

6. SME Access to Finance

6.1 Are SMEs Credit Constrained?

Theoretically, there are good reasons why the availability (and cost) of credit may be more adverse for smaller enterprises. First, the fixed costs associated with loan appraisal, supervision, and collection are not trivial. This implies that from the perspective of the lender, it is preferable to provide (larger amounts of) credit to a larger enterprise than (small amounts of) credit to many smaller enterprises. Second, smaller enterprises are less able to provide collateral against their loans. From the lender's perspective, the cost implications associated with the possible bankruptcy of the borrower rise accordingly, further diminishing incentives to lend to smaller enterprises.

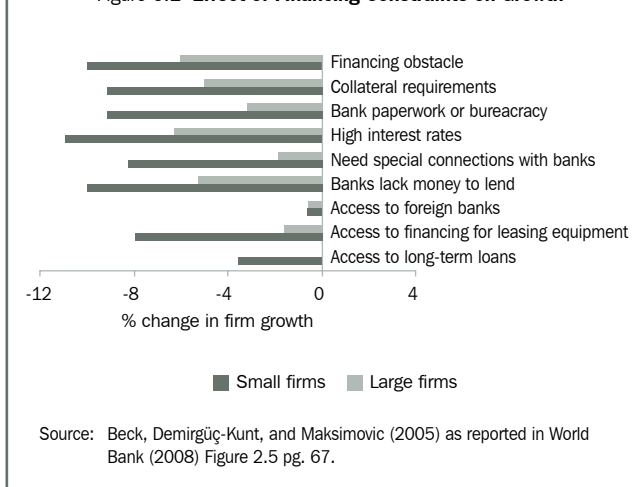
As for the empirical evidence, Ayyagari, Demirgüç-Kunt, and Maksimovic (2006) point out that, worldwide, SMEs frequently tend to report financing as a major obstacle compared to large firms. In addition, financing constraints appear to hit the smaller firms harder than large ones. They show that given that an enterprise, large or small, complains about a particular aspect of finance, its growth is smaller on average if the enterprise size is small. Put differently, complaints about finance are associated with a 10 percentage point reduction in growth for small firms compared to an average decline of 6 percentage points for large ones (Beck, Demirgüç-Kunt and Maksimovic 2005 and Figure 6.1).³⁴ Moreover, the figure also tells us that even if we go into more detail on the cause of the financial obstacle, it is still true that small firms that report a specific cause (say, collateral requirements) will experience a larger average decline in growth compared to the average reduction in growth of large firms that complain of it.

Once we move away from analysis based on entrepreneur responses much of the evidence on the importance of credit constraints tends to be indirect. For example, a recent study using cross-industry and cross-country data finds that improvement in financial development (as captured by the ratio of private credit to GDP) is associated with faster growth of industries that are characterized by smaller firm size for 'technological' reasons (Beck, Demirgüç-Kunt, and Maksimovic 2005). The findings

are consistent with the view that smaller firms are more credit constrained than larger firms and that financial development alleviates these constraints.

Moving to studies that examine data at the enterprise level, a commonly used approach is to examine the relationship between investment decisions of enterprises and close substitutes for credit (for example, cash flow, family wealth, and others). Evidence that an increase in one of these substitutes for credit increases investment is taken to be consistent with the existence of a credit constraint (since otherwise an increase in the substitute should have had no effect on the investment decision). Of course, the interpretation of such evidence is open to question. For example, an increase in cash flow may well be the result of a sudden increase in demand for an enterprise's product; to the extent that it signals a favorable environment for future sales, the enterprise would be expected to invest and expand capacity.

Figure 6.1 Effect of Financing Constraints on Growth



Direct evidence on credit constraints that apply to enterprises is less common, especially once we move beyond microenterprises (see Box 6.1 for an innovative recent study involving a randomized experiment involving microenterprises in Sri Lanka).³⁵ An exception is a recent study that exploits changes to a directed credit program in India. Banerjee and Duflo (2004) track 249 firms that received credit from one of India's largest public-sector banks before and after changes made to eligibility requirements that allowed medium-sized firms to get subsidized credit (that is, credit provided at an interest rate that can be no more than 4% above the prime lending rate of banks). In particular, eligibility for the credit subsidy was extended in January 1998 to enterprises with total

³⁴ Carlin, Schaffer and Seabright (2007) caution against hastily concluding that the relaxation of financial constraints on countries that report a high score would automatically produce a strong positive effect on output. It may well be that the high scores reflect poor quality of SME investment projects so that making finance available would produce at best only a negligible effect on output.

³⁵ A firm can be said to be credit constrained when it cannot borrow as much as it would like to at the going market rate.

Box 6.1 Are Microentrepreneurs Credit Constrained? Evidence from Sri Lanka

In de Mel, McKenzie, and Woodruff (2008b) the authors used a randomized experiment involving microenterprises in Sri Lanka in order to present direct evidence of credit constraints. Over five consecutive quarters, the study tracked the revenues, expenses, profits, and assets of 408 enterprises, about half of which were randomly provided grants of between \$100 and \$200.¹ Comparing the profits of firms which received a grant with those that did not allowed the authors to measure the (marginal) returns to capital and compare these with market interest rates. Evidence that the returns to capital exceed market interest rates would be consistent with market failures involving markets for credit or insurance. The

results indicate that the average firm receiving a grant sees its profits increasing substantially. In fact, the returns to capital are estimated at 5% per month on average or around 60% per year—much higher than the market interest rate of around 12–18% per annum. Additional analysis leads the authors to conclude that the staggering differences between estimated returns to capital and market interest rates is largely on account of failures in the credit market and not the insurance market—that is, enterprises under invest because they are unable to obtain credit and not because they are unable to insure against the uncertainty of return from investment.

1 203 firms were involved in retail—that is, typically small grocery stores. The remaining 205 enterprises were involved in sewing clothing, making lace products, making bamboo products and repairing of bicycles and making food products.

Source: de Mel, McKenzie and Woodruff (2008b).

investment in plant and machinery of 30 million rupees from 6.5 million rupees previously, and subsequently lowered to 10 million rupees in 2000.³⁶

These changes in policy constitute a useful “natural” experiment with which to examine the issue of credit constraints among small enterprises. Banerjee and Duflo (2004) find that 93 newly eligible firms (that is, plant and machinery between 6.5 million rupees and 30 million rupees in 1998) demanded and received extra credit. By itself, this does not prove the existence of credit constraints among these firms since it would make sense to use the subsidized credit in order to repay more expensive credit obtained earlier at market rates. However, the study finds that the new credit was used to expand production among the 93 newly eligible firms. Both sales and production increased faster, without any significant changes to either for other enterprises. The opposite happened when a large subset of the 93 firms lost eligibility in 2000. Taken together, the evidence strongly suggests that firms were credit constrained.³⁷

36 It may be noted that based on establishment level data from the 2000–01 Annual Survey of Industry, establishments with total investments in plant and machinery of 6.5 million rupees or less have on average of 33 workers. Those with 10 million rupees and 30 million rupees have on average 62 and 95 workers, respectively. Thus, defining small enterprises as those with less than 50 workers, the changes in eligibility would primarily have benefited medium-sized enterprises.

37 Indeed, there can be a flip-side to the under investment by those constrained by market imperfections: more than optimal investments by the unconstrained. For example, a study of two social groups operating in the knitted garment industry in Tirupur in south India, the Gounders (a small and wealthy agricultural community that has moved into garment production due to a shortage of agricultural opportunities) and “outsiders” (who have moved to Tirupur to exploit its recognized location as a center for garment exports), reveals that even though the outsiders are more productive, it is the locally well-connected Gounders who are able to invest more due to their access to local finance (Banerjee and Munshi 2004).

6.2 SME Access to Finance: Policy Responses to Credit Constraints

Policymakers have not waited for the results of rigorous empirical studies to intervene in credit markets on behalf of SMEs. That market failures in credit markets—due to asymmetric information and imperfect contract enforcement, for example—make it difficult for smaller enterprises to get external finance seems to have been widely accepted by development practitioners. Moreover, the sheer size of employment generated by smaller enterprises has meant that many governments have felt compelled to provide some sort of financial assistance to smaller enterprises.

Table 6.1 lists some programs put in place by governments to assist SMEs with finance. Since external financing through debt holds more promise for smaller enterprises, this is where the focus has mostly been. In addition to directed credit programs that aim to ensure either a certain quantity of credit goes to smaller enterprises and/or credit is provided to these enterprises at subsidized rates, governments have tried to help SMEs access finance through loan guarantees, credit lines, and rediscount facilities, among other things.

Recent literature provides guidance on how governments should approach the issue of access to finance for SMEs.³⁸ First, while directed credit programs and government ownership of banking have been associated with some success in improving particular types of outcomes for small enterprises and entrepreneurs, the overall record seems poor, with much scope for improvement. For example, while banks in the Philippines are required by law to allocate 8% of their loan portfolios to SMEs and appear to be doing so, Aldaba (2008) notes

38 The main sources for this discussion include ADB (2006), World Bank (2008), and Inter-American Development Bank (2005).

Table 6.1 Various Programs Assisting SMEs with Finance in Selected Economies

	Program	Features	
South Asia	Bangladesh	Small Enterprise Fund (SEF)	- Provide refinance facilities to scheduled banks and financing institutions that lend to the SME sector.
	India	Priority Sector Lending Policy	- Earmarked 40% of net bank credit of public and private sector banks for the priority sector, which include SMEs. - Earmarked 32% of net bank credit of foreign banks for the priority sectors, of which 10% is allocated to SMEs .
		Credit Guarantee Fund Scheme for Micro and Small Enterprises	- Collateral-free credit facility to new and existing micro and small enterprises for loans up to Rs 5 million per borrowing unit. - Guarantee cover is up to 75% of the credit sanctioned.
	Pakistan	Establishment of SME Bank	- Provide Smart Loan facility, asset finance, running finance, leasing.
	Sri Lanka	Low Cost Credit Negotiation program	- Financial support to operate micro finance schemes with partnership of the financial institution.
Southeast Asia	Indonesia	Credit for People's Business	- Provides up to Rp 500 million per borrower at maximum 16% per annum.
	Malaysia	Small and Medium Industries Development Corporation Matching Grants	- For business startups, product and process improvements, certification and quality management system, development and promotion of halal products, market development, advertisement and promotion.
	Philippines	Mandatory Allocation of Credit Resources to Small Enterprises	- Banks are required to set aside at least 8% and at least 2% for small and medium enterprises respectively, of their total loan portfolio.
		SME Unified Lending Opportunities for National Growth	- Simplified and standardized lending procedures and guidelines, e.g., loan purpose, fee structures, interest rates, application forms, financial ratios, and other lending parameters, for evaluating the loan applications of SMEs. - Provision of short term loans payable in one year, and long term loans that are payable up to five years.
		Various guarantee and financial facilities	- SME GUIDE (Guarantee Incubation for DTI Endorsed Enterprises) is a P100 million direct lending facility. - Small Enterprise Financing Facility finances up to a maximum of 90% of the project cost, with the accredited financial institutions co-financing at least the remaining 10%.
	Singapore	Start-up Enterprise Development Scheme	- For innovative Singapore-based start-ups, SPRING will invest a matching dollar for every dollar an investor puts into the business, up to a maximum of \$300,000.
		Micro Loan Programme	- For businesses with less than 10 employees, this programme provides loans of up to \$50,000 to fund daily business operations.
		Enterprise Investment Incentive Scheme	- Start-ups can attract more investments as investors can deduct up to \$3 million worth of losses against their taxable income.
	Thailand	Financial promotion programs	- Establishment of the Small and Medium Enterprise Development Bank of Thailand and the Small Business Credit Guarantee Corporation in 2000.
		Capacity Building Fund	- Provides financing for consulting services, expansion into export markets and application for intellectual property rights.
Various loans programs of SME Bank		- Food Safety Loans, One Tambon One Product Loans and other fast track loans.	
China, People's Republic of	Innovation Fund (1999) and SME Development (2004)-APEC, 2008	- Provision of direct loans to SMEs.	
	Technological Innovation Fund	- Provision of funding for technology for SMEs.	

Source: Authors' compilation based on sources mentioned in the references.

anecdotal evidence that much of the funds did not actually go to SMEs but to larger enterprises that deliberately understate their assets to get classified as SMEs.

Moreover, even when directed credit programs seem to have helped the intended beneficiaries, they seem to have done so at considerable cost. For example, a regulation operating between 1977 and 1990 in India and aimed at spreading bank branches in rural areas—mandating that

commercial banks could open a new branch in a location that already had bank branches on the condition that it open four in locations without any branches—has been shown to have led not only to an increase in bank branches in rural areas, but to be associated with rural poverty reduction, largely through an increase in nonagricultural activities (Burgess and Pande 2005). However, commercial banks have been found to incur large losses on account of subsidized interest rates and losses on loans, strongly

suggesting that the long-term viability of the program was questionable and that the blunt nature of the interventions has impeded the development of a credit culture.

A similar situation exists for government-owned banks—institutions that can be expected to pay more attention to smaller enterprises. Here, the literature has picked up on two very different issues. First, the incentive structures for loan officers have sometimes made them excessively reluctant to lend to smaller enterprises. Second, at the same time, the political subversion of directed credit programs has often been a serious issue. Evidence for this comes from various recent studies. For example, Khwaja and Mian (2005) find that government-owned banks in Pakistan are more likely than private banks to lend to firms whose directors or executives have political affiliation. They are also less likely to collect on the loans. Similarly, in India, Cole (2008) finds that government-owned banks lend more in election years and target this lending to constituencies that are deemed “close”. Dinc (2005), in an analysis of 36 countries, provides cross-country evidence of the increase in lending from government-owned banking and political influence.

It should be noted that a simple switch from government ownership to private ownership alone should not be expected to change too much. Indeed, it has been argued that perhaps the only certain, major change with a switch to private ownership of banks is a reduction in the overstaffing that characterizes many government banks (and state-owned enterprises, more generally). Similarly, the move from domestic ownership to foreign ownership does not automatically improve the financial system, especially as far as smaller enterprises are concerned. Indeed, a study of 80,000 bank loans in Pakistan between 1996 and 2002 indicates that foreign-owned banks were much less likely to lend to small firms than was the case for domestic-owned banks (Mian 2006). Foreign banks also stayed away from small and medium-sized cities. This seems to be true even for foreign banks that had been operating in Pakistan for a considerable period of time.

Instead, and this is a second key point made by the recent literature, while market failures present a compelling rationale for governments to intervene in finance, governments should work with commercial forces to correct, rather than exacerbate, existing market failures. Moreover, one of the most important roles of the government may not involve direct provision of finance. Instead, it is to strengthen the institutional underpinnings of financial transactions. Certainly, this requires improvements in the legal and regulatory infrastructure, as has been pointed out by many analysts for quite some time now. But very crucially, it also requires improvements in the information infrastructure that underpins the efficient operation of

financial systems (ADB 2006 and World Bank 2008).³⁹ To see this broad point more clearly, it is useful to go over some specific issues, several of which pertain specifically to SME finance.

Creditor rights. As the set of laws and institutions that protect lenders from nonpayment (of interest and/or principal), these are one of the most important underpinnings of a formal financial system. Without creditor rights, the market for credit can be expected to remain underdeveloped. In other words, opportunities for both borrowing as well as lending would dwindle. Strengthening creditor rights helps potential borrowers.

This can be seen from a recent study evaluating efforts to improve creditor rights in India. In particular, while laws protecting creditor rights exist, inefficiencies in the judicial system have led to long delays that in effect weaken creditor rights.⁴⁰ In 1993, the Government of India passed a national act that allowed the establishment of Debt Recovery Tribunals, a quasi-legal institution for processing legal suits brought by banks against defaulting borrowers for loans that are late on repayment of Rs1 million or more. What was the effect? Using loan-level records collected from a large private-sector bank with national presence in India, Visaria (2009) shows that establishment of a tribunal increased the likelihood that installments were paid on time for precisely the category of loans that were to be dealt with by the tribunal. Of course, this does not indicate how the strengthening of creditor rights in this case helps potential borrowers. Another finding of Visaria’s sheds light on this issue. In particular, it turns out that interest rates on new loans tend to be one or two percentage points lower than those on comparable older loans. In other words, strengthening creditor rights has improved repayment behavior, and by lowering the risk of default, allowed banks to provide cheaper credit.⁴¹

Collateral. It is well known that the use of collateral in credit contracts helps in dealing with various sources of market imperfection in financial transactions. In addition to decreasing the incentives of borrowers to default, and increasing the incentives to devote effort toward success

39 Fortunately, improvements in the information infrastructure appear able to take faster root than the more complex improvements in legal and regulatory infrastructure.

40 Visaria notes that in 1985, 40% of cases concerning asset liquidation had been pending for more than eight years.

41 It should be noted that how the strengthening of creditor rights affects different types of firms—small versus large, for example—may not be equal, a point raised recently by Lilenfeld-Toal, Mookherjee, and Visaria (2009). In particular, the theoretical result in favor of strengthening creditor rights may redistribute the allocation of credit in favor of larger enterprises when the supply of credit is inelastic. In fact, work in progress by these authors indicates that this is what happened with the Indian Debt Recovery Tribunals.

of the project, it also decreases bankruptcy costs for banks. But for collateral to play this role not only do property rights need to be well defined, creditor rights are also required. An asset with unclear property rights is unlikely to be accepted as collateral. Similarly, if creditor rights are weak so that banks have difficulty executing the collateral in case of loan default, collateral has less value.

Credit registries and credit scoring. Collateral is useful when a borrower has a collateralizable asset. While many medium-sized enterprises may have such assets, many small enterprises may not. Indeed, as noted earlier, it is precisely the lack of such assets that contributes to the situation where many small enterprises are underserved by the formal banking system. Unfortunately, solutions like social collateral and group lending—solutions which underpin the apparent success of microfinance—will not work for the larger loan size associated with small enterprises. One solution to this problem is to improve information of the risk-related characteristics of owners of small enterprises looking for loans. In particular, reductions in the cost of obtaining credit history information on owners of small enterprises can alleviate credit constraints. Credit registries allow this. By providing banks the credit history of loan applicants, the cost of collecting information can go down. Moreover, the more informative credit registries are, the less the incentives of loan recipients to default on their loans. In this way, governments trying to improve access to finance for small enterprises can consider working with

existing institutions, public and private, to build larger and more accurate credit registries.

Well-designed credit registries also enable the use of low-cost automated credit scoring technologies that can further help small enterprises access finance. Khwaja and Klinger (2009) note that SME lending in the US boomed in the early 1990s when banks instituted low-cost automated credit scoring for small-business loans. Of course, the process of building deep and rich individual credit histories takes time. In the meantime, there are potential solutions and tools that work in a similar manner to a credit score. Box 6.2 describes one such solution.

Credit guarantee schemes. Credit guarantee schemes typically arise when well capitalized guarantors have privileged information and/or leverage over a borrower as compared to lenders. For example, a group of small enterprises may be suppliers to a large enterprise, but cannot get credit for working capital from lenders on account of insufficient collateral. In such cases, it may be possible for the large enterprise to guarantee the loan made to the suppliers. The large enterprise has better knowledge than the lender about the small enterprises and, as an important client, also has leverage over them.

Given their potential for overcoming the lack of collateral among SMEs, many governments have supported credit guarantee schemes. While governments

Box 6.2 Using Psychometric Testing to Screen SME Borrowers

In developing countries, microfinance institutions (MFIs) have been trying to move up-market, while banks and venture capitalists have been trying to move down-market to invest in SMEs. The challenge facing MFIs is that social collateral and group lending do not work for larger risk finance, while for venture capitalists, the due diligence process entails significant time and cost that make smaller investments in SMEs unviable.

And as already discussed for banks, having an experienced officer evaluate a business plan and build up cash flow estimates is expensive given the paucity of collateral and deep credit histories. Because the SME segment represents a larger number of smaller loans, it is only viable if the transaction costs of screening applicants are low.

One solution proposed by the Entrepreneurial Finance Lab at Harvard University's Center for International Development is to use psychometrics to evaluate the credit worthiness of entrepreneurs in a low-cost, automated, and reliable way. Research strongly suggests that two characteristics of entrepreneurs, their *ability* and *honesty*, are critical in determining their creditworthiness. While ability is all about whether a person can invest profitably, honesty determines

whether the person would pay back if they were able to do so. The venture capitalist approach uses careful but costly due diligence to measure these characteristics directly, while banks use rougher, indirect proxies such as past history of repayment and current wealth.

There is an increasing body of research that has uncovered systematic associations between entrepreneurial success and attributes measured through psychometric instruments, such as personality and intelligence tests. Successful entrepreneurs consistently score higher on certain aptitude tests and have particular personality traits and cognitive styles that can be measured. Even in cases when test-takers try to "game" the test to appear more honest and entrepreneurial, the predictive power remains.

SMEs currently locked out of the financial system for a lack of collateral and credit history could be financed using such psychometric screening. The challenge now is to pilot psychometric tests in the field to validate effectiveness in different settings—both across countries and types of businesses.¹ Success could help unleash tremendous growth potential.

¹ This is the task of the Center for International Development's new 'Entrepreneurial Finance Lab' at Harvard University <www.cid.harvard.edu/efl>. Source: Khwaja and Klinger (2009).

will not have the privileged information and/or leverage of the large enterprise, as suggested above, that market failures may be shutting out SMEs from credit markets, and disappointment with the track record of many direct and directed lending programs, has typically been reason enough for government support. As noted in World Bank (2008), however, the costs and benefits of public support for credit guarantee schemes have not been rigorously evaluated. On the cost side, credit guarantee schemes do not require too much upfront cash commitment by the government. But the liabilities of the credit guarantee are contingent on whether or not, and how many, SMEs default on their loans. As for the social benefits, this depends on how much *additional* lending is provided to SMEs *because* of the guarantees provided.

What is clear is that design issues are critical, as with any other scheme. ADB (2006) provides a comprehensive discussion of these: first, government support for credit guarantee schemes is warranted when there is evidence that financial institutions will make additional loans if 60–80% of the loan amounts are guaranteed. The key point is that banks must be willing to absorb some lending risk. By providing only a partial guarantee, moral hazard on the part of banks can be alleviated. Second, banks and business associations should both share in the ownership of the credit guarantee organizations, rather than the government fully owning and operating them. Moreover, for schemes in operation for 10 years or more, banks and businesses must strive to reach majority ownership of the credit guarantee organization. Third, the operation of a credit guarantee organization can play a useful role in strengthening credit registry systems.

Training and incentive systems. The difficulties inherent in lending to SMEs cannot be wished away. Left on their own, SMEs are likely to continue facing difficulties getting credit from the banking system.

Nevertheless, there are approaches and technologies for risk assessment and loan management that may alleviate constraints on lending. The main reason private enterprises under-provide training also applies to banks: training and experimenting with different approaches is costly. And once bank personnel have been trained, it is easy for them to take their new skills over to a competitor. Alternatively, once a new approach has proven successful, competitors can easily adopt it. The result is diminished incentives to train staff in the first place and/or invest much in new approaches. Subsidization of training and mechanisms for banks to experiment with new approaches is one solution.

The above is also an issue for public sector banks. Indeed, even when a key guiding principle for public-sector banks is to not neglect SMEs, actual lending practices may also work to leave SMEs seriously underserved. As a careful study of bank financing in India shows, loan officers in public-sector banks face incentives that make them much more concerned about making bad loans (and therefore risking charges of corruption) than finding profitable opportunities (Banerjee, Cole, and Duflo 2003). The study finds loan officers to be quite indifferent to profits or prospective borrowers, something which they argue is consistent with the rules that the public-sector loan officers work with rules “which do not pay even lip service to the need to identify profitable borrowers”. Such incentives are particularly likely to be harmful for SMEs rather than large enterprises. The solution would appear to be to make lending rules more responsive to current profits and projections of future profits. Of course, this is easier said than done. But as we will see more clearly in the next section on technology, experimentation and discovery are part and parcel of the process of building technological capability. The public sector has an important role to play in partnering with the private sector in this experimentation and discovery.