Electrical	3.66	2.9	6.82	5.93
Electrical Machinery	0.49	6.9	20.14	16.82
Transport Equipment	1.98	4.81	5.56	5.29
Professional and Scientific Eqpt	0.1	0.53	1.78	1.47
Miscellaneous Manufacture	0.98	3.05	0.5	1.03
Total Share (in %)	100	100	100	100

Source: National Statistics Office.

Note: *2006 covers only the formal sector of the economy.

Table 10 presents labor productivity as measured by value added per worker in the manufacturing industry for the years 1994, 1998 and 2003. On the whole, though an increase in the labor productivity of both SMEs and large enterprises was registered between the years 1994 and 1998, the same fell in 2003. For SMEs, labor productivity dropped from P139,000 to P97,000 while for large enterprises, labor productivity declined from P227,000 to P211,000.

Table 10. Labor Productivity: 1994, 1998, 2003 and 2006

Year	1994		1998		2003		2006*	
Establishment Size	SMEs	Large	SMEs	Large	SMEs	Large	SMEs	Large
Labor Productivity In PhP million at 1985 prices	0.11	0.196	0.139	0.227	0.097	0.211	0.064	0.118

Source: Own calculations using National Statistics Office data.

Note: *2006 figures are not comparable with the rest of the years, the 2006 Annual Survey of Establishments covers only the formal sector of the economy

In general, the labor productivity of SMEs has remained at only about half the labor productivity of large enterprises. Some narrowing of the gap was evident in 2003, but , SMEs still suffer from low productivity. According to the Financial Investment Advisory Service (FIAS), World Bank and IFC (2005), the value added per worker relative to all firms was approximately 46% in the Philippines as compared to 64% in Indonesia, 65% in Malaysia, and 84% in Thailand.

3. Government Policies and Programs for SMEs

3.1. Overall Policy Framework

Since the 1970s, the Philippine government has devoted considerable effort to supporting and promoting SME development through a variety of schemes and agencies, covering numerous programs and policies on financing, market improvement, technology transfer, and entrepreneurship. During the seventies, which were characterized by government protectionist policies, SMEs did not grow substantially due to two major factors: (i) very few SMEs made use of the incentives and services

available to them; and (ii) formal lending bodies had very little involvement in SMEs because of the perceived risks and high costs associated with processing and supervising their projects.

With the government's trade liberalization policies in the eighties, SMEs started to face a more competitive business environment. During this period, the government adopted market improvement strategies to increase market access and expand the domestic market for SMEs. To achieve this, the government focused on the creation of subcontracting linkages, provision of financing and guarantees to exporters as well as common market facilities, market intelligence and information access, and identification of local market centers and rural transport facilities.

In the nineties, the government's SME policy focused on market access, export expansion, identification of specialization, entrepreneurship and management, technology and quality systems and domestic linkages. The most important piece of SME legislation, the Magna Carta for Small Enterprises, was passed in January 1991. Representing landmark legislation, the Magna Carta (RA 6977) aimed to consolidate all government programs for the promotion and development of SMEs into a unified institutional framework.

The Magna Carta may be highlighted by the following provisions: (i) creation of the Small and Medium Enterprise Development (SMED) Council to consolidate incentives available for SMEs; (ii) creation of the Small Business Guarantee and Finance Corporation (SBGFC) to address SME financing needs; and (iii) allocation of credit resources to SMEs by mandating all lending institutions to set aside 8% of their total loan portfolio to SMEs (6% for small and 2% for medium enterprises). RA 6977 was amended by RA 8289 in 1997 to further strengthen the promotion and development of, and assistance to, small and medium enterprises.

The Department of Trade and Industry (DTI) is the main government agency responsible for the development and regulation of Philippine SMEs, including micro and large enterprises. There are various DTI-attached agencies set up with 14 offices and 20 line bureaus mandated to support SMEs and SME exporters. The SMED Council formulates SME promotion policies and provides guidance and direction in implementing SME programs. It is a multi-agency group chaired by the DTI Secretary. The Bureau of Micro, Small and Medium Enterprises Development (BMSMED) leads

DTI's SME Core Group and coordinates SME policies, programs and projects. It acts as a "one-stop-shop" to guide SMEs to specialized support agencies. The BMSMED is also the secretariat to the SMED Council tasked to review policies and strategies for SME development.

In 2001, the Small Business Guarantee and Finance Corporation (SBGFC) was merged with the Guarantee Fund for Small and Medium Enterprises (GFSME) through EO 28 and became known as the Small Business Corporation (SBC). It registered a total of P728 million in loan approvals in 2002, exceeding its previous highest approval level of P180 million in 1999. The SBC is considered as the National Government's largest provider of SME financing, with a lending portfolio of over P3 billion. It has more than 3,000 clients and 71 partner financial institutions serving 57 (out of 75) provinces in the country.

In order to provide SMEs with greater access to capital, the Small Business Guarantee and Finance Corporation (now called Small Business Corporation) developed a lending program in 2003, known as SME Unified Lending Opportunities for National Growth (SULONG). The Program is a collaboration among government financial institutions consisting of the Land Bank of the Philippines, the Development Bank of the Philippines, the Small Business Corporation, the Quedan and Rural Credit Corporation, the Philippine Export-Import Credit Agency, and the National Livelihood Support Fund. Interest rates are fixed at 9% per annum for short-term loans, 11.25% per annum for medium-term loans and 12.75% per annum for long-term loans. The program funds export financing and temporary working capital with short-term loans, as well as permanent working capital, equipment or lot purchase or building/warehouse construction with long-term loans. More than PHP 35.3 billion (US640 million) in loans have been released to 368,000 SMEs since 2003.

Under the One Town One Product (OTOP) Program of the government, PHP 1 million (US$ 18,200) will be allocated for lending to an SME in every locality, through identified funding sources. The DTI, in coordination with local government units, identifies a product or service cluster for funding support. SMEs that offer such product or service are eligible to apply for a loan with a maximum effective interest rate of 10% per annum. The OTOP Program offers a comprehensive assistance package through local government units (LGUs), national government agencies and the private sector,

covering business counseling, appropriate technologies, skills and entrepreneurial training, marketing, and product design and development.

In 2002, RA 6977 was further amended by RA 9178 or the Barangay[1] Micro Business Enterprises (BMBE) Act. The latter provides support to micro-enterprises and the informal sector through incentives to local government registered barangay micro enterprises, exemption from income tax, reduction in local taxes, exemption from payment of minimum wages, financial support from government financial institutions and technological assistance from government agencies.

With respect to microfinance lending, the government created the People's Credit and Finance Corporation (PCFC) as a government-owned finance company registered with the Securities and Exchange Commission on September 14, 1995. PCFC is the only government agency mandated by law to provide microfinance lending. It provides wholesale funds to retail microfinance institutions consisting mostly of rural banks/cooperative rural banks, cooperatives, and non-government organizations.

Under Republic Act 9510 or the Credit Information System Act (CISA) which was legislated in October 2008, a centralized credit bureau, to be known as the Central Credit Information Corporation (CICC), would be created to provide information for the local banking industry, as well as other financial institutions, to use so as to determine the credit worthiness of their borrowers more efficiently. Those with "clean" records may get charged lower interest rates and be encouraged to borrow, while those with poor records will be penalized with a higher risk premium, and would be unable to borrow. According to the World Bank[2], the establishment of a credit bureau will increase the probability of small firms accessing financing from 28% without a credit bureau to 40%. It will also reduce financing constraints for small firms. By sharing credit information, the efficiency of banks in processing loan applications will increase by 43% while the default rate will drop significantly, to two percent. The PSBank (June 2010) noted that apart from improving the overall availability of credit particularly for MSMEs and providing mechanisms to make credit more cost-effective, the credit

[1] Barangay or village is the smallest unit of administration in Philippine local government.
[2] As cited in Philippine Star, "Proposed credit info bureau still in limbo after two years" by Ted Torres, 24 March 2010.

information system is expected to reduce excessive dependence on collateral to secure credit facilities. However, while it's implementing rules and regulations were already approved in May 2009, the CICC is still not operational.

It is important to note that despite the government's financing programs and mandatory credit allocation to small and medium enterprises, access to finance has remained a major constraint to SME growth and development, as the volume of funds for SME lending has been inadequate for their needs. The success of government sponsored lending programs has been limited because much of the funds from these lending programs are directed not to real SMEs but more toward livelihood and micro-enterprise projects, many of which fail to grow. The government's Small Business Corporation has very limited coverage in terms of areas reached, and complaints abound on the long time it takes to evaluate proposals. Additionally, Government programs do not provide funds for start-up companies.

Although banks appear to be generally complying with the mandatory lending to SMEs, with a total compliance rate reaching almost 29 percent in 2002; these loan funds, particularly from large banks and financial institutions, hardly benefited small firms. Anecdotal evidence shows that much of this money does not actually go to SMEs but to some large firms that deliberately understate their assets so as to be classified as small or medium enterprises. Foreign banks and large domestic banks comply with the requirement by depositing the required amount with the Bangko Sentral ng Pilipinas (BSP), instead of exerting efforts to look for SME borrowers (Lamberte 2001). Meanwhile, some rural banks cite difficulties in finding medium enterprises in the small towns where they operate. Mostly, banks would rather pay the fine than set aside non-income-generating funds for lending to medium enterprises.

3.2. Sources of Financing for SMEs

The banking system has been structured into commercial, thrift, and rural banks in order to provide loans not only to large borrowers but also to cover the needs of smaller borrowers including SMEs. Thrift banks and rural banks were granted incentives (such as reduced capital requirements, lower reserve requirements and access to rediscount facilities from the central bank) for locating outside Metro Manila and providing banking services in the provinces, particularly to small enterprises. Thrift banks and

private development banks were mandated to lead in meeting the long and short-term financing needs of SMEs for investment and working capital. However, private development banks have been unsuccessful, due to their limited resources and their reliance on government financial institutions for a substantial part of their funding requirements. Nangia and Vaillancourt (2007) indicated that despite incentives to disperse them, thrift banks have remained geographically concentrated in Metro Manila. Thrift banks were also constrained even more by their limited resources. Private development banks also often establish minimum lending levels that deter many SMEs. Commercial banks have been the largest sources of financing for SMEs. Note that they need to meet the mandatory credit requirement under RA 6977. In more recent years, they have shown increasing interest in SME lending. Note also that apart from their own resources, commercial, thrift, and rural banks use wholesale credit lines from government financial institutions (GFIs) and donor funds.

Development finance institutions such as the Development Bank of the Philippines have direct lending programs for both small and large enterprises, using credit lines provided by donors and the government. Other GFIs that provide direct lending include the Land Bank of the Philippines, SBGFC, the Philippine Export-Import Credit Agency (PhilEXIM), as well as the Sulong Program by Quedancor. Government agencies like the Department of Science and Technology (DOST) and DTI also provide direct lending. There are also private foundations and business associations which provide funds through rural banks, non government organizations (NGOs) and cooperatives, that targeting micro-enterprises more than SMEs. Other sources of funds include lease financing and loans from non-bank financial intermediaries like leasing and finance companies and some limited investments by venture capital companies targeted at medium enterprises.

Banks along with GFIs like the Development Bank of the Philippines (DBP) and Land Bank of the Philippines (LBP) are the main providers of SME loans. They provide loans of all sizes ranging from P150,000 to P100 million. Though some commercial banks go down to as little as P1 million, in general commercial banks rarely lend below the range P5-10 million because smaller loans are assumed to be unprofitable. On the other hand, only a small number of rural banks lend beyond P150,000 (the limit for micro credit) due to their limited capital and capacity. Lending is thus limited in the

P150,000 to P5 million range. Note, however, that the standard loan conditions apply on all loans (whether P150,000 or P5 million) and none of the exemptions available for micro-loans apply to SME loans. For micro credit, BSP relaxes its regulations on adverse classification and loss provisioning for loans with inadequate collateral and incomplete documentation. Nangia and Vaillancourt (2007) argue that some of the conditions (or lack of them) which have encouraged the growth of micro credit in recent years have not been changed for SME loans, and this has contributed to their insufficient financing levels. Llanto and Lamberte referred to this as the "missing middle" or missing market for financial services arising from the failure of smaller banks to move up to keep up with larger financing needs of enterprises.

As of September 2010, the Bangko Sentral ng Pilipinas (BSP) reported that total banks' allocation of credit resources to MSMEs amounted to P289.1 billion, of which P152.5 billion went to micro and small enterprises and P136.6 billion to medium enterprises. In 2009, total lending amounted to P309.4 billion. Meanwhile, the government's SULONG Program released a total of P15.3 billion in loans as of June 2010. As Table 11b shows, the bulk was accounted for by the Land Bank of the Philippines (56.5% share) together with the Development Bank of the Philippines (31%) during the period 2004 to June 2010. The PCFC reported a total amount of loans released of about P191.5 billion during the period 2004 to October 2010.

Table 11a. Compliance Report: Bank Lending Under RA 6977 (in million Pesos)

Micro, Small And Medium Enterprises Credit (8% & 2%) [2]	2002	2005	2007	2009
Total Loan Portfolio Net of Exclusions	**943,850**	**1,095,531**	**1,339,735**	**1,728,628**
Direct Compliance for MSMEs	233,259	226,170	239,511	305,952
Alternative/Indirect Compliance for MSMEs	38,771	14,689	15,724	3,403
Funds Set Aside for MSMEs [3]	11,069	13,176	8,660	-
Total Compliance for MSMEs	**283,099**	**254,035**	**263,895**	**309,356**
Percentage of Compliance for MSMEs	**29.99**	**23.19**	**19.7**	**17.9**

Source: Supervisory Data Center, Bangko Sentral ng Pilipinas.

[1] The mandatory credit allocation is presently at 8% for Micro and Small Enterprises and 2% for Medium Enterprises pursuant to R.A. No. 9501 of 2008. Prior to R.A. No. 9501, the Magna Carta was based on R.A. No. 6977, as amended by R.A. No. 8289, with a lower mandatory credit allocation of 6% covering only Small Enterprises with same 2% for Medium Enterprises.

[2] Any discrepancy between the computations of the constituent items and the figures shown above may be attributed to the rounding of numbers.

[3] Consists of either Cash on Hand or Due from BSP which are free, unencumbered, not hypothecated, not utilized or earmarked for other purposes. The Due from BSP is a special account deposited with the BSP and does not form part of the bank's legal reserves. Under the new mandatory credit allocation (R.A. No. 9501), Funds Set Aside is no longer considered as a mode of compliance.

Table 11b. SULONG Program Loan Releases (in million Pesos)

GFI	2004	2005	2006	2007	2008	2009	10-Jun	Total
DBP	9872.1	10488.1	11051.1	8514.5	11630.5	7592.1	4108.1	63256.6
LBP	12559.5	17431.3	16214.4	16352.8	20001.4	21883.3	9986.9	114429.6
NLDC	115.2	25.3	59.5	46.7	36.1	32.3	9.1	324.3
PhilEXIM	404	154	201.6	327.8	283.1	275.8	93.9	1740.1
QUEDANCOR	831.4	559.7	1133.5	548.2	184.5	14.5	0	3271.7
SBGFC	3268	2939.2	3443	2689.7	3004.8	1825.2	1057.1	18227
SSS	166	129	303.6	96.6	455.5	186	50.2	1386.9
TOTAL	27216.3	31726.6	32406.6	28576.3	35595.8	31809.3	15305.3	202636.3

Source: DTI-BMSMED.

Equity financing through the Philippine stock market is still in its infancy stage. The Initial Public Offering (IPO) requirements, for instance, are too formidable for SMEs. These include authorized capital of P20-100 million (US$460,000-2.3 million), 25% paid-up, net tangible assets of at least P5 million (US$115,000), and being operational for at least two years with positive operating income.

So far, the largest proportion of SME funding comes from the personal resources of business owners and their family members including internal accruals as well as borrowings from relatives and friends and loans from informal lenders. Bank financing represents a very small proportion of both start-up capital and the current financing

needs of SMEs, which reflects the difficulties faced not only by SMEs in obtaining loans from banks and other formal sources, but also the unwillingness of many owners to secure loans from formal and informal lenders.

Given the limited official data on SME financing, survey results from various sources (the Small Enterprise Research and Development Foundation or SERDEF of the University of the Philippines-Institute for Small Scale Industries, the National Confederation of Cooperatives (NATCCO), the World Bank, the Asian Development Bank, and the International Finance Corporation) were compiled to provide information on the funding sources of SMEs. These surveys also focused on SME access to finance and asked basically similar questions. As Table 12 shows, 53% to 73% of the surveyed firms relied on own resources for their initial funding. Only 10 to 19% relied on bank loans while 11 to 28% used informal credit. In terms of their current funding, 52% to 78% of firms still relied on own resources while 15% to 21% used bank loans. For 7 to 29% of the firms, current funding depended on informal credit. Overall, the results showed significant dependence of SMEs on internal sources for financing, and a relatively lower share of borrowings from banks and other financial institutions.

Table 12. Initial and Current Funding Sources for SMEs based on Surveys (% of firms)

Source	Initial Funding (%)		Current Funding (%)			
	SERDEF	NATCCO	SERDEF	WBES	ICPS	PEP
	1992	1998	1992	2000	2004	2006
Own resources	79	53	78	52	60	69
Bank loans	10	19	15	21	11	19
Informal credit	11	28	7	27	29	12
Total	100	100	100	100	100	100

Source: Culled from Nangia and Vaillancourt (2007).

Notes:

- SERDEF (UP-ISSI): A Study on Financial Intermediation for SMEs in 7 Regions of the Philippines (1992); NATCCO: National Confederation of Cooperatives. Lending and Borrowing Patterns for MSMEs (1998); WBES: World Business Environment Survey (2000); ICPS (ADB): Investment Climate & Productivity Study (2004); PEP Philippines (IFC): SME Finance Survey (2006).
- SERDEF: 372 SMEs in manufacturing and services located in 7 regions
- NATCCO: 383 MSMEs (large majority – 79% micro enterprises) from 6 regions
- WBES: World Bank Enterprise Survey
- ICPS: 800 small, medium & large firms in 4 manufacturing industries (food, garments, textiles, & electronics & electrical equipment) located in 4 regions of NCR, Calabarzon, Davao, & Cebu.
- PEP: 187 SMEs from Luzon and Mindanao and engaged in non-agricultural production

3.3. Finance Issues and Challenges

The draft MSME Plan for 2010-2016 indicated that despite the availability of funds for lending, MSMEs find it difficult to access these funds. Based on consultations with various stakeholders, concerns were raised regarding the inability of enterprises, particularly the smaller ones, to access funds due to the stringent and voluminous requirements of financial institutions. Firms find it hard to borrow due to the collateral requirements and the long time it takes to process their loan applications. MSMEs also find the minimum loan requirement and short repayment period too restrictive, and loan restructuring difficult. Firms also pointed out the high interest rates charged by financial institutions to MSMEs, the lack of funds for start-up MSMEs in some regions, the lack of access to venture capital funds, the absence of financial packages for MSMEs in some regions, and the limited access to information on fund sources for MSMEs.

Meanwhile, banks expressed their concerns about the bankability of MSMEs and the high risks involved in MSME lending. Banks believe that MSMEs in some regions lack appropriate financial management capacity. Both the banking sector and the MSMEs noted the inadequacy of government policies to address these concerns.

The previous SME Development Plan (2004-2010) also highlighted the same finance issues. The overemphasis on collateral has been a major impediment to SME development. With collateral coverage as the primary condition of lenders, project feasibility is practically ignored. The lack of credit information and highly centralized examination system have led to long loan processing times, and created project delays and backlogs. Furthermore, most SMEs are not able to comply with borrowing conditions such as the submission of financial statements and business plans. Banks seldom provide assistance on loan applications, and many do not have trained personnel to extend this service.

Note, however, that the experience of the Philippine Planters Development Bank illustrates a successful case of private bank lending geared towards SMEs. Planstersbank has shown that the above challenges can be overcome (Aldaba 2008). In lending to SMEs, Planters went beyond banking by providing non-financial services to help its SME clients strengthen their operations, including assistance in preparing accounting records, business advice, and networking. Planters customized designed and

customized its products and services to suit the needs of SMEs. It also simplified its loan documentation and tailor fitted loans to match borrowers' cash flows.

Philippine SME studies have continued to highlight the same major constraints that affect SME development, covering access to finance along with issues on technology, skills, information gaps and difficulties in product quality and marketing (FINEX and ACERD, 2006; Tecson, 2004; Fukumoto, 2004). In these studies, the lack of access to financing is highlighted as the most difficult constraint to SME growth. The FINEX and ACERD study pointed out that the problem seems to lie not in the supply of funds potentially available for SME lending but in the difficulty of access to these funds. In theory, there should be sufficient funds for SME financing, since banks are required by law to allocate 8 percent of their loan portfolios to SMEs. At the same time, government financial institutions have their own SME financing programs. Nevertheless, private banks are reluctant to lend to SMEs because of their general aversion to dealing with a larger number of smaller accounts. Moreover, many banks are still not aware of the need for lending to small businesses. Many SMEs cannot access available funds due to their limited track records, limited acceptable collateral, and inadequate financial statements and business plans. Based on a survey of MSMEs, Tecson (2004) noted that SMEs complained that banks still considered their projects' bankability rather than viability, leading them to rely on collateral lending.

The country's underdeveloped financial markets also represent a formidable barrier, not just to the entry of new enterprises but also to the growth prospects of small and medium sized firms. The absence of a deep liquid peso financial market contributes to the high cost of investment and makes it more difficult for enterprises to expand. Note, however, that financing constraints do not affect all firms equally, with access to financial credit being a particular problem affecting SMEs (Maxwell Stamp PLC, 2001). Based on a survey of SMEs, Hapitan (2005) concluded that SMEs still face difficulties in credit access, particularly from foreign banks. This, the study found, is the result of accessibility problems in terms of branch location and the absence of information on the availability of credit facilities.

Lamberte (2001) argued that since the 1990s, the policy environment for microfinance to develop has improved significantly, and private banks have responded to it positively. However, banks still face some constraints in expanding their services

further. These constraints include the inadequacy of infrastructure (electricity and telecommunications) in the country, which increases the cost of providing financial services to MSMEs; limited capital among small banks which sets a ceiling as to how much of their deposits they can mobilize; and competition with government banks and government-owned non-bank financial institutions such as the Small Business Corporation and the People's Credit and Finance Corporation. Moreover, while most rural banks and thrift banks are easily able to allocate 6% of their loan portfolio to small enterprises, they find it hard to comply with the requirement to allocate at least 2% to medium enterprises.

3.4. SME Finance Gap

Access to finance has remained one of the most critical factors affecting the competitiveness of MSMES. Many are unable to qualify for bank loans because they lack the necessary track record and collateral. Moreover, most do not have the financial expertise to manage a healthy cash flow. The lack of credit information has deterred banks from lending to MSMEs. Other factors that have constrained banks from lending to SMEs include a lack of familiarity with the SME business environment, an inability to deal with sub-standard financial record keeping, the absence of business plans, the high cost of collecting information, and limited management capabilities (Nangia and Vaillancourt, 2007). In other words, banks believe that SME lending entails higher risks and larger transactions costs. The cost of lending to SMEs has also been affected by prudential norms and regulations, especially loan recognition and provisioning requirements.

SME financing is to a large extent driven by government policy covering targeted interventions through government financial institutions using private banks as conduits, direct lending by government agencies and corporations, and the mandatory credit requirements of banks. However, despite these programs and policies, the volume of funds for SME lending has remained inadequate for their needs. Nangia and Vaillancourt (2007) estimated the annual volume of unmet demand for SME loans to be about P170 billion (US$3.95 billion). The calculated unmet demand was based on estimates of the current level of SME financing provided by banks, and commonly held benchmarks for the level of funding that should be provided by banks. Using the

International Finance Corporation-Private Enterprise Survey (IFC-PEP) survey data, the authors extrapolated total SME lending demand for capital investments of P157 billion. Based on their survey data, SMEs had around P80 billion in loans outstanding. These figures suggested a lower level of unmet demand for SME lending of about P77 billion (US$1.78 billion). Another estimate of the gap provided by the Philexport suggested around P67 billion (US$.16 billion) while the DTI estimated the SME finance gap at about P180 billion (US$4.2 billion). Using the more updated 2009 total bank lending indicated in Table 11 and applying the IFC-PEP finding that banks provide 21% of the financing needs of SMEs would indicate a finance gap of about P130 billion.

4. Survey Results

4.1. General Characteristics of the Surveyed Firms

A survey of 97 firms was conducted to study the access to finance issues affecting Philippine small and medium enterprises. The firms are located in Central Luzon, one of the three largest regions in the country (together with the National Capital Region and CALABARZON) in terms of employment and value added contribution. 2008 figures showed that in terms of number of enterprises, Central Luzon accounted for 10% of the total, CALABARZON had 15% and NCR 26%. In terms of employment, Central Luzon posted a contribution of around 8%, CALABARZON 16% and NCR 40%. Overall, the three regions accounted for 53% of GDP (NCR with 33%, CALABARZON 12% and Central Luzon 8%).

Due to the limited size of the sample, analyzing the impact of the gap on the performance of SMEs through regression analysis is difficult. For instance, only 32 firms reported that their requests for bank loans, capital leases, equity financing, government financing, and trade credit had been authorized. One firm had withdrawn its application and was considered to have no access to finance. Most of the firm respondents indicated that they had not made any requests for financing. With respect to official statistics, further problems arise due to the lack of reliable data on SME financing, particularly on the volume of loans to SMEs. There are some official

aggregates provided by the BSP as well as by other government agencies and regulators but there are no statistics on funding from informal sources.

Table 13 presents a summary of the characteristics of the surveyed firms. The firm respondents are mostly from the garments and textiles industry (60%) followed by food manufacturing (20%), electrical and electronics (12%), and motor vehicle and motorcycle industries (7%). By ownership status, the surveyed firms are mostly 100% domestically owned (77%). 8% are foreign-owned (American, Chinese, Japanese, Korean, and Taiwanese) and 15% are joint venture companies. In terms of age, 30% of the firms are in the age range 6-10 years, 23% are from 11 to 15 years and 20% are from 16 to 25 years. 71% of the surveyed firms have employment from 6 to 49 workers while 11% have 50 to 99 workers.

Table 13. General Characteristics of Surveyed Firms (in %)

	Garments & Textiles	Automotive	Electrical & Electronics	Food & Others	Total
Total Number	**58**	**7**	**12**	**20**	**97**
In %	**60**	**7**	**12**	**21**	**100**
MSME Philippine Definition (number)	**57**	**7**	**12**	**20**	**96**
Micro: 1-9 workers	18	14	17	15	17
Small: 10-99 workers	67	86	75	70	70
Medium: 100-199	7		8	5	6
Large: 200 & above	9			10	7
No response					1
Company Status	**58**	**7**	**12**	**20**	**97**
100% Domestic	86	71	42	75	77
100% Foreign	5	29	17	5	8
Joint Venture	9		42	20	15
Age of Company	**56**	**7**	**12**	**20**	**95**
2-5	17	29	25		16
6-10	30	29	25	35	30
11-15	18	14	33	35	23
16-25	21	29	8	20	20
26-35	11		8	5	8
36-50	4				2
51 - 53				5	1
Company Size	**58**	**7**	**12**	**20**	**97**
1-5 persons	7			5	5
6-49 persons	72	71	58	75	71
50-99 persons	7	29	33	5	11
100-199 persons	5	0	8	5	5
more than 200	9			10	7

Source: Tabulations based on the survey.

The average profit rate remained unchanged at 19% for all industries during the years 2008 and 2009. The profit rates for electrical and electronics together with food manufacturing and others increased during the same years. , For garments and textiles however, the profit rate declined. In 2009, on average, labor as percentage of total cost accounted for 29% for all industries. Raw materials cost registered the largest share at 50%, utilities 12%, and interest payments 5%.

Table 14. Cost Structure for 2009 and 2008

Year 2009	**All**	**Garment & Textiles**	**Automotive**	**Electrical & electronics**	**Food & others**
Total Sales	738,590	723,117	667,337	1,270,013	488,002
Profit (% of sales)	19	20	10	22	17
Labor (% of cost)	29	33	36	18	19
Raw materials	50	45	37	61	61
Utility	12	14	10	6	10
Interest payments	5	5	6	3	5
Other Costs	10	8	13	14	12
Year 2008	**All**	**Garment & Textiles**	**Automotive**	**Electrical & electronics**	**Food & others**
Total Sales	701,799	599,856	982,104	1,326,585	509,162
Profit (% of sales)	19	22	10	15	16
Labor (% of cost)	28	33	27	18	21
Raw materials	51	45	49	58	62
Utility	11	14	8	7	9
Interest payments	5	5	6	2	4
Other Costs	11	9	10	16	10

Source: Tabulations based on the survey.

On average, total sales grew by 9% in 2009, a slowdown from an 11% growth posted in 2008. Automotive sales growth was negative for both years while growth declined from 20% to 4% for electronics and from 10% to 5% for food manufacturing during the same years. For garments and textiles, however, growth increased from 12% in 2008 to 14% in 2009.

Table 15. Sales Patterns

	All	Garments & Textile	Automotive	Electrical & electronics	Food & Others
Total	**97**	**58**	**7**	**12**	**20**
Average annual sales growth rate					
2009	9	14	-12	4	6
2008	11	12	-4	20	10
Domestic Market (100%)	**71**	**43**	**4**	**5**	**19**
Both Domestic & Export Markets	**7**	**2**	**1**	**4**	
Final Assemblers	40	33	80	56	37
First Tier	23	36	0	0	11
Second Tier	5	2	0	22	5
Third Tier and More	13	11	0	11	21
No Response	24	18	20	22	42
Export Market (100% of sales)	**15**	**9**	**2**	**3**	**1**

Source: Tabulations based on the survey.

In terms of market orientation, most of the firms in the sample focused solely on the domestic market (71%) while 15% were export-oriented. In terms of buyers, most of the respondent firms sell to final assemblers (40%) and first tier suppliers (23%). For the automotive and electronics industries, the proportions of firms who supply final assemblers were 80% and 56%, respectively. For food, the share of final assemblers was 37% and 33% for garments and textiles.

In terms of the composition of workforces by level of education and training, on average, 72% of the respondent firms' workers have secondary education, of whom 65% are female. Nine percent have vocational training, of whom 21% are female. 19% have tertiary education with females accounting for 45%. The electrical and electronics industry has the highest proportion of workers with tertiary education (51%) and vocational training (25%).

Table 16. Average Employment and Composition by Education and Level of Training

Industry	Average Employment (number)	Tertiary	% Female	Vocational	% Female	Secondary or less	% Female
Total	60	19	45	9	21	72	65
Garments & Textiles	68	10	40	7	25	83	82
Automotive	39	33	32	8	10	59	16
Electrical & electronics	54	51	59	25	23	24	21
Food & others	50	17	56	5	13	78	66

Source: Tabulations based on the survey.

In terms of business capability, only a relatively small proportion of the surveyed firms have invested to improve their business processes or adopted or introduced new products. In the last three years, 23% of the surveyed firms met an international standard such as ISO. 19% introduced information and communication technologies (ICT) and reorganized business processes accordingly. Only 8% reported that they established new divisions or plants. 16% reported that they had introduced new products to the market in the past three years. 36% of firms that met international standards were in the 50 to 99 workers category. 50% of firms that introduced ICT had 6 to 49 workers and 22% had 50 to 99 workers.

Table 17. Business Capability

	All	Garment & Textiles	Automotive	Electrical & electronics	Food & others
Met International Standards	**22**	**8**	**1**	**8**	**5**
1-5 persons					
6-49 persons	27	13	0	38	40
50-99 persons	36	25	100	50	20
100-199 persons	9	13	0	13	0
more than 200 persons	27	50	0	0	40
Introduced ICT and reorganized business processes	**18**	**7**	**1**	**5**	**5**
1-5 persons					
6-49 persons	50	43	100	40	60
50-99 persons	22	0	0	60	20
100-199 persons	11	29	0	0	0
more than 200 persons	17	29	0	0	20
Established new divisions or new plants	**8**		**1**	**3**	**4**
1-5 persons					
6-49 persons	38		100	0	50
50-99 persons	50		0	100	25
100-199 persons	0		0	0	0
more than 200 persons	13		0	0	25
Bought new machines or facilities with new functions to operation	**21**	**8**	**1**	**5**	**7**
1-5 persons					
6-49 persons	52	75	0	20	57
50-99 persons	24	0	100	60	14
100-199 persons	5	0	0	20	0
more than 200 persons	19	25	0	0	29
Upgraded existing machines, equipment, or facilities	**27**	**12**	**2**	**7**	**6**
1-5 persons					
6-49 persons	59	58	50	57	67
50-99 persons	22	17	50	29	17
100-199 persons	7	8	0	14	0
more than 200 persons	11	17	0	0	17
Introduced new know-how on production methods	**19**	**5**	**1**	**7**	**6**
1-5 persons					
6-49 persons	53	60	0	57	50
50-99 persons	21	0	100	29	17
100-199 persons	11	20	0	14	0
more than 200 persons	16	20	0	0	33
Introduced new products or services	**16**	**3**	**1**	**5**	**7**
1-5 persons	6	33	0	0	0
6-49 persons	56	67	100	40	57
50-99 persons	19	0	0	40	14
100-199 persons	6	0	0	20	0
more than 200 persons	13	0	0	0	29

Source: Tabulations based on the survey.

4.2. Access to Finance

The survey results show that out of the 97 respondent firms, 31% had made financing requests (defined as any request for borrowing, capital leases, government grants and equity financing) in the last 12 months. 10% had made similar requests in the last three years while 14% had made borrowing requests more than three years ago. A relatively large proportion of the firms, 42%, had never sought external financing. The reasons why the firms did not borrow were not evident from the survey. In the NATCCO survey, however, the surveyed firms cited the following reasons: had enough funds of their own and did not acquire further assets, high interest rate, did not want to take the risk associated with borrowing money, collateral problems, insufficient track record, and difficulties in getting a loan.

Table 18a. Recent Request for Financing

Most recent request for external financing	Frequency	%
last 12 months	30	31
last 3 years	9	10
more than 3 years ago	14	14
never made request	41	42
refused/don't know	3	3
Total	97	100

Source: Tabulations based on the survey.

4.2.1. Bank Loans, Lines of Credit or Credit Cards

Table 18b shows that of those who requested financing in the last 12 months, 62% applied for new or additional loans, lines of credit or credit cards. 72% approached only one or two credit supplier(s) to obtain financing while 17% approached three to five credit suppliers. 22% were refused financing by the credit suppliers.

Table 18b. Loans, Lines of Credit/ Credit Cards in the Last 12 Months

In the last 12 months, applied for new or additional loans, lines of credit/credit cards in last 12 months	Frequency	%
Yes	18	62
No	11	38
Total	29	100
Number of credit suppliers approached		
1-2	13	72
3-5	3	17
6-10	2	2
Total	18	78
Refused financing		
Yes	4	22
No	14	78
Total	18	100
Last financial institution or credit supplier approached for new credit		
Bank	14	78
Microfinance Institution	2	11
Government Institution	0	0
Others (friends, hardware store)	2	11
Total	18	100
Reasons for approaching this credit supplier		
Thought this credit supplier would offer the best credit terms and conditions	13	36
This was the regular financial institution for the business	12	33
Thought this credit supplier would offer the lowest interest rate	8	22
Others: marketing assistance	2	6
This was the only credit supplier in our area	1	3
Total	36	100

Source: Tabulations based on the survey.

A great majority (78%) said that banks were the most recent financial institution or credit supplier that their business approached for new or additional credit. Most of the firms chose this credit supplier because this was the regular financial institution of the business and they thought that this would offer the best credit terms and conditions.

Most of the firms used the financing requested for working capital/operating capital (42%), other machinery and equipment (17%) and to grow the business (17%). 85% of the firms said that the full credit amount was authorized as a result of the request. Only 4% said that a partial amount was authorized while 7% withdrew their application. The reasons cited for the withdrawal of their application were the cumbersome borrowing process and their firms' insufficient sales.

Table 18c. Uses of Requested Financing

	Frequency	%
How the business intend to use financing requested		
Working capital/ operating capital, such as inventory or paying suppliers	24	42
Other Machinery and equipment	10	17
To grow the business	10	17
Land and buildings	4	7
Vehicles/ rolling stock	4	7
Debt consolidations	3	5
Other purpose	2	3
Research and development	1	2
Total	58	100
Credit authorized as a result of this request		
The full amount was authorized	23	85
Partial amount was authorized	1	4
Application was withdrawn	2	7
Don't Know	1	4
Total	27	100
First request for financing was made through		
Application filled in at the branch	17	71
Application over the Internet or email	1	4
Others	4	17
Don't Know	2	8
Total	24	100

Source: Tabulations based on the survey.

Most of the firms' first request for financing from the credit supplier was made by filing an application at the branch (71%) while about 4% filed their application over the Internet. For 60% of the respondents, the total amount of financing requested amounted to about US$20,000 while for 15% of the respondents, the total amount was greater than $100,000. The mean amount of financing requested was about US$150,000, with a minimum of $529 and a maximum of $2 million.

Table 18d. Amount of Financing Requested

Amount of financing requested	Term Loan	%	Operating line	%	Others	%	Total financing requested	%
less than 5,000	1	14	1	10	2	29	4	20
5,001 to 10,000	2	29	2	20	1	14	4	20
10,001 to 20,000	1	14	4	40	3	43	4	20
20,001 to 30,000	1	14					1	5
30,001 to 50,000		0	1	10			3	15
50,001 to 100,000	1	14			1	14	1	5
above 100,000	1	14	2	20			3	15
Total	7	100	10	100	7	100	20	100

Source: Tabulations based on the survey.

For 96% of the firms who requested financing, the full amount was authorized as a result of the request. For 56% of the firms who responded, the interest rate ranged from 6 to 15%. For most of the firms (76%), the interest rate was fixed. Mean interest rate was about 16.5%. The results also showed that micro firms in the electrical, electronics and parts and machinery group paid the highest average interest rates (at 36%) while micro enterprises in the garments and textiles sector paid on average 31.7%. Small enterprises in parts, components and motor vehicles paid 31.2%. Overall, micro enterprises paid the highest average interest rate, at 32.8%. For small enterprises the average interest rate was 12.1% while large enterprises paid only 8.8%.

Table 18e. Type of Recent Financing Request

Financing request	Number	Mean	Std. Dev.	Min	Max
Term Loan	7	31289	35908.48	4228	105708
Operating Line	10	267718	664861.8	592	2114165
Other Instruments	7	20009	29441.38	529	84567
Total Financing Requested	20	149911	473975.4	529	2114165

Source: Tabulations based on the survey.

Table 18f. Recent Request for Financing

	Frequency	%
Credit authorized due to this request		
The full amount was authorized	22	96
Partial Amount was authorized	1	4
Request was turned down	0	
Application under review	0	
Application withdrawn	0	
Total	23	100

Interest rate on the loan		
2-5	3	11
6-15	10	56
16-25	3	17
26-45	2	11
above 50	1	6
Total	18	100
Interest Rate		
Fixed Rate	19	76
Variable Rate	4	16
Don't Know	2	8
Total	25	100
Percentage of Fees		
less or equal 10%	16	89
10-15%	1	6
>15%	1	6
Total	18	100
Financing guaranteed by a government program		
No	23	88
Yes	*2*	*8*
Don't Know	1	4
Total	26	100
Collateral Required		
No	12	46
Yes	13	50
Don't Know	1	4
Total	26	100
Co-signee Required		
Yes	9	35
No	17	65
Total	26	100
Documents Requested		
Formal application for financing	18	22
Business financial statements	17	20
Other documentation	12	14
Appraisal of assets	11	13
Personal financial statement	10	12
Cash flow projection	8	10
Business plan	7	8
Total	83	100
Satisfaction Rating		
Very Dissatisfied	3	13
Dissatisfied	1	4
Neither satisfied nor dissatisfied	2	9
Satisfied	11	48
Very Satisfied	6	26
Total	23	100

Source: Tabulations based on the survey.

Table 18g. Interest Rate Paid by Size of Establishment and Sector

	Micro	Small	Medium	Large	Total
Garment & Textiles	31.7	11.0			17.9
Parts, Components, and Motor Vehicles(incl. motorbikes)		31.2			31.2
Electrical, electronic, parts and machinery	36.0				36.0
Food & Other Manufacturing		9.9		8.8	9.8
Total	32.8	12.1		8.8	16.5

Source: Tabulations based on the survey.

On average, the fees associated with obtaining the loan amounted to 3.5% of the total loan. 88% said that the financing was not guaranteed by a government program. 50% indicated that the credit supplier required the business to provide collateral to obtain the new financing. 46% said no collateral was required. For 65% of the firms, no co-signatures from individuals other than business owners were required as a condition of obtaining the loan. As part of the application process, the following documents were required: formal application for financing (22%), business financial statements (20%), appraisal of assets (13%), personal financial statement (12%), cash flow projection (10%), business plan (8%) and others (14%). Other documents required included bank account, barangay clearance and pictures, community tax certificate, Department of Trade and Industry and Bureau of Internal Revenue registration/certificate, insurance policy, vehicle registration, income tax return, schedule of sales, electricity bill, business permits, and post-dated checks. Overall, 48% were satisfied with the services offered by the financial institution that provided term lending. 26% were very satisfied, but, 13% were very dissatisfied and 4% dissatisfied.

4.2.2. Capital Lease Financing

19% of the respondent firms had made a request for new or additional capital lease financing in the last 12 months. 5% had made a request in the last three years while another 5% had made a request more than three years ago. Note that 51% had never made a request for capital lease financing.

Through this lease, 20% acquired other machinery and equipment. The majority used the lease for other types of assets such as raw materials and working capital. The lease was authorized for all those who had made a request for lease financing in the last

12 months as well as for those who had requested in the last three years. On average, the total value of the lease authorized amounted to US$176,300.

Table 19. Requests for Leases

	Frequency	Percent
When did the business make its most recent request for new or additional capital lease financing?		
Last 12 Months	8	19
Last 3 Years	2	5
More than 3 years ago	2	5
Never made a request for capital lease financing	22	51
Refused/Don't know	9	21
Total	43	100
What type of asset did the business try to acquire through this lease?		
Business or office space	1	10
Vehicles	1	10
Computer hardware and software	1	10
Other Machinery and Equipment	2	20
Others	5	50
Total	10	100
Was the lease authorized as a result of this request		
Yes	10	100

Source: Tabulations based on the survey.

4.2.3. Equity Financing

Only about 8% of the firms had sought equity financing in the last 12 months while 6% had done so in the last three years. 81% of the respondents had not sought equity financing. Requests for equity financing were from friends and relatives (20%), private investors from outside the firm unrelated to the firm and its owners (20%), government institutions (20%), and others such as banks (40%). For 80% of those who made equity financing requests, an investment was provided as a result of the request. On average, the total value of the investment provided amounted to US$778,200.

Table 20. Requests for Equity Financing

	Frequency	Percent
When did the business make its most recent request for equity financing?		
Last 12 Months	3	8
Last 3 Years	2	6
More than 3 years ago		0
The business has never make a request for equity financing	29	81
Refused/Don't know	2	6
Total	36	100
From whom did this establishment request equity financing?		
A friend or relative of the business owners	1	20
An employee of the business	0	0
A private investor from outside the firm unrelated to the firm and its owners (i.e. angels)	1	20
A crown corporation or government institution	1	20
Others: banks	2	40
Total	5	100
Was an investment provided as a result of your most recent request?		
Yes	4	80
Don't Know	1	20
Total	5	100

Source: Tabulations based on the survey.

4.2.4. Supplier and Government Financing

Only 5% of the firms had made a request for a grant, subsidy, no-interest loan or repayment contribution from the government in the last 12 months while around 3% had made similar requests in the last three years. The bulk, 82% of the firms, had never made a request for government-aided financing. Of the two firms who responded, one said its request for government financing was approved but the other was disapproved. The total amount of financing authorized was about US$634,000.

Table 21. Requests for Supplier and Government Financing

	Frequency	Percent
When did the business make its most recent request for a grant, subsidy, no-interest loan or non-repayment contribution from government?		
Last 12 Months	2	5
Last 3 Years	1	3
More than 3 years ago	2	5
Never	31	82
Refused/Don't Know	2	5
Total	38	100
Was the request approved?		
Yes	1	50
No	1	50
Total	2	100
When did the business make its most recent request for trade credit from a supplier?		
The last 12 months	13	35
Last 3 Years	2	5
More than 3 years ago	1	3
Never	18	49
Refused/Don't know	3	8
Total	37	100
Was request approved?		
Yes	10	71
No	2	14
Refused	1	7
Don't know	1	7
Total	14	100

Source: Tabulations based on the survey.

35% of the firms that responded indicated that they had made a request for supplier trade credit in the last 12 months while 5% had made a similar request in the last three years. 49% of the respondents had never made a request for trade credit. 71% indicated that the request was approved, 14% were disapproved. The mean total amount of trade credit authorized was about US$13,500.

4.3. Characteristics of Firms That Have Access to Finance

4.3.1. General Firm Characteristics

A total of 33 firms made a financing request for any of the following: bank borrowing, capital leases, trade credit, government grants, and equity financing. Of these firms, 32 (33%) were able to get either full or partial authorization of the amount requested. Only one firm (1%) was unable to get either partial or full approval of its

financing requests, and this was due to its withdrawal of its application. The remaining 64 firms (66%) had never made a request for external financing, or refused to provide firm financing information.

Table 22. Firms with Finance Access and Type of Financing Used

Firms	Freq.	Percent
With finance access	32	32.99
No access	1	1.03
Did not request financing	64	65.98
Total	97	100.00

Type of Financing Accessed by Firms	Freq.	Percent
Bank Loan	16	39.02
Capital Lease	10	24.39
Equity Financing	4	9.76
Government Grant	1	2.44
Supplier Credit	10	24.39
Total	41	100.00

Source: Tabulations based on the survey.

In terms of type of finance institutions, Table 22 indicates that banks (39%) are the most common source of financing, followed by institutions providing capital leases (24%) and supplier/trade credit (24%). Equity financing had a share of 10% while government programs had the lowest share, of about 2%.

In terms of industry type, the firms that were able to access finance were mostly from the garments and textiles industry (53%) followed by food and other manufacturing (31%). By size of employment, these firms were largely small (75%) and micro (19%) enterprises. Almost 91% of the firms were 100% domestic-owned, 6% were joint ventures while 3% were foreign-owned. The mean age of the companies was about 16.2 years. For firms that did not make any request, the mean company age was 13.4 years. In terms of distribution by industry, size of employment and ownership there was not much difference between firms with access and firms that had never requested financing.

Table 23. General Characteristics of Firms with Access to Finance

Industry Type	Number of Firms	With Access	No Access	Did Not Request
Garment & Textiles	58	53	0	64
Parts, Components, and Motor Vehicles (incl. motorbikes)	7	9	0	6
Electrical, electronic, parts and machinery	12	6	100	14
Others (e.g. food manufacturing)	20	31	0	16
Total	97	100	100	100
By Employment Size				
Micro	16	19	0	16
Small	67	75	100	67
Medium	6	0	0	10
Large	7	6	0	8
Total	96	100	100	100
Firm Ownership				
100% Domestic	75	91	0	72
Joint	14	6	100	17
100% Foreign	8	3	0	11
Total	97	100	100	100

Market Orientation	All Firms	With Access	No Access	Did Not Request
Domestic Market (100%)	76	94	0	69
Both Domestic & Export Markets	8	3	0	10
Export Market (100% of sales)	16	3	100	21
Indicators				
Firm Age	14	16	10	13
Profit (% of sales)	19	24	2	17
Sales growth rate				
2009	9	3	8	12
2008	11	11		11
Labor productivity (US$)				
2008	3462	3046	2939	3696
2009		3722	3106	4114
Stage				
startup	9	100	9	10
fast growth	3	0	2	2
slow growth	31	0	45	40
maturity	16	0	5	8
decline	41	0	23	29
Do not know	0	0	13	8
No Response	0	0	3	2
Total	100	100	100	100

Source: Tabulations based on the survey.

In terms of stage of development, the bulk of the firms with access to finance were in industries in the slow growth and declining stages of their life-cycle. Only 12% were in the start-up and fast growth stages while 16% were in the maturity stage. The firms

that did not request financing also had the same distribution by stage of growth with firms in slow growth and declining stages accounting for the majority. In terms of labor productivity, the firms registered US$3,722 in 2009. Firms that did not request finance had a slightly higher labor productivity of around US$4,114 during the same year. In terms of profitability rate as measured by profit as % of sales, firms with finance access had a higher profit rate of 24% than firms that never made any finance request, which recorded a rate of 17% in 2009. In terms of annual growth rate of sales, firms with access registered growth of 11% in 2008 but dropped to 3% in 2009, while firms that never made a finance request enjoyed 12% growth in 2009 and 11% in 2008.

4.3.2. Owner's Characteristics

Table 24 describes the characteristics of the major owners of firms that were able to access finance, including the company's R&D expenditures and patent ownership. The mean age of owners was 46.8 years. 50% of the owners were female and mean length of experience was 15.9 years. 75% of the owners know other foreign languages. With respect to the net worth of the owners, 42% had net worth of from US$25,000 to 100,000 while 19% had net worth within the $100,000-500,000 range. 88% of the firms in the group also indicated that majority ownership of the business was held by members of the same family. Only 26% said that the majority owners of the business had invested in another unrelated business. 27% said that the majority owners acted as operators in these other unrelated businesses. In terms of R&D investment, only 13% invested in research and development although 28% owned a patent. R&D as percentage of sales was around 1.1%.

Table 24. Characteristics of Owners with Finance Access

	With Access	No Access	Did Not Request		With Access	No Access	Did Not Request
Gender				**Majority of business held by members of family**			
Female	52	0	54	No	13	100	26
Male	48	100	46	Yes	88	0	74
Length of Experience				**Majority owners made investments in another unrelated business**			
1-5 years	6	0	14	No	74	100	89
6-10 years	28	0	20	Yes	26	0	11
11-20 years	41	0	28				
21-30 years	16	0	14	**Majority owners act as operators in these businesses**			
31-40 years	0	0	3	No	73	100	90
41-50 years	3	0	2	Yes	27	0	10
refused	3	0	2				
don't know	3	100	17	**Investment in R&D**			
Languages spoken				No	88	100	91
Only Native Language	25	0	36	Yes	13	0	9
Knows Other Foreign Language	75	100	64				
Net-worth				**Own Patent?**			
Less than $25000	32	0	61	No	72	100	88
$25000 – 100000	42	0	20	Yes	28	0	13
$100000 – 500000	19	100	18	Age of Major Owner	47		54
Between $500000 & 1000000	3	0	2	Length of Experience	16		15
Over $1million	3	0	0	R&D as % of Sales	1.1	0	1.8

Source: Tabulations based on the survey.

For those firms that never requested financing, the mean age of owners was 53.5 years with mean length of experience of about 15.3 years. 54% of the firms had female owners. 64% knew other foreign language. The bulk of the firms (61%) had net worth less than US$25,000 while 20% had net worth of from US$25,000 to 100,000, and 18% from US$1,000,000 to 500,000. 88% of the firms in the group also indicated that majority ownership of the business was held by members of the same family. 11% said that the majority owners of the business had invested in another unrelated business. 10% said that the majority owners acted as operators in these other unrelated businesses. In

terms of R&D investment, only 9.4% invested in research and development and 12.5% owned a patent. R&D as a percentage of sales was around 1.8%.

Compared with firms that never requested financing, the owners of firms with access to finance were younger (mean age 47 years, and 54 years for the other group). In terms of length of experience of the owner, there was not much difference. Firms with finance access had a higher proportion of owners who knew other foreign languages; with net worth valued from US$25,000 to 500,000; and had patent ownership.

4.3.3. Business Expansion Plans

For firms with access to finance, close to 72% intended to expand the size and scope of their businesses in the next two years while 25% did not have intentions of expanding. 73% said that the company's current ability to fund their expansion plans through internal funds alone was not sufficient. 22% said the owners had sufficient internal funds. 13% indicated that the owners would fund the expansion by sharing equity in the business while 91% indicated that they intended to make a loan request. 8% said they would fund the expansion through other means, such as borrowing from relatives and friends.

Table 25. Firms' Expansion Plans

	With Access	No Access	Did Not Request	Total
Do you intend to expand in the next 2 years?				
Not expand	25	0	55	44.33
Expand	72	0	25	40.21
Don't know	3	100	20	15.46
Total	100	100	100	100
Is company's current financing sufficient?				
Not sufficient funds	74		56	67
Sufficient internal funds	22		31	26
Don't know	4		13	8
Total	100		100	100
How would owners finance the expansion plans?				
by sharing equity in the business				
No	87		63	77
Yes	13		38	23
Total	100		100	100
by making a loan request				
No	9		69	33
Yes	91		31	67
Total	100		100	100
Others				
No	52		44	49
Yes	9		19	13
No Response	39		38	38
Total	100		100	100

Source: Tabulations based on the survey.

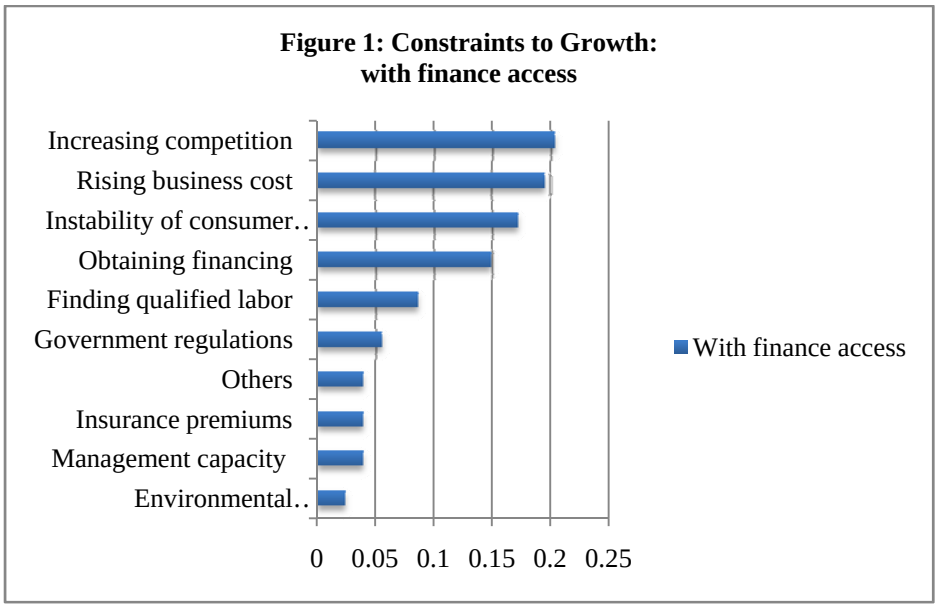
For firms that never made any request for financing, only 25% had plans for expanding their businesses in the next two years. 56% said they did not have sufficient funds to finance the expansion plan while 31% said that they had sufficient internal funds. 37.5% indicated that they would finance their expansion by sharing equity in the business, 31.3% by making a loan request and 19% through other means.

Results from other surveys also showed a substantial proportion of firms planning to borrow in the future. The proportions ranged from 52% under the PEP to 96% for the NATCCO survey. Note, however, that despite a large majority of firms that expressed plans to borrow from banks in the future, the continuing dependence of firms on internal sources of financing may seem to suggest a gap between the plans of firms to borrow and the actual amount of funding made available by banks.

4.3.4. Major Business Constraints

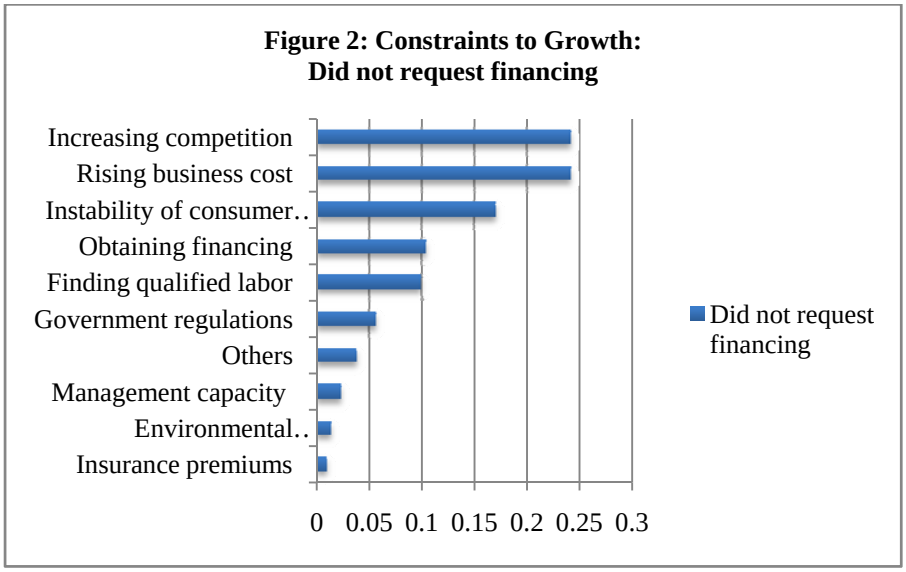
For firms with access to finance, the major obstacles to the growth of their business were increasing competition (20%), rising business costs (20%), instability of consumer demand (17%), obtaining finance (15%), and finding qualified labor (9%). For those firms that had never made any financing request, the same factors were identified: increasing competition (24%), rising business costs (24%), instability of consumer demand (17%), obtaining finance (10%), and finding qualified labor (10%).

Figure 1. Constraints to Growth: with Finance Access



Source: Tabulations based on the survey.

Figure 2. Constraints to Growth: Did not Request Financing

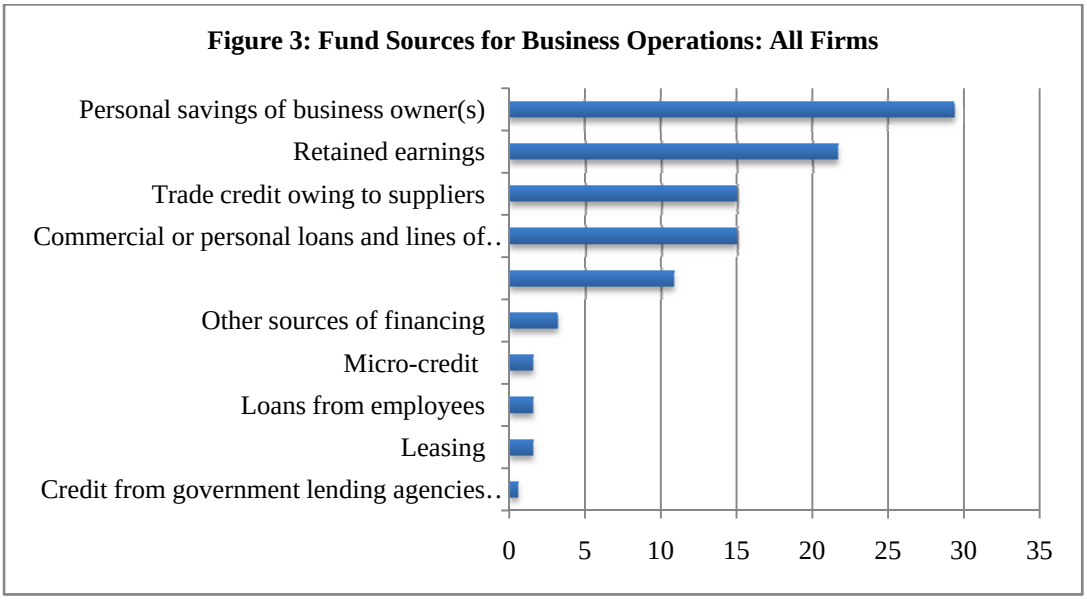


Source: Tabulations based on the survey.

4.3.5. Sources of Funds

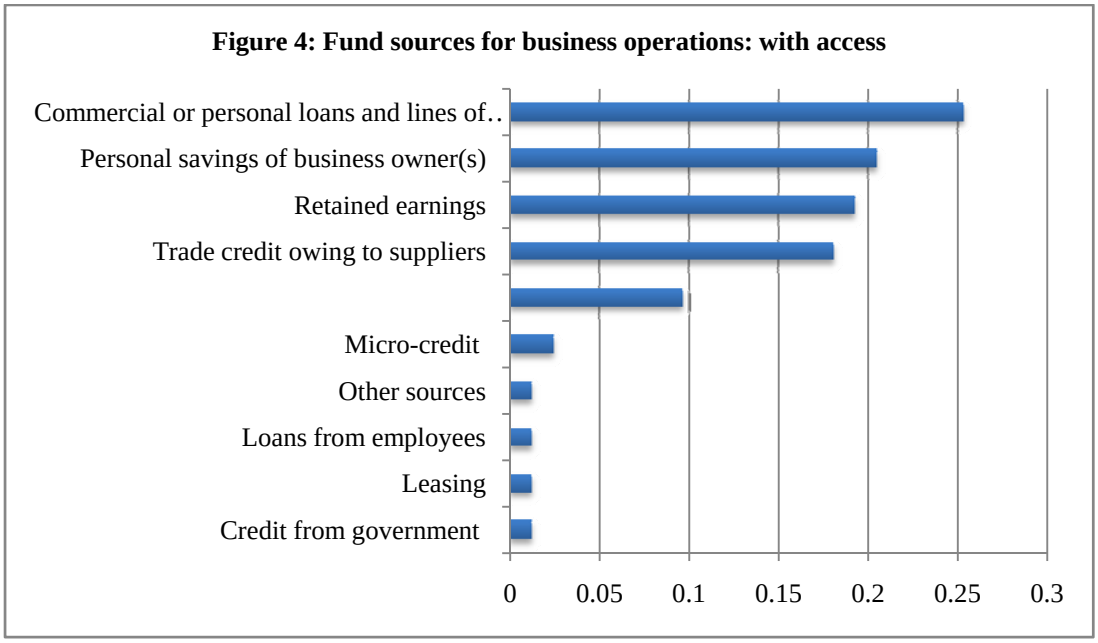
For firms with access to finance, commercial or personal loans and lines of credit from financial institutions, including credit cards (25%), were their major sources of finance used to keep their businesses operating. These sources was closely followed by personal savings of business owners (20%), retained earnings (19%), trade credit owing to suppliers (18%), and loans from individuals unrelated to the firm or its owners (10%).

Figure 3. Fund Sources for Business Operations: All Firms



Source: Tabulations based on the survey.

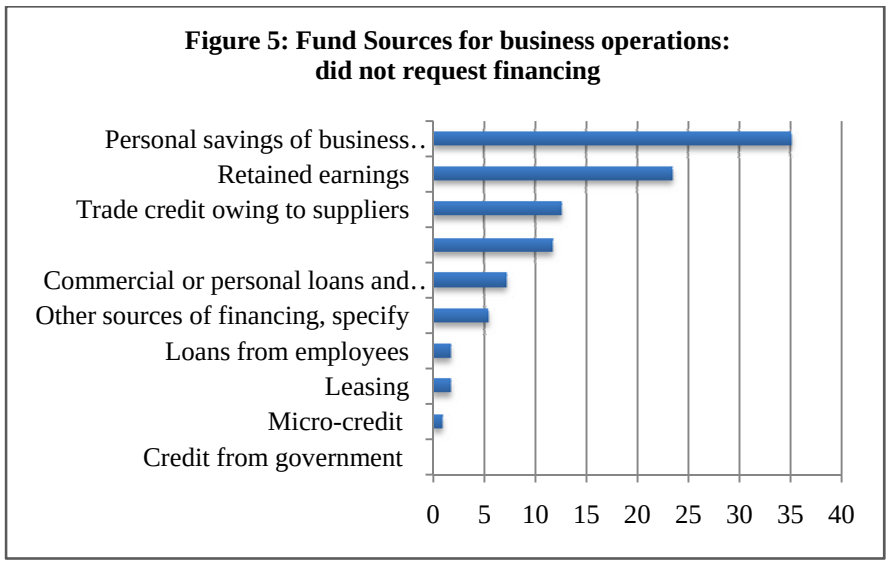
Figure 4. Fund sources for Business Operations: with Access



Source: Tabulations based on the survey.

As start-up funds for their business, the major sources used were personal savings of owners (32%), commercial or personal loans and lines of credit from financial institutions including credit cards (19%), loans from friends or relatives of the business owners (16%), and trade credit (11%).

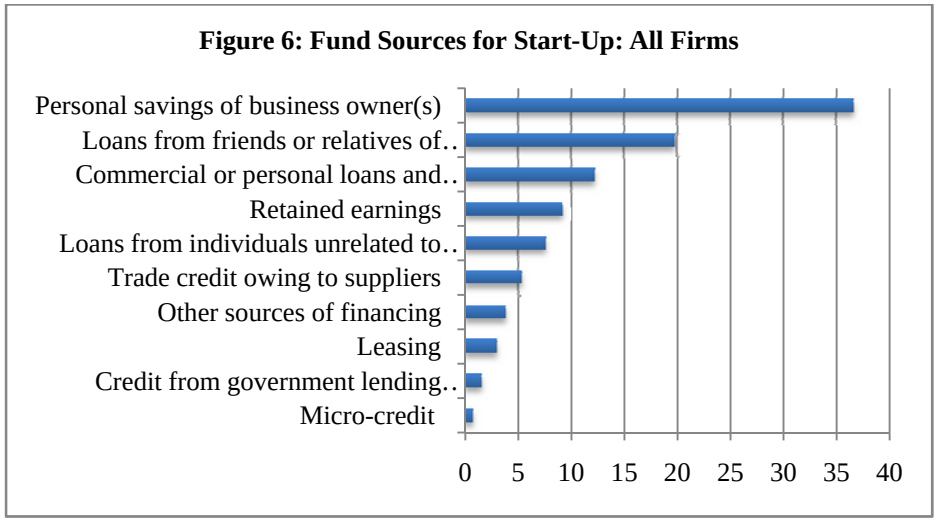
Figure 5. Fund Sources for Business Operations: Did not Request Financing



Source: Tabulations based on the survey.

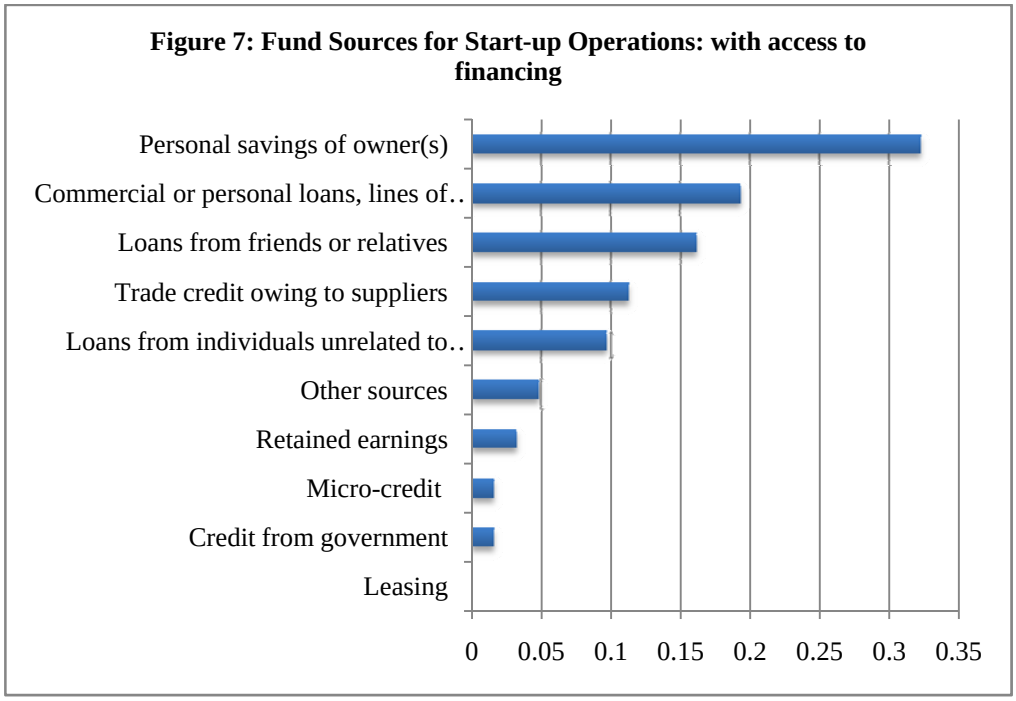
For those firms that had never made any financing request, personal savings (35%) were the major source of financing followed by retained earnings (23%), trade credit (13%), and loans from individuals unrelated to the firm (12%).

Figure 6. Fund Sources for Start-Up: All Firms



Source: Tabulations based on the survey.

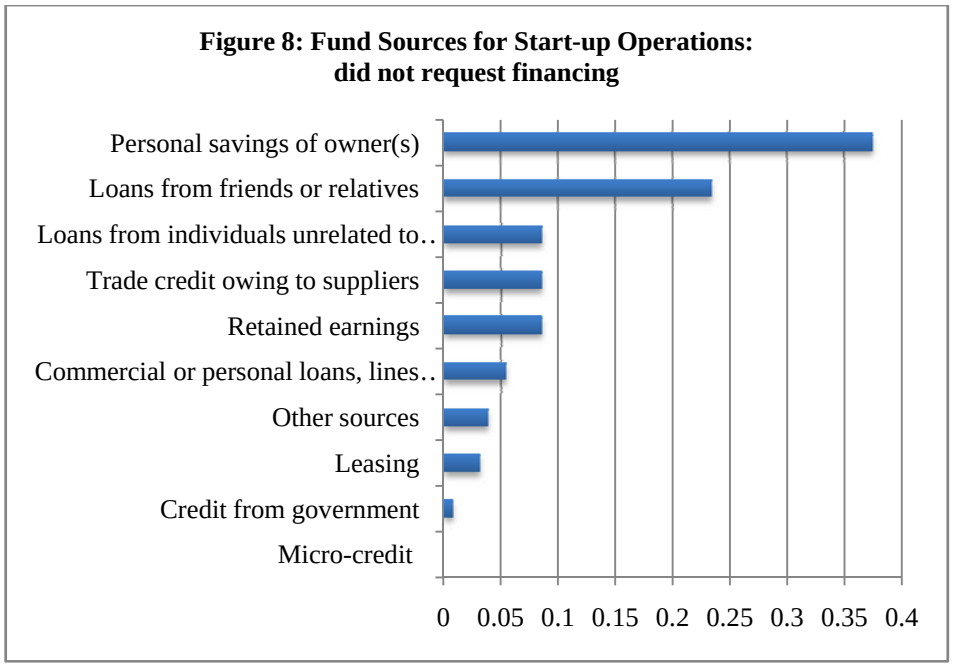
Figure 7. Fund Sources for Start-up Operations: with Access to Financing



Source: Tabulations based on the survey.

For their start-up funds, the top sources were personal savings (38%), loans from friends and relatives (23%), commercial personal loans (16%), loans from individuals unrelated to the firm (9%), trade credit (9%), and retained earnings (9%).

Figure 8. Fund Sources for Start-up Operations: Did not Request Financing



Source: Tabulations based on the survey.

4.4. Bank Survey

Three banks responded to the SME access to finance survey. Tables 26A to 26E summarize the survey results. The total assets of the three banks range from $4.6 million to $198.5 million. Bank 1 has 6,000 business clients in the group with 6-49 employment while Bank 3 has 81 clients with 50 to 99 employees. In terms of outstanding loans, Bank 1 reported a total of US$17 million, consisting mostly of term loans followed by umbrella credit. Bank 3 reported a total of US 51, 557 livelihood and salary loans.

In terms of distribution of outstanding credit by industry, Bank 1 reported a total of $2.3 million outstanding credit from the automotive industry and $690,000 from the electronics and electrical industry. Bank 3's $51, 557 outstanding credit is all from the garments and textiles industry.

Table 26a. Total Assets and Business Clients of Respondent Banks

Bank Code	Total Assets (in US$)	Business Clients by Employment Size	
		6 to 49 workers	50 to 99 workers
Bank 1	27,586,207	6,000	
Bank 2	4,597,701		
Bank 3	198,533,979		81

Source: Tabulations based on the survey.

Table 26b. Loan Outstanding by Type and Size (in US$)

Bank Code	Term	Mortgage	Lines of Credit	Umbrella Credit	Others	Total
Bank 1	9,195,402	2,298,851	1,149,425	4,597,701		17,241,379
Bank3					51,557*	51,557

Source: Tabulations based on the survey.
Note: * livelihood/salary loan.

Table 26c. Credit Outstanding to Business Clients (in US$)

Bank Code	Authorized amount	Outstanding loan	No. of clients
Garments & Textile			
Bank 1		114,943	4
Bank 3	51,557	51,557	81
Automotive			
Bank 1		2,298,851	10
Electronics & electrical			
Bank 1		689,655	6

Source: Tabulations based on the survey.

Only Bank 2 reported that it provides factoring financing. The total amount authorized is $114,900 with total outstanding amount of $45,977.

Table 26d. Factoring Financing to Business Clients (in US$)

Bank Code	Total Amount Authorized	Total Amount Outstanding	No. of Clients
Bank 2	114,943	45,977	1

Source: Tabulations based on the survey.

Both Banks 1 and 2 have leases totaling $114,900 and $45,977 respectively. Bank 1 provides leases to the garments, automotive and electronics industries while Bank 2 reported only other industries.

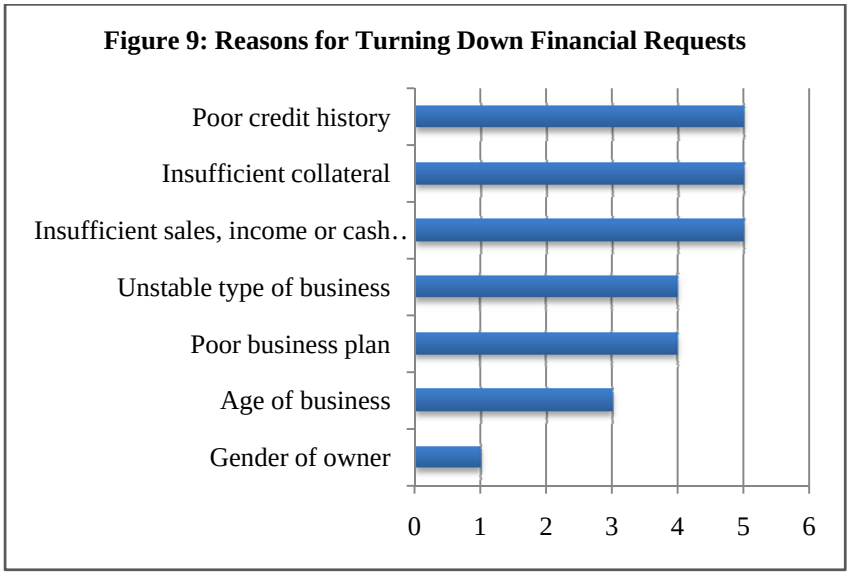
Table 26e. Lease Outstanding to Business Clients

Bank Code	Total amount leases	Total amount outstanding	No. of clients
Garments & Textile			
Bank 1	114,943		2
Automotive			
Bank 1	459,770		4
Electronics & electrical			
Bank 1	689,655		6
Food & Others			
Bank 2	114,943	45,977	1

Source: Tabulations based on the survey.

Figure 8 contains a ranking of the reasons for turning down financial requests. The top reasons cited were poor credit history, insufficient collateral, and insufficient sales income or cash flow. These were followed by unstable business type, poor business plan and age of business. The gender of the owner is not considered as important. These results are consistent with the results of previous surveys of SMEs and financial institutions. According to the SERDEF survey (as cited in Nangia and Vaillancourt), the main reasons for rejecting applications were: adverse credit/repayment record, insufficient or unacceptable collateral, and non-viability. The results of the SERDEF survey also showed that 90% of all applications were approved and that banks provided borrowers with technical and marketing assistance along with training and information. Banks are heavily biased towards lending to existing enterprises with good track records and viable projects. Their primary criteria were collateral and good credit standing, as well as management quality and location.

Figure 9. Reasons for Turning-down Financial Requests



Source: Tabulations based on the survey.

5. Conclusions and Some Broad Policy Implications

5.1. Access to Finance Issues: Findings from SME Literature in the Philippines

Access to finance has remained one of most critical factors affecting the competitiveness of MSMES. Studies focusing on the growth constraints faced by SMEs in the Philippines have continued to highlight the difficulties of MSMEs in accessing finance. Based on the PEP survey, Nangia and Vaillancourt (2006) indicated that funds obtained from the banking sector accounted for only 11 to 21% of capital raised by SMEs. This is lower than the 30% international benchmark seen in other developing countries like India and Thailand. Furthermore, banks are generally reluctant to make large loans, particularly those ranging from P150,000 to P5 million (US$3,450-115,000) which is the normal range of funding required by SMEs.

Studies have shown that despite the availability of funds for lending, SMEs, particularly the smaller ones, have been unable to access funds due to their limited track record, limited acceptable collateral, and inadequate financial statements and business plans. In these studies, the lack of access to financing is highlighted as the most difficult constraint on SME growth. The problem seems to lie not in the supply of funds

potentially available for SME lending, but in the difficulty of access to these funds. In theory, there should be sufficient funds for SME financing since banks are required by law to allocate 8 percent of their loan portfolios to SME financing. At the same time, government financial institutions have their own SME financing programs. Private banks, however, are reluctant to lend to SMEs because of their general aversion to dealing with a larger number of smaller accounts. Moreover, many banks are still not aware of the need for lending to small businesses. Many SMEs cannot access available funds due to their limited track records, limited acceptable collateral, and inadequate financial statements and business plans.

Banks have continuously pointed out that the lack of credit information has deterred them from lending to SMEs. Without the necessary credit information, it is difficult to determine the creditworthiness of borrower firms. Banks are also concerned about the bankability of MSMEs and the high risks involved in MSME lending, given that many MSMEs have limited management and financial capability. Financial institutions have therefore continued to impose collateral requirements and other stringent conditions such as minimum loan requirements. Other issues include slow loan processing, short repayment periods, difficulties in loan restructuring, high interest rates, and lack of start-up funds for SMEs.

There are various estimates of the financial gap, ranging from Philexport's P67 billion (US$1.6 billion) to the Department of Trade and Industry's P180 billion (US$4.2 billion). Extrapolating from the PEP survey results (SMEs' average investment requirements and loan appetite less average declared availment of loans), Nangia and Vaillancourt estimated a finance gap amounting to P76 billion (US$1.8 billion) and using more official existing SME lending and assuming 30% of total current SME funding as benchmark, they arrived at P170 billion (US$3.9 billion) gap. Applying the same procedure and using the PEP finding that banks provide 21% of the financing needs of SMEs, an estimated gap of around P130 billion was obtained.

5.2. Access to Finance Survey

The present survey, which was carried out among 97 firms in Central Luzon covering garments, textiles, automotive, electrical and electronics, and food manufacturing and other industries. It illustrates the experiences of MSMEs in seeking

bank credit financing, capital leases, equity financing, and Government and trade supplier credit. Overall, the results reflect the difficulties faced by SMEs in accessing finance. Both for firms with access to finance as well as those that had not made any finance request, financing obstacles (12%) were one of the top four serious problems for the growth of their businesses, along with increasing competition, rising business costs, and instability of consumer demand.

The current survey shows the continued dependence of SMEs on internal sources of financing, not only during the start-up phase but also to finance the current operations of the business. To keep their business operations running, firms have continued to rely on the personal savings of business owners (29%), retained earnings (22%), and loans from individuals (11%). Finance sources for start-up operations consisted mainly of the personal savings of owners (37%), loans from friends or relatives of business owners (20%), retained earnings (9%), and loans from unrelated individuals (8%). Commercial or personal loans and lines of credit from financial institutions including credit cards accounted for 12% of the total.

Close to 41% of the respondents intended to expand the size and scope of their businesses in the next two years while 44% did not have intentions to expand. 67% said that the company's internal funds alone were not sufficient to fund their expansion plans. 23% said the owners would fund the expansion by sharing equity in the business, 67% by making a loan request, and 21% through other means, such as borrowing from relatives and friends. Previous surveys also showed a substantial proportion of firms planning to borrow in the future. The proportions ranged from 52% under the PEP to 96% for the NATCCO survey. Note, however, that despite a large majority of firms that expressed to the intention of borrowing from banks in the future, the continuing dependence of firms on internal sources of financing may seem to suggest a gap between the plans of firms to borrow and the actual amount of funding made available by banks.

The bank survey showed that the top reasons for turning down financial requests were the firms' poor credit histories, insufficient collateral, insufficient sales, income or cash flow, unstable business type, and poor business plans. In terms of bank requirements, 50% of the respondent firms indicated the need for collateral to obtain the new financing. Voluminous documents were also required as part of the application

process, including business financial statements, appraisal of assets, personal financial statements, cash flow projections, business plans and other documents such as government clearances, registration certificates, proofs of billings (credit card, electricity, etc) and post-dated checks, among others. A majority of those who borrowed were either satisfied or very satisfied with the banking services that provided their loans.

Looking at the characteristics of firms that were able to access financing, it is evident from the survey results that these firms are mostly those with high sales growth, high profitability rates and whose owners tend to have higher net worth. Among those firms that borrowed from banks, the survey results showed that micro and small enterprises paid higher interest rates are than large enterprises.

5.3. Policy Recommendations

To improve MSMEs access to finance, the paper suggests the following:

1) Credit rating information and asymmetric information.

It is important to address the high risk profile of firms arising from the absence of track records, informational asymmetries, shortage of assets and collateral and insufficient management skills. To address these issues, the implementation of the Central Credit Information Corporation must be expedited. The central credit system is expected to improve the overall availability of credit, particularly for MSMEs, to provide mechanisms to make credit more cost-effective, and to reduce the excessive dependence on collateral to secure credit facilities.

2) Changing the mindsets of banks and developing a non-traditional approach to SME lending.

It is also important to change the traditional mindsets of banks, and to encourage the adoption of a non-traditional approach to SME lending. Traditionally, lending to SMEs has been seen as entailing higher risks and higher costs, and the tendency is to seek to over-guarantee the loan. The case of Plantersbank has proven that SME lending can be profitable and rewarding. In more recent years, RCBC (the fourth largest universal bank in terms of capital base in the country) intensified its SME lending program by bringing in a new team of banking professionals, reviewing and instituting radical changes in traditional banking practices and processes and introducing new tools and

technology that changed the way SME loans are screened, evaluated, approved and administered. As a result, its SME lending grew by 63% or over P9 billion (US$193.3 million) in 2008 compared to P6 billion in 2006. RCBC also established a web portal (www.getaloan.com.ph), a free online self-assessment services that firms can visit to immediately find out whether their business will be eligible for a business loan with the bank. Questions asked include basic information on the business, financial performance, credit experience, location, purpose of the loan, required loan amount, etc. Each answer is awarded specific points and those that pass and are interested in getting a loan are invited to proceed with the bank's application process.

There is also an initiative in the country by the International Finance Corporation to create an SME banking model that departs from the traditional lending approach. It focuses not only on SME banking but also stresses the importance of banks offering and cross-selling multiple products, focusing on strong marketing and adopting segmentation and a product development capacity. It also emphasizes the importance of a strong management information system to support credit scoring and credit relations management. The program is currently being tested with a microfinance institution, CARD Bank.

Through its cooperation program with the Philippine Government, the Small and Medium Enterprise Development for Sustainable Employment Program (SMEDSEP), the German Government has also introduced new lending technology on the provision of credit by rural banks and thrift banks to SMEs. This technology is expected to encourage more banks to intensify lending to SMEs on the basis of business viability, which makes collateral requirements only a secondary consideration in providing loans. SMEDSEP has also partnered with the University of the Philippines through the Institute of Small Scale Industries (UP-ISSI) to institutionalize SME finance training for rural banks and thrift banks in the Philippines. Under this partnership, SMEDSEP will pass on to UP-ISSI the technologies on the provision of credit to SMEs by rural banks and thrift banks.

3) Training and capability building programs for SMEs, evaluation of government lending programs, and improvement of official SME statistics.

Training and capacity building programs for SMEs to improve their financial literacy and management capacity are also necessary. Equally important is the need for the government to review the impact of its SME lending activities along with its other SME programs on training and marketing, and identify whether these are the correct interventions and responses to the current financing issues faced by MSMEs. In the context of the government's role in SME financing through SBC, PCFC, and the Sulong Program; the survey results showed that only 5% of the firms made a request for a grant, subsidy, no-interest loan or repayment contribution from the government in the last 12 months. Around 3% had made similar requests in the last three years while the bulk, 79% of the firms, had never made a request for government-aided financing. Finally, there is also a need to improve data collection and statistics on SMEs, particularly on financing indicators for more precise information and empirically-based policy-making.

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CHAPTER 11

Small and Medium Sized Enterprises' Access to Finance in China

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LIU XUEYAN[1]

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

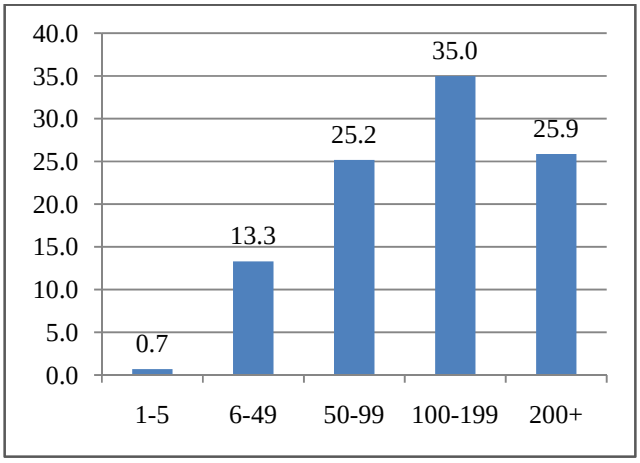
bank loans especially when asset assessment, insurance and guarantees were involved; 4) poor track record of credibility.

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.

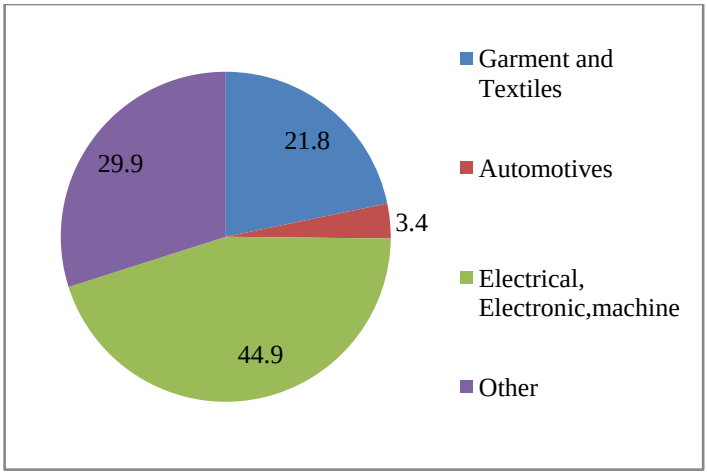
Figure 1. Distribution of SMEs by Size (%)



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).

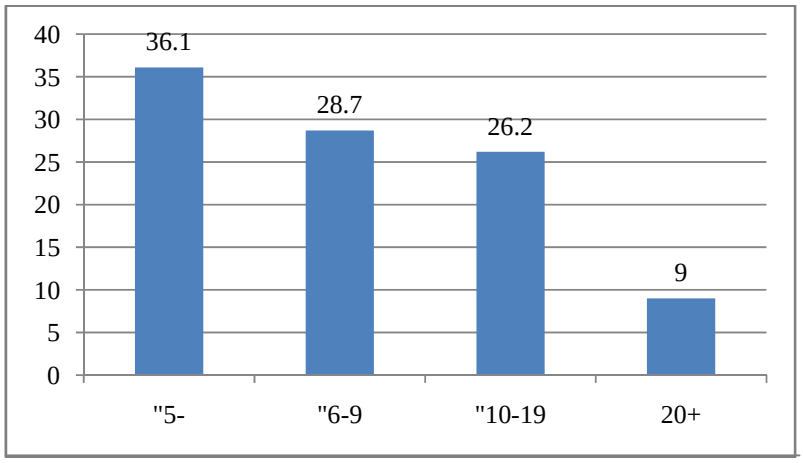
Figure 2. Industry Distribution of SMEs



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

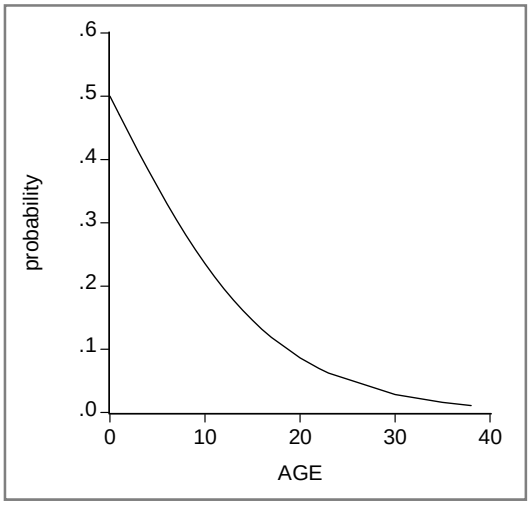
performance. The data seem to support this argument. The average age of SME who had ever been declined by a financial institution was 7.5 years, younger than the average age of 9 of those had not. However, the difference is only 1.5 years, which is not substantial. Comparing the average ages of those 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.

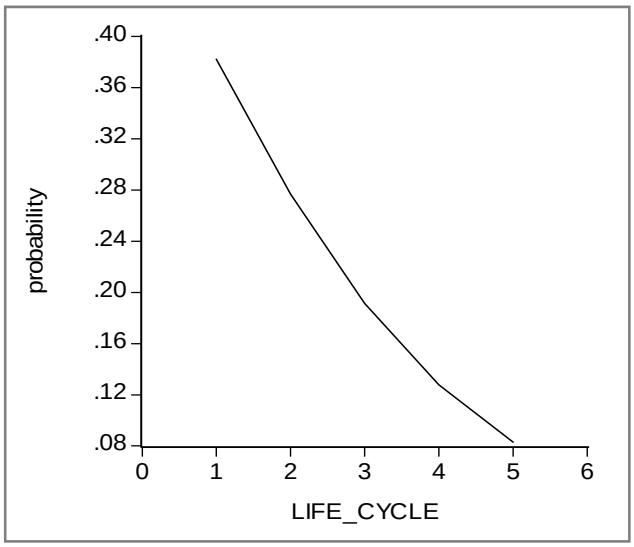
The life cycle of an SME is related to its age, but not necessarily in a linear way. In our sample, each SME could identify itself only in 3 out of 5 stages of a life cycle; say, fast growth, slow growth and maturity. The statistics show the mature SME enjoyed the best financing probability, with the 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.

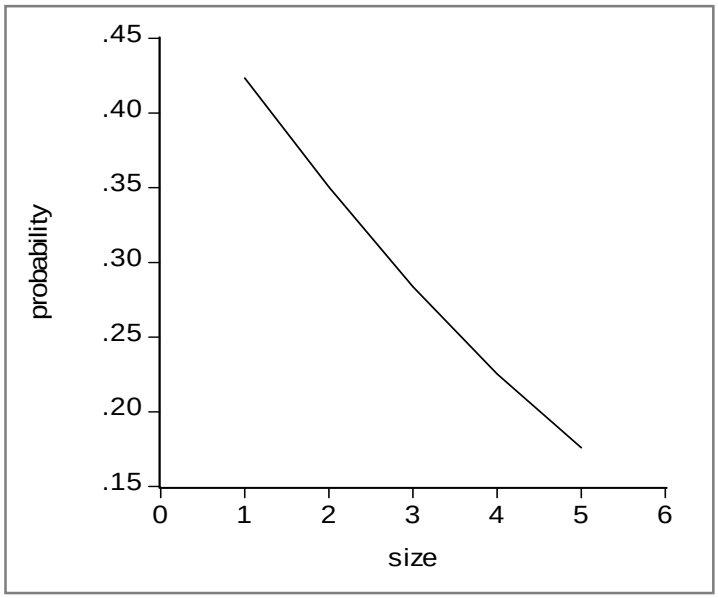
Size of SME. It is reasonable to assume that the size of an SME would matter significantly for access to financing. Not surprisingly, our survey data shows this. For SMEs with less than 200 employees, the proportion of SMEs who had been refused by financing institutions was 20-33%. This proportion declined 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

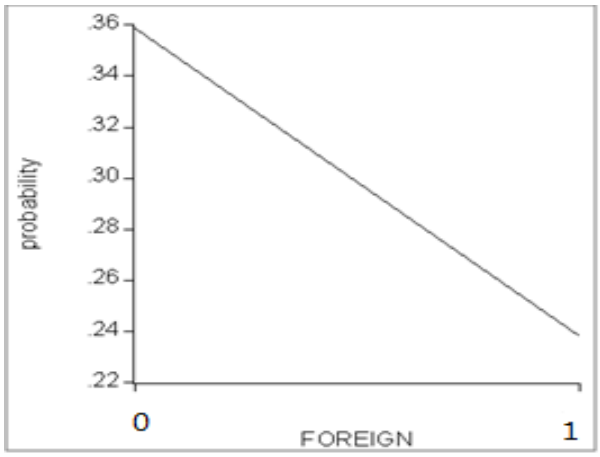
Source: Authors' calculation based on the survey data.

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

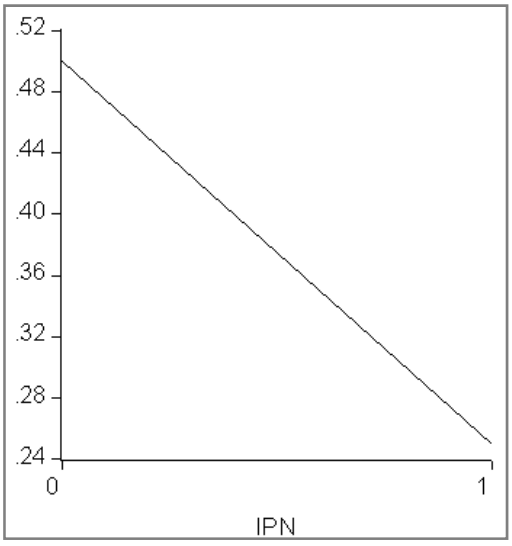
Source: Authors' calculation based on the survey data.

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.

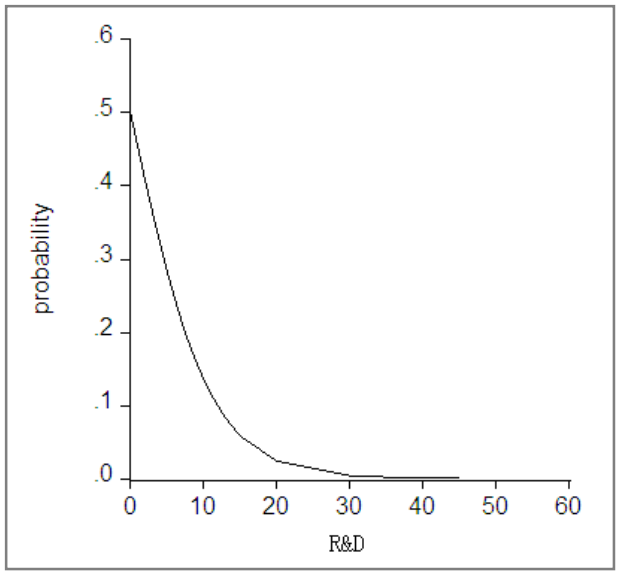
Innovation Capability. When technology capability is measured by R&D spending and number of patents, its relationship with financing probability is not clear. Although SMEs which were not refused by a financial institution have higher R&D spending relative to their sales, SMEs with fully authorized financing 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

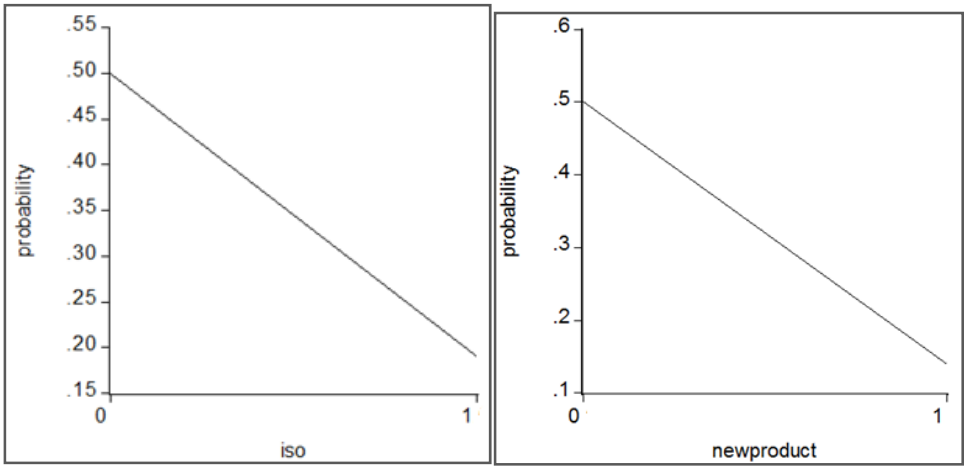
doing so. The biggest difference was found in new products or service introduction. For those SMEs introducing new products or services, the proportion of refusal was 10.7%, compared to 35.3% for those not doing so. Activities such as introducing ICT, buying new machines, or facilities, with new functions 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.

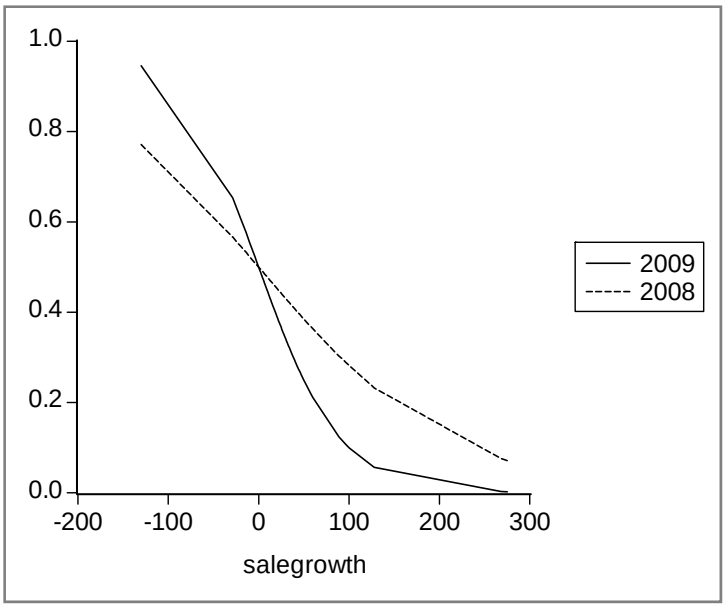
Table 17. Sales Growth, and Financing

	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.

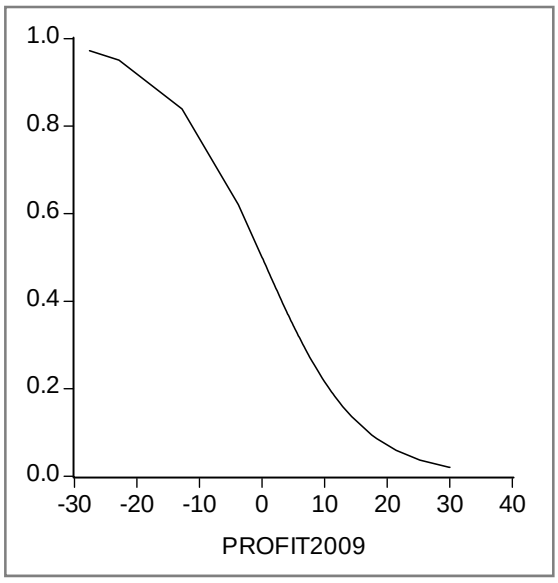
Profit. Its profit is a very important gauge of a firm's performance. We tested the relationship between the accessibility of financing to an SME and its profit as percentage of sales. The descriptive statistics indicate that the chance of access to financing of an SME is more related to recent profit 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

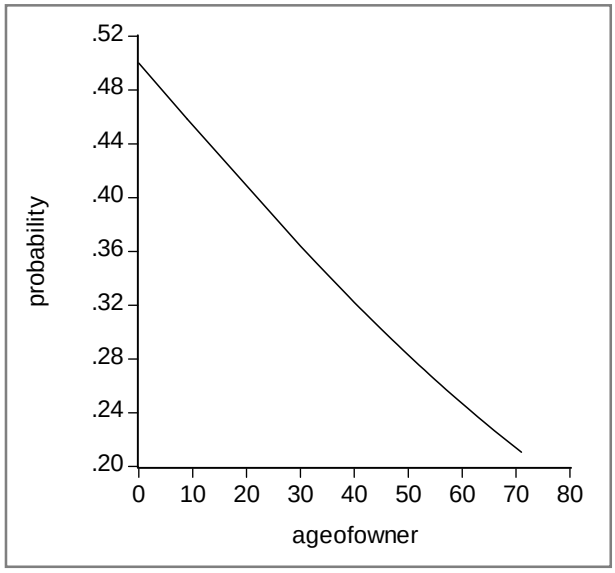
financing requests were not refused was lower than those refused. In both cases, the age differences were small, however. So, the results of the descriptive statistics were inconclusive. However, the logit regression result tends to indicate that the age of owner plays a role in the decision-making of 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.

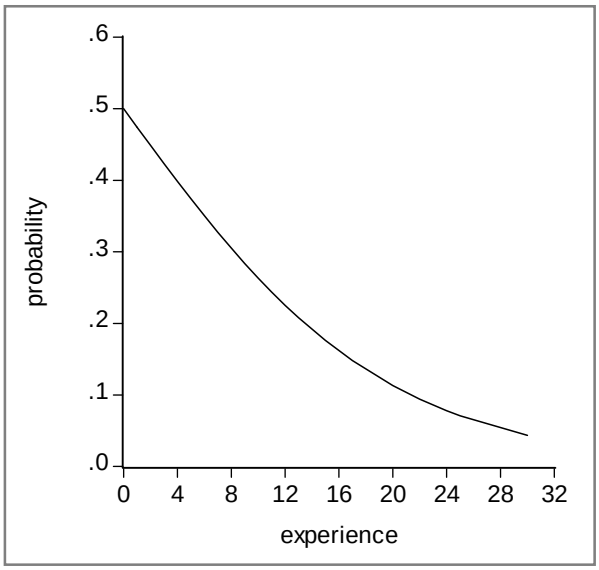
Management Experience of Owner. The data consistently suggest that the owners of SMEs who get full authorization, or at lease are not refused by financial institutions, have longer management experience. The difference is quite small however,. The result of the logit regression also supports the conclusion 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.

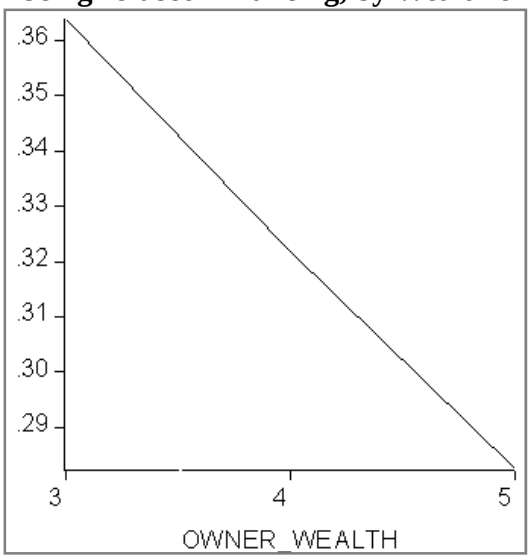
Personal Wealth. The proportion of those refused financing was 40% among SME owners with less than $1 million personal wealth, and 19% among those with more than $1 million. And the proportion of fully authorized financing was 53.8% among SME owners with less than $1 million personal wealth, and 65% 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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