Small and Medium-Size Enterprises:

Overcoming Growth Constraints

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Abstract: This paper discusses recent research that uses new country-level and firm-level databases to assess the developmental impact of SMEs and to explore their growth obstacles and policies to overcome them. First, cross-country research using a new database on the role of SMEs in manufacturing sheds doubt on a causal link between SMEs and economic development and poverty alleviation. Second, there is evidence of a positive role of a competitive business environment - low entry barriers, effective property rights protection and ready access to finance - on entry, entrepreneurship, productivity and economic development. Third, there is substantial evidence that small firms face larger growth constraints and have less access to formal sources of external finance. Fourth, financial and institutional development helps alleviate SMEs’ growth constraints and increase their access to external finance, thus leveling the playing field with large enterprises. Finally, the paper discusses the importance of the legal and information environment and of specific financing tools such as leasing and factoring for SME credit availability.

Keywords: Small and Medium-Size Enterprises; Business Environment; Economic Development

JEL Classification: L11; O1; O4

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Introduction and Motivation

The World Bank Group has a substantial portfolio of small and medium-size enterprise (SME) related activities. More than $10 billion in SME support programs were approved in the past years, $1.3 billion alone in 2003 (World Bank, 2002, 2004). While 20% of this support is indirect support in the form of technical assistance and institution building, 80% is direct financial assistance to SMEs. Although developing country policymakers are very interested in assisting the SME sector and the World Bank is often involved in helping design these strategies, there is relatively little systematic research in this area and the rationale for these efforts remains vague. New cross-country research now sheds new light on the developmental effect that SMEs have, on their growth constraints and on policies to overcome these constraints. Some of this research was presented at a recent conference at the World Bank in Washington D.C.¹

Efforts targeted at the SME sector are based on the premises that (i) SMEs are the engine of economic development, but (ii) market and institutional failures impede their growth, thus justifying government interventions. Despite the growing interest of the development community in subsidizing SMEs, however, there are skeptical views that question the efficacy of pro-SME policies. Some question that SMEs are more productive, and argue that they are not better at job creation than large firms when one also considers job destruction and the quality of the jobs created. Others argue that it may be optimal for firms to stay small in environments where the institutional environment does not support their growth, thus making SME-promotion efforts futile.

and even counter-productive. The business environment view doubts the crucial role of SMEs and instead stresses the importance of the business environment facing all firms, large and small. From this perspective, low entry and exit barriers, well-defined property rights, effective contract enforcement, and firm access to finance characterize a business environment that is conducive to competition and private commercial transactions.

While the recent microeconomic literature has provided little evidence in favor of pro-SME arguments of higher efficiency and developmental impact, ample evidence has been accumulated on the higher growth constraints that SMEs face relative to larger enterprises. In the absence of reliable cross-country databases, most of these studies, however, have been limited to individual countries. The recent compilation of cross-country databases on the importance of SMEs and of cross-country firm-level surveys, finally have given researchers the tools to assess the following questions: (i) Is the relative size of the SME sector related to economic growth and poverty alleviation? (ii) What are some of the growth constraints SMEs face? (iii) What are different ways of relaxing these constraints? This article will summarize recent cross-country research to answer these three questions.

2. **SMEs – Different views**

Advocates of pro-SME policy interventions cite three core arguments. First, they argue that SMEs enhance competition and entrepreneurship and hence have external benefits for economy-wide efficiency, innovation, and aggregate productivity growth. Second, proponents of SME support frequently claim that SMEs are more productive

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2 For literature surveys on pro-SME arguments, their criticism and empirical evidence, see Hallberg (2001) and Biggs (2002).
than large firms but financial market and other institutional failures impede their operation and growth. Thus, pending financial and institutional improvements, direct government financial support to SMEs can boost economic growth and development. Finally, some argue that SME expansion boosts employment more than large firm growth because SMEs are more labor intensive, and thus subsidizing SMEs may help reduce poverty.

While the international community channels a large and growing amount of aid into subsidizing SMEs, four skeptical views question the efficacy of this policy. First, some authors stress the advantages of large firms. Specifically, large enterprises may more easily exploit economies of scale and be able to bear the fixed costs associated with research and development (R&D) with positive repercussions for productivity growth (Pagano and Schivardi, 2001; Pack and Westphal, 1986). Empirical evidence also shows that large firms offer more stable employment, higher wages and more non-wage benefits than small firms in developed and developing countries, even after controlling for differences in education, experience and industry (Rosenzweig, 1988; Brown et al., 1990).

A second set of skeptical views directly challenges the assumptions underlying pro-SME arguments. In particular, some research finds that SMEs are neither more labor intensive, nor better at job creation than large firms (Little et al., 1987).

A third set of skeptical views question the validity of considering firm size as an exogenous determinant of economic growth. Country characteristics such as natural resource endowments, technology, policies, and institutions help determine a nation’s industrial composition and optimal firm size (You, 1995). Institutional theories suggest
that firm size will reflect the margin between intra-firm transactions costs and market transactions costs, such that as market transaction costs fall relative to intra-firm transactions costs the optimal firm size falls (Coase, 1937). This margin will vary across industries and countries for various institutional and technological reasons. Thus, from this perspective, pro-SME subsidization policies could actually distort firm size and potentially hurt economic efficiency.

A fourth skeptical view regarding the efficacy of pro-SME policies, which we call the business environment view, doubts the crucial role of SMEs, but instead stresses the importance of the business environment facing all firms, big and small. From this perspective, low entry and exit barriers, well-defined property rights, effective contract enforcement, and firm access to finance characterize a business environment that is conducive to competition and private commercial transactions. While these factors may encourage the development of SMEs, the focus of the business environment view is not on SMEs per se; it is on the environment facing all businesses. Thus, consistent with the other skeptical views, the business environment view questions the pro-SME policy prescription of subsidizing SME development.

3. **SMEs and Economic Development – Correlation or Causality?**

While many country-level and microeconomic studies have assessed the importance of SMEs in the economic development and industrialization process (Snodgrass and Biggs, 1996), the lack of reliable cross-country data has impeded a rigorous cross-country analysis so far. In a recent data compilation effort, Ayyagari, Beck, and Demirguc-Kunt (2002) constructed a database with comprehensive statistics
on the contribution of the SME sector to total employment in manufacturing and to GDP for more than 70 developed, developing and transition economies. One of the interesting stylized facts emerging from the data is that richer countries have larger SME sectors in manufacturing in terms of their contribution to total employment and to GDP (Figure 1).

The examples given in Table 1 confirm the picture of a wide variation in the importance of SMEs. Countries with a larger share of SMEs also tend to have a business environment that eases entry and exit, better protects property rights and facilitates access to finance.

Table 1: SMEs and Business Environment around the world.

<table>
<thead>
<tr>
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<th>GDP per capita</th>
<th>SME250</th>
<th>Business Environment</th>
</tr>
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<tbody>
<tr>
<td>Brazil</td>
<td>4,327</td>
<td>59.8</td>
<td>-0.34</td>
</tr>
<tr>
<td>Cameroon</td>
<td>653</td>
<td>20.27</td>
<td>-1.98</td>
</tr>
<tr>
<td>Poland</td>
<td>3,391</td>
<td>63.00</td>
<td>0.15</td>
</tr>
<tr>
<td>Germany</td>
<td>30,240</td>
<td>59.5</td>
<td>0.82</td>
</tr>
<tr>
<td>Philippines</td>
<td>1,099</td>
<td>66</td>
<td>-0.70</td>
</tr>
<tr>
<td>Korea</td>
<td>10,508</td>
<td>76.25</td>
<td>1.03</td>
</tr>
<tr>
<td>Turkey</td>
<td>2,865</td>
<td>61.05</td>
<td>-0.12</td>
</tr>
<tr>
<td>Japan</td>
<td>42,520</td>
<td>71.7</td>
<td>1.09</td>
</tr>
</tbody>
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GDP per capita is in constant U.S. dollars averaged over the period 1990-99. SME250 is the share of SMEs in manufacturing, where an SME is defined as a formal enterprise with less than 250 employees. Business Environment is a principal component indicator of four variables measuring property right protection, contact enforcement, cost of entry regulations and effective bankruptcy system, and has an average value of zero and a standard deviation of one. It takes higher values for a more effective business environment. Source: Beck, Demirguc-Kunt and Levine (2005a).

Does the positive correlation of GDP per capita with the importance of SMEs in manufacturing imply that a large SME sector is a pre-condition for economic growth? Beck, Demirguc-Kunt and Levine (2005a) provide the first cross-country evidence on the links between SMEs, economic growth, and poverty alleviation, using the SME database compiled above for over 70 developed and developing countries.

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3 While broader statistics of SMEs’ contribution to employment across all sectors would be preferable, no such data is available for a large cross-section of countries.
Regressions of GDP per capita growth, averaged over the 1990s, on a measure of the importance of SMEs in manufacturing and an array of other country characteristics that can account for differences in growth across countries show a strong relationship between the importance of SMEs and economic growth. This relationship still holds when the analysis controls for the importance of the informal economy and excludes transition economies and Sub-Saharan African countries whose growth path might vary from those in other regions. Instrumental variable regressions that explicitly control for reverse causation and simultaneity bias, however, erode the significance of the relationship between SMEs and economic growth. This finding is consistent with the view that a large SME sector is a characteristic of fast-growing economies but not a cause of their rapid growth. Beck, Demirguc-Kunt and Levine (2005a) also do not find any evidence for any association of a large SME sector with faster income growth of the lowest income quintile and faster rates of poverty reductions.

While cross-country comparisons provide no evidence that SMEs cause economic growth or reduce poverty, cross-country regressions provide qualified evidence that an effective business environment does cause growth. Cross-country regressions of GDP per capita growth on the business environment indicator and an array of other potential growth factors show a strong relationship between an effective business environment and economic growth. Moreover, they show that this relationship still holds even when extracting the exogenous component of business environment in instrumental variable regression, i.e. when the analysis takes into account the possibility that faster-growing countries might adopt more effective business regulations or that a third factor might drive both an effective business environment and economic growth. So, unlike for SMEs,
there is evidence that an effective business environment is not just a characteristic of successful economies but also plays an important part in their success.

Figures 2 and 3 illustrate the relationships between GDP per capita, and SMEs and Business Environment, respectively. The figures are partial scatter plots, thus controlling both for other factors that explain cross-country variation in GDP per capita growth and for the possible reverse causation and third factors driving SME development and Business Environment, on the one hand, and GDP per capita growth, on the other hand. While both graphs show a positive relationship, the relationship between GDP per capita growth and the exogenous component of the SME indicator is not significant unlike the relationship between GDP per capita growth and the exogenous component of Business Environment.

Cross-country evidence on the importance of the business environment is complemented by industry-level, firm level and survey evidence that consistently shows a positive association of a competitive business environment with entry and entrepreneurship, productivity and growth. Klapper, La even and Rajan (2004) show that one channel through which the business environment affects economic development is the entry of new firms. Using firm-level data for Western and Eastern Europe, they find that entry regulations, measured as the cost of registering a firm, hamper the creation of new firms, while regulations fostering property right protection and access to finance enhance entry. Further, the effect of depressed entry shows up in lower productivity: value added per employee in natural “high entry” industries grows more slowly in countries with more onerous regulations on entry. Firms are not only more likely to enter in countries with better access to external finance and better investor protection they are
also more likely to incorporate than to maintain the legal form of proprietorships (Demirguc-Kunt, Love and Maksimovic, 2004). Using firm-level survey data for 52 countries, Demirguc-Kunt, Love and Maksimovic show that one of the reasons for this variation in the likelihood of incorporating could be the fact that incorporated firms face lower obstacles to their growth in countries with better-developed financial sectors and efficient legal systems and grow faster in these countries. Using survey data from interviews with entrepreneurs and non-entrepreneurs in 7 cities across Russia Djankov et al. (2005) provide further evidence for the importance of the business environment for the decision of becoming an entrepreneur. They find that in addition to many personal characteristics the perception of corruption and government officials’ attitude towards entrepreneurship affects the decision to become an entrepreneur. Similarly, Johnson et al. (2002) find that entrepreneurs in transition economies are more likely to reinvest their profits if they feel more secure about property right protection in their country, while Cull and Xu (2005) find that Chinese entrepreneurs are more likely to reinvest their profits if they are more confident in the system of property rights protection and have easier access to credit, with this effect being stronger for small firms.

Together, these results suggest that it is important to have a competitive business environment that allows for the entry of new and innovative entrepreneurs resulting in the Schumpeterian process of “creative destruction” rather than simply having a large SME sector, which might be characterized by a large number of small enterprises that are neither able to grow nor to exit.
4. Constraints faced by SMEs: Impact on Firm Size, Growth and New Entry

Although SMEs per-se are not a precondition for economic development, successful economies are characterized by a larger share of SMEs in manufacturing. This raises the question of why SMEs can flourish in some but not in other countries.

Both in the developing and in the developed world small firms have been found to have less access to external finance and to be more constrained in their operation and growth (Berger and Udell, 1998; Galindo and Schantiarelli, 2003). Recent cross-country firm-level surveys have enabled researchers to not only explore firm-differences within specific countries, but also compare firms across countries and link it to country characteristics such as financial and institutional development. The World Business Environment Survey (WBES) is a unique firm-level survey conducted in 1999 and 2000 for over 10,000 in more than 80 countries. First, this database provides information on the obstacles as perceived by the firms and allows researchers to relate these obstacles to actual firm growth. Second, the database contains information on a broad cross-section of different types of firms, including a large number of small and medium-size enterprises, firms of different ownership and organizational structure.

Financing Constraints, Access to Finance and Growth: The Importance of Size

Firms in the WBES were asked to rate financing and other obstacles, such as infrastructure, crime, macroeconomic instability and corruption in terms of their impact on the operation and growth of the firm. Schiffer and Weder (2001) show that small firms consistently report higher growth obstacles than medium-size or large firms. Beck, Demirguc-Kunt, Laeven and Maksimovic (2006) show that size, age and ownership are
the most reliable predictors of firms’ financing obstacles. The authors find that older, larger and foreign-owned firms report lower financing obstacles. The relationship is not only statistically but also economically significant. The probability that a small firm lists financing as a major obstacle (as opposed to moderate, minor or no obstacle) is 39% compared to 36% for medium-size firms and 32% for large firms. The higher financing obstacles that small firms report match not only anecdotal evidence from both developed and developing countries, they also confirm theory’s predictions. In a world with fixed transaction costs and information asymmetries, small firms with demand for smaller loans face higher transaction costs and face higher risk premiums since they are typically more opaque and have less collateral to offer.

Not surprisingly, the data also show that small firms finance a smaller share of their investment with formal sources of external finance (Beck, Demirguc-Kunt and Maksimovic, 2003). As shown in Figure 3, small firms finance on average 13 percentage points less of investment with bank finance than large firms. While there are no significant differences in the case of lease finance, larger firms finance a greater share of investment with equity and – perhaps surprisingly – with development finance than small firms. On the other hand, smaller firms finance a larger share of investment with informal sources of finance, such as moneylenders or family and friends.

Do the higher financing obstacles that small firms report actually constrain their growth or do they find ways around these obstacles? Beck, Demirguc-Kunt and Maksimovic (2005) find that the higher obstacles faced by smaller firms indeed translate into slower growth. As shown in Figure 4, small firms’ financing obstacles have almost twice the effect on annual growth that large firms’ financing obstacles do. The difference
is even stronger in the case of growth constraints related to the legal system and to corruption, where small firms suffer more than three times as much in the form of slower growth as large firms. Small firms thus do not only report facing higher growth obstacles, these higher obstacles are also more constraining for their operation and growth than in the case of medium-size and large firms.

Financing Constraints, Access to Finance and Growth: The Importance of Institutions

The newly available cross-country firm-level surveys do not only allow researchers to assess the differences in financing constraints and patterns across firms of different sizes, but also to explore the effect of different policies on these differences. Beck, Demirguc-Kunt, Laeven and Maksimovic (2006) show that institutional development, broadly defined, is the most significant country characteristic that can explain cross-country variation in firms’ financing obstacles, even after controlling for cross-country income per capita variation. Firms in countries with higher levels of institutional development report significantly lower financing obstacles than firms in countries with less developed institutions. The positive effect of financial and institutional development can also be observed in the use of external finance. Better protection of property rights increases external financing of small firms significantly more than it does for large firms, particularly due to the differential impact it has on bank and supplier finance (Beck, Demirguc-Kunt and Maksimovic, 2003). Box 1 provides a historical perspective on SME financing patterns. Box 2 discusses examples from Africa where ethnic networks often replace formal institutions.
Combining firm-level data with indicators of national policies and institutions also helps researchers assess the causes for the missing middle phenomenon observed in many developing countries. For example, Sleuwaegen and Goedhuys (2002) show that smaller firms grow relatively faster in Germany than in Côte d’Ivoire, while the opposite holds for large firms. What drives these differences in the growth rates of small and large firms in developed and developing countries?

Two papers using different methodologies, aggregation levels and datasets show the extent to which financial and institutional underdevelopment help explain the phenomenon of the missing middle for broad cross-country samples. Using the WBES, Beck, Demirguc-Kunt and Maksimovic (2005) show that the effect of growth obstacles on firm growth is smaller in countries with better-developed financial and legal systems. And even more, it is the small firms that stand to gain most from financial and institutional development. The effect of financial and legal development on the constraints-growth relationship is significantly stronger for small firms than for large firms. Financial and institutional development thus helps close the gap between small and large firms. Using cross-industry, cross-country data for 44 countries and 36 industries in the manufacturing sector, Beck, Demirguc-Kunt, Laeven and Levine (2004) show that financial development exerts a disproportionately large positive effect on the growth of industries that are technologically more dependent on small firms. Their results suggest that the furniture industry (an industry with many small firms) should grow 1.4% per annum faster than the spinning industry (an industry with relatively few small firms) in Canada (a country with a well developed financial system) than in India (which has a low level of financial development). Since the average industry growth rate in their
sample is 3.4%, this is a relatively large effect. Thus, small firms not only suffer more from market frictions such as transaction costs and information asymmetries than large firms – as discussed above – but these market frictions have a disproportionately larger effect on small firms in countries with less developed institutions.

The constraining effect of financial and institutional underdevelopment also shows up in a distorted size distribution. Kumar, Rajan and Zingales (2000) find that the average size of firms in human capital-intensive and R&D intensive industries is larger in countries with better property rights and patent protection. Similarly, Beck, Demirgüç-Kunt and Maksimovic (2004) show that firms in industries that rely more on intangible assets are larger in countries with better-developed financial and legal systems. These results suggest that it is the risk of expropriation of returns that keeps firms smaller in countries with weak legal and financial systems. Using data across Mexican states, Laeven and Woodruff (2004) show that legal system efficiency is positively associated with firm size, an effect that is strongest in sectors where proprietorships dominate. This suggests that more effective legal systems increase investment by firm owners by reducing the idiosyncratic risk proprietors face. The finding of a positive association between financial and legal development and firm size has important implications for SME-promotion policies. If in the absence of well-developed institutions, it is optimal for firms to stay small, efforts to promote growth of SMEs cannot be expected to be successful, unless institutional shortcomings are addressed first.
Box 1. Financing of SMEs: A Historical Perspective

How do financing patterns of SMEs in today’s developing economies compare with the financing patterns of SMEs in yesterday’s developing economies? Cull, Davis, Lamoreaux, and Rosenthal (2004) explore a new angle in the debate on financing patterns of SMEs by exploring the financial resources available to SMEs in the core North Atlantic economies during the 19th and early 20th centuries. They find that the main institutions associated with modern finance—banks and securities markets—were of marginal significance to SMEs, but an impressive variety of local institutions emerged to supply their needs. These intermediaries ranged from notaries in France that in the absence of readily available information took a broker function in obtaining financing for SMEs to the cooperative movement in Germany and other countries that focused on local SME lending. Most of these institutions were demand driven and were established through private initiative. While governments played little role in creating these institutions, they allowed their emergence through a generally permissive regulatory environment.

Box 2. Business networks as tool to overcome growth constraints

In many African countries, ethnic identity is a significant predictor of firms’ access to credit, productivity and growth (Biggs and Shah, 2005). In these countries, networks substitute for the weak business environment. Indian entrepreneurs in East Africa, Lebanese firms in West Africa and European enterprises in Southern Africa form business networks whose members lend to each, provide personal references and ease transactions with an informal contract enforcement system based on reputation. These
networks help overcome the problems of asymmetric information and weak formal contract enforcement systems. Advantages of networks even extend to new entrants who start out twice as large in terms of assets as new entrants outside the ethnic networks and get immediate access to supplier credit without having to build up a reputation and relationships (Biggs and Shah, 2005). While networks with private institutional support systems help their members overcome deficiencies in their economies’ institutional environment, they have a discriminatory effect on non-members who can effectively be excluded from market exchanges. This has not only negative repercussions for equity, but also provides for a static pattern of business exchange, with little competition and innovation.

5. **Beyond Financial and Institutional Development: Creative Ways of Relaxing SMEs’ Financing Constraints**

Results reported so far show a strong economic effect of financial and institutional development on easing SMEs’ financing constraints and on increasing their access to formal sources of external finance. But what are the policies that drive SME-friendly financial and institutional development? What can policy makers do, both in the short- and in medium- to long-term, to ease SMEs’ financing constraints and improve their access to external financing, thus leveling the playing field?

Credit availability of enterprises, but especially of SMEs, depends on the infrastructure that supports financial transactions, including the legal system and the information environment. Commercial laws that effectively assign and protect property rights and their efficient enforcement are crucial for financial transactions. This includes
the laws, regulations and institutions to create, register and enforce collateral and an
effective bankruptcy system. Firms in countries with more effective and more adaptable
legal systems report lower financing obstacles (Beck, Demirguc-Kunt and Levine, 2005b)
and the effect of financial and legal obstacles on growth is lower in countries with better
developed legal systems, especially for small firms (Beck, Demirguc-Kunt and
Maksimovic, 2005). A rapidly expanding literature has shown the positive effect that
credit information sharing has on the credit availability to SMEs (Pagano and Jappelli,
1993; Miller, 2003; Love and Mylenko, 2003). Since the mid-1990s, the use of
information from these bureaus and of proprietary information from financial institutions
for small business credit scoring has become popular in the U.S. and other developed
economies. This technique relies mostly on information on the owner rather than the
small firm itself and can significantly reduce transaction costs of loan processing. Frame,
Padhi and Wosley (2004) show that the use of credit-scoring techniques has increased
small business lending by banks in the U.S. While the high start costs and reliance on a
strong information environment have limited credit scoring models to the U.S. and a few
other developed economies, Miller and Rojas (2004) propose to study the feasibility of
developing a small business credit scoring model using pooled data from banks in
Colombia and Mexico.

Depending on the legal and information environment in their respective country,
financial institutions around the world have developed specific techniques to lend to
small, opaque firms with little or no collateral. While relationship lending – lending
decisions based on soft information and long-term relationships between lender and
borrower - has long been seen as the major lending technology benefiting SMEs, the last
decades have seen the rise of new transaction lending technologies – based on hard information - that have found ways around the constraints that opaqueness and lack of appropriate collateral pose for SME lending.

Asset-based lending and leasing are both lending techniques focused on the underlying asset as the primary source of repayment (Berger and Udell, 2005). Leasing is mostly for equipment, while asset-based lending is also used for accounts receivable and inventory. While asset-based lending uses the underlying asset as collateral, the lender – lessor – owns the equipment in a leasing relationship and rents it to the lessee (borrower). While asset-based lending relies on a sophisticated and efficient legal system – which might be the reason why it has a significant presence in only four countries -, leasing does less so, since the ownership of the asset passes to the financier. Leasing can also have tax advantages if lessor and lessee face different marginal tax rates (International Finance Corporation, 2000).

Factoring involves the purchase of accounts receivable by a financier, known as the factor. Strictly speaking, factoring is thus not a lending technique, which makes it especially attractive in countries with weak legal systems. It also does not rely on information about the “borrower”, but rather on the obligor, which makes it an attractive financing instrument for relatively opaque SMEs. Reverse factoring relies even less on informational infrastructure, as the factor enters into an agreement with a large company to finance accounts receivable from its small suppliers (Klapper, 2005).

Finally, the banking market structure and regulatory policies influencing this market structure can have an important impact on the availability of SME financing (Berger and Udell, 2005) including on the different new technologies discussed above.
While a large share of small banks does not necessarily result in more external financing available to small firms, financial systems dominated by government-owned banks seem less effective in providing credit to SMEs, while the entry of foreign banks is mostly associated with greater SME credit availability (Clarke, Cull, Martinez Peria and Sanchez, 2003). For example, foreign banks can bring the necessary know-how and scale to introduce new transaction lending techniques. There are mixed results concerning the effect of concentration and competitiveness on the availability of SME financing (Berger, Demirguc-Kunt, Haubrich and Levine, 2004).

6. Conclusions and Policy Implications

This article summarizes recent empirical research that sheds new light on the developmental impact of SMEs and the business environment, and the effect that financial and legal institutions have on SMEs’ growth obstacles.

First, this research emphasizes the importance of strengthening the overall business environment for all firms, instead of focusing on and subsidizing SMEs. Indeed, there is no robust evidence that SMEs per se do matter for growth or poverty alleviation, although having a better business environment that promotes competition, protection of private property rights, and sound contract environment, boosts economic growth. In other words, splitting big firms into small firms or subsidizing small firms will not lead to faster growth, unless more fundamental reforms are undertaken to address the underlying reasons for the inability of firms to fulfill their growth potential.

Second, SMEs indeed face greater growth obstacles, and limited access to finance is an important one of these. Furthermore, compared to large firms small firms are also
more constrained by these obstacles. Inability to access finance may be one of the reasons why we do not see a robust correlation between SME prevalence and economic growth, since it appears that financial constraints are particularly preventing small firms from reaching their growth potential. Thus improving institutions would certainly be important in leveling the playing field so that all deserving firms – including small ones- would be able to access finance.

Third, financial development helps the small firms the most. Indeed, both firm-level and industry-level studies suggest that small firms do relatively better compared to large firms in countries with better-developed financial institutions. With financial development, small firms grow faster since their financing constraints are relaxed to a greater extent. Furthermore, industrial sectors that naturally should have a disproportionate number of firms also grow faster with financial development, suggesting that it is the small firms that benefit the most. Further, the lack of well-functioning financial markets and underdeveloped legal systems make it very difficult for firms to grow to their optimal size since outside investors cannot prevent expropriation by corporate insiders. This is important for SME-promotion strategies since if it is optimal for firms to stay small in countries with underdeveloped institutions, simply subsidizing SMEs may be at best ineffective but at worst, counterproductive.

Fourth, it is not only firm growth that is hampered by weaknesses in business environment, but also entry. Indeed, bureaucratic entry regulations do impede entry but perhaps more importantly, they also negatively affect the growth and size of incumbent firms. However other regulations such as those that enhance the enforcement of intellectual property rights or those that lead to a better developed financial sector are
beneficial in that they lead to greater entry. Similarly, firm incorporation decisions and entrepreneurship are also affected by the business environment. Businesses are more likely to incorporate in countries with better-developed financial sectors and efficient legal systems. Similarly, individuals are more likely to become entrepreneurs and they are more likely to reinvest their profits if the institutional environment is favorable.

Fifth, although developing institutions and building a more enabling business environment are key to improving firm entry and performance, and particularly that of smaller firms, institution building is a long term process, fraught with many challenges. In the interim, innovative lending technologies hold promise. These can provide market-friendly ways of relaxing the constraints of the SMEs. Some technologies, such as factoring are particularly promising in the interim, since they rely on institutions to a lesser extent. However others such as credit-scoring and leasing can also be useful for relaxing the financing constraints of SMEs and their use would improve with development of institutions over time. Foreign institutions have an important role to play in facilitating the adoption of these technologies, whereas public banks have been less useful in the past.

7. **SME Research – Looking Forward**

The research summarized in this article is only the first step on a long term research agenda. First, the cross-country results on the effects of SMEs and the business environment on economic development have to be confirmed with other empirical studies that use better measures and exploit time-series variation and microeconomic data. Second, micro-economic analyses and country case studies should explore in more details
the policies and financing tools that can help SMEs overcome financing constraints and expand their access to external finance. In this context, it seems especially relevant to focus on institutions that are important for SMEs’ access to finance. Going along with institution-building, however, the search has to be continued for financing tools that can work around institutional deficiencies.
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Fig 1. SME Sector's Contribution to Total Employment and GDP (Median Values)
Figure 2: The Importance of SMEs and GDP per Capita Growth

This figure represents the two-dimensional representation of the regression plane in GDP per capita growth – predicted SME250 space. To obtain this figure, we regress GDP per capita growth $X$, collect the residuals, and call them $e(GDP \text{ per capita growth } | X)$. Next, we regress the predicted SME250 from the first stage on $X$, collect the residuals, and call them $e(\text{SME250 } | X)$. Then, we plot $e(\text{GDP per capita growth } | X)$ against $e(\text{SME250 } | X)$. Source: Beck, Demirgüç-Kunt and Levine (2005a).
Figure 3: The Business Environment and GDP per Capita Growth

This figure represents the two-dimensional representation of the regression plane in GDP per capita growth – predicted Business Environment space. To obtain this figure, we regress GDP per capita growth $X$, collect the residuals, and call them $e(\text{GDP per capita growth} \mid X)$. Next, we regress the predicted Business Environment from the first stage on $X$, collect the residuals, and call them $e(\text{Business Environment} \mid X)$. Then, we plot $e(\text{GDP per capita growth} \mid X)$ against $e(\text{Business Environment} \mid X)$. Source: Beck, Demirguc-Kunt and Levine (2005a).
Figure 4: Financing Patterns across Firms of Different Sizes

This graph shows the predicted share of investment financed with bank, equity, lease, supplier, development bank and informal finance by (i) small, (ii) medium-size, and (iii) large firms, from a regression of the respective financing share on size dummies and other firm and country characteristics. Source: Beck, Demirguc-Kunt and Maksimovic (2004).
Figure 5: The effect of financing obstacles on firms of different sizes

This graph shows the effect of financing, legal and corruption obstacles on firm growth and is based on a regression of firm growth on the respective growth obstacle, interacted with dummy variables for small, medium-size and large firms, and controlling for other firm and country characteristics. Source: Beck, Demirguc-Kunt and Maksimovic (2005).