UNDERSTANDING MICRO AND SMALL ENTERPRISE GROWTH

microREPORT #36

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The Accelerated Microenterprise Advancement Project (AMAP) is a four-year contracting facility that U.S. Agency for International Development (USAID)/Washington and Missions can use to acquire technical services to design, implement, or evaluate microenterprise development, which is an important tool for economic growth and poverty alleviation.

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ABBREVIATIONS

GEM	Global Entrepreneurship Monitor
GEMINI	Growth and Equity through Microenterprise Investments and Institutions
IDB	Inter-American Development Bank
IFC	International Finance Corporation
ILO	International Labour Organization
MSE	Micro- and small enterprise
OECD	Organisation for Economic Co-operation and Development
USAID	United States Agency for International Development

ABSTRACT

This paper discusses the factors that determine small firms' ability to grow. The authors discuss evidence about how contextual (business environment), social, individual entrepreneur, and firm-level variables influence micro and small enterprise (MSE) growth. The paper adopts a framework based on opportunities and capabilities and discusses how firm productivity contributes to growth. The authors conclude by discussing how development practitioners can link small enterprise growth to their programs' desired development objectives, and offer suggestions about targeting growth-oriented "gazelles" versus survivalist firms.

Keywords: micro and small enterprise, growth, productivity, entrepreneur, business environment, value chains, inter-firm cooperation, horizontal and vertical linkages, supporting markets, social networks, social capital, individual entrepreneur, and firm-level characteristics.

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EXECUTIVE SUMMARY

The discussion on MSE growth presented in this paper may raise more questions than it answers. The paper provides specific insights about each of a set of factors that contribute to MSE growth in developing countries. More importantly, it conveys how firm growth results from the interaction of a number of variables, offering a framework based on opportunities and capabilities. In the causal model used by this paper, productivity is an important mediating variable—contributing to growth via enhanced firm-level capabilities.

The discussion is organized around four sets of growth factors:

- The business environment, which defines the world of opportunities and incentives available to all firms, as well as specific incentives/disincentives or obstacles to growth;
- The nature of the value chain, including the types of relationships MSEs can have with other firms;
- Social networks, which in positive cases represent an asset that entrepreneurs can leverage for multiple purposes, and
- Individual and firm-level characteristics, which relate primarily to capabilities.

The research found that:

- The business environment may affect MSEs directly and indirectly in a variety of ways.
  - There are important nuances in the relationship between MSE growth and the overall business cycle: the overall MSE sector expands during economic downturns due to an increase in survivalist-type activities, although individual MSEs may stagnate or contract. In addition, during severe economic crises, MSEs may be more resilient than their larger counterparts.
  - Regulatory obstacles represent a disproportionate burden for smaller firms.
- Value chain characteristics—such as the rate of industry growth, the strength and nature of demand from end markets, and the type of organization or governance structure of the chain—can make MSE growth more or less likely.
- Inter-firm cooperation, such as horizontal and vertical linkages, can be especially powerful catalysts to growth when they expand business opportunities and enhance firm capabilities at the same time.
- Social networks can help entrepreneurs identify business opportunities and overcome a number of obstacles related to transaction costs, contract enforcement, and regulation. In some cases, however, traditional customs associated with these networks may hinder MSE growth.
- Individual characteristics of entrepreneurs and their households exhibit the following influences on MSE growth:
  - More education correlates with MSE growth above a country-specific threshold. Higher education can expand an entrepreneur's opportunity set, but ironically, might hinder the growth of his or her MSE.
  - Experience—gained on the job or through prior employment—is a critical growth factor.

  - Women-owned firms face multiple challenges. Although evidence shows they are as effective as male owner/managers, women often use their firms as part of household survival strategy and opt not to grow.

- Firm characteristics are related to growth in the following ways:
  - Youth correlates strongly to robust growth.
  - Informality reduces chances for growth, and is associated with several other characteristics that make growth difficult.
  - Lack of access to finance is widely accepted as a major obstacle to MSE growth.

Theory holds that entrepreneurs learn as they go and that business productivity should continue to increase even after growth has slowed, but empirical evidence shows that older businesses may lose productivity. In reality, individual businesses are likely to experience both positive (learning-by-doing, increases in productivity) and negative (crises, productivity losses) moments in their lifetime. Further, productivity increases in MSEs, can be "lumpy" when there is a lag between capital investments and a firm's ability to use all of its capacity. Recognizing that the "learn-as-you-go" model may be too simplistic, some researchers have developed frameworks based on a life-cycle approach to explaining firm growth.

IMPLICATIONS FOR DEVELOPMENT PRACTITIONERS

While this paper focuses specifically on small firm growth, it does not assume that firm growth is always the most desirable outcome, nor that small firm growth, for its own sake, should be the objective of most private-sector development projects.

The MSE sector is large and heterogeneous. Development policies and programs that include "small enterprise growth" among their explicit or implicit objectives may be targeting the majority of firms in a country. The insights from this study can help to formulate a more defined targeting strategy. Program designers and implementers should have a clearly developed causal model that shows how the intervention works to achieve small enterprise growth. Important to this is an understanding of how the intervention will influence firm opportunities, capabilities, and productivity.

A subset of growth-oriented MSEs, termed "gazelles" in this paper, have the potential to contribute substantially to value chain productivity and, ultimately, to economic growth. At the other end of the spectrum, one-person firms—often informal, owned by women, and located within the home—contribute to household survival strategies. Designers of enterprise development programs might want to segment the small enterprise sector according to certain variables to target those firms more likely to grow, or to match specific interventions and services to certain populations. Where firm growth is not the objective, programs could be designed with an explicit recognition of the important role survivalist MSEs play in maintaining employment and income among poor populations.

Where MSE growth or competitiveness is the goal, practitioners will want to pay attention to the nature of value chain linkages. Beneficial linkages can simultaneously expand MSE opportunities (providing steady product demand) and capabilities (by transferring skills and knowledge necessary to improving productivity, such as in process or product upgrading). Implementers of development programs should look for ways in which they can strengthen firm linkages and build local capacity, such that MSEs and their partners are equipped to solve ongoing problems that arise in their value chain. This "problem-solving" in successful cases represents the beginning of a virtuous productivity-growth cycle in which MSE growth and upgrading is a continuous process.

1. INTRODUCTION

The notion that small firms grow to become large is a popular fairytale in the United States. As the story goes, a company is created through the almost single-handed efforts of a dynamic, hardworking entrepreneur (usually male) who slaves around the clock for years in his garage—until one day, "the big break" comes. At this point some combination of investors and customers recognize the value of the entrepreneur's unique product idea and "poof" the fledgling business is on its way to becoming a household brand name.

The truth is we know very little about how businesses grow. What studies have confirmed is that often the "winning product idea" that catapults a lone entrepreneur from his garage into multimillion-dollar offices is the exception rather than the rule (Collins and Porras, 1994). Moreover, while the scenario above may be believable when the garage in question happens to be located in Palo Alto, California, it becomes downright implausible if the start-up is based in a place like La Paz, Bolivia; Nairobi, Kenya; or Dhaka, Bangladesh.

Developing-country entrepreneurs have to be twice as creative as their counterparts in wealthier nations, if they are to overcome obstacles such as dysfunctional legal and financial systems, distorted markets, and unequal access to resources. Large companies in Latin America, Africa, or Asia are even more likely than U.S. firms to have started out large—as offshoots of existing companies with significant resources to invest or as part of a portfolio of businesses owned by already successful entrepreneurs.

However, some striking similarities do exist between small firms in developed and developing countries. Entrepreneurs around the world attribute much of their success to past work experience and knowledge of the industry, in addition to business contacts obtained through personal social networks. In all types of economies, there is a heavy element of "churn" in the small enterprise sector, meaning that a large proportion of firms die every day, to be quickly replaced by new start-ups. And in both developed and developing countries, there appears to be a small group of fast-growing firms—sometimes referred to as "gazelles"—that vastly outperform the legions of small enterprises that may survive over time, but never quite take off.

This paper explores which types of enterprises, under what conditions, are likely to grow and/or upgrade in response to new opportunities. Evidence is drawn primarily from developing countries, with occasional reference to studies about firms in developed countries to highlight interesting contrasts or similarities. Annex A offers definitions of terms and presents supporting data from the detailed literature review conducted by the authors.

RATIONALE FOR SMALL ENTERPRISE DEVELOPMENT

Why pay attention to small enterprises? The proposition that small firms offer unique development advantages is as old as the concept of economic development itself (Snodgrass and Biggs, 1996). Proponents of policies and programs to support small firms have long claimed that they are more labor intensive, efficient, equitable in distributing the income that they generate, widely dispersed geographically, and nurturing of entrepreneurs.

Though small firms are widely recognized as contributing to growth in many developed economies (such as the United States, Italy, Japan, and the "East Asian tigers"), the presence of large numbers of MSEs in developing economies often carries a stigma, especially when the firms are informal and concentrated in markets with low barriers to entry. So, is the presence of a large number of small firms an indicator of economic health or not? Recent data in this case is neutral, showing that a higher

contribution by small enterprises is associated with, but not a cause of, higher growth (Beck, Demiurguc-Kunt, and Levine, 2003).

In addition to the perceived economic benefits, MSE development has long been viewed by policymakers as a means to increase incomes of the poor. MSE owners and workers do tend to be disproportionately poor, with the incidence of poverty within MSEs higher than in medium and large firms. However, current thinking on the part of international donors focuses less on the size of enterprises and more on outcomes, seeking patterns of economic growth that are beneficial to the poor, or "pro-poor." Growth that is broad-based by both region and sector is more likely to be faster and provide greater opportunities for the poor. Similarly, rapid growth in regions where the poor live and sectors of the economy in which they work is likely to result in poverty reduction (OECD, 2004).

In today's global economy, large multinational firms are increasingly concentrating their efforts on branding and marketing rather than production. These firms prefer to source from flexible networks, rather than setting up large production plants. The result is a new, extended supply chain reaching far into developing countries and providing new opportunities for small firms. Small firms offer a number of potential advantages as partners in value chains, often serving as a flexible and low-cost production resource, offering proximity to markets and access to land and other key resources, providing a "storyline" for companies and consumers interested in social responsibility, and supplying unique products (Goldmark and Barber, 2005).

The trend toward outsourcing described above may provide an important ingredient for small firm growth—a set of clear opportunities in the form of "demand pull." Market opportunities, however, are only one side of the equation. Firms that wish to compete and survive over the long term must demonstrate their capabilities—for example, in meeting certain quality or productivity standards. This paper will explore the factors that determine small firms' ability to grow, from broad, contextual variables such as the macroeconomic environment and the characteristics of value chains, to specific individual and firm-level characteristics. The paper uses a framework of opportunities and capabilities, under the assumption that firm growth is, over the long term, only sustainable if it is driven by increases in productivity.

While this paper focuses specifically on small firm growth, it does not assume that firm growth is always the most desirable outcome, nor that small firm growth, for its own sake, should be the objective of most private-sector development projects. Rather, it seeks to clarify in which cases firm growth, upgrading, or both may happen, and to stimulate thought about how and when MSE growth is a contributor to economic growth and poverty reduction. In some cases MSE growth is not realistic; in others is may not be necessary. For example, some entrepreneurs may view their enterprises as important sources of household incomes and wish to avoid risk-taking. Others may actively seek to enter new markets and earn increased incomes; such activities may generate local investment. However, the firm may not always be the vehicle that takes the entrepreneur from start to finish; these goals may be achieved by individuals supported by social networks, or groups of firms working together.

OVERVIEW OF MSE GROWTH

In most developing countries, MSEs constitute the vast majority of firms, generating a substantial share of both overall employment and output.[1] Given their significant economic role, one might expect MSE growth to drive overall increases in output and income levels. In many cases, however, their largest economic contribution appears to be one of maintaining—rather than generating new—employment and income for the poor.[2]

At an aggregate level, MSEs demonstrate impressive growth,[3] especially when compared with larger firms. However, many individual MSEs grow slowly or not at all—in some cases, due to a conscious decision on the part of the business owner. Overall growth rates are often fueled by the rapid expansion of a narrow group of highly performing MSEs. In developing as well as in developed countries, there appears to be a small group of "gazelles"—firms that outperform their peers and drive aggregate employment and productivity growth for the small business sector.

Why do some MSEs expand rapidly, while others stagnate? What factors account for the wide variation observed in MSE growth trajectories? This paper explores a wide array of specific factors, but it is first useful to consider a broader conceptual framework of opportunities and capabilities. Clearly, opportunities for profitable business activities shape the ability of an entrepreneur to expand his or her firm. Yet, profitable business opportunities are a necessary but insufficient condition for firm growth (Mead, interview, 2004). To take advantage of business opportunities, entrepreneurs must also possess appropriate capabilities, such as skills, resources, or technology.

Figure 1 provides an overview of how opportunities and capabilities can interact to shape the trajectories of MSE growth. This typology presents four "ideal types" of MSE growth profiles—distinctions are more blurry in reality, so a particular MSE may not clearly fall into one category. Most prominently, MSEs that demonstrate high, sustained growth rates are frequently termed "gazelles." These highly performing firms typically share two fundamental characteristics—they have profitable business opportunities and appropriate capabilities to harness these opportunities. Only a minority of firms become "gazelles," which drive overall growth in the MSE sector.

Some MSEs may face potentially lucrative business opportunities, but be unable to take full advantage of them due to inadequate capabilities. Although these "ponies" may expand quickly for short durations while trying to harness these opportunities, they often lack endurance as they do not have requisite capabilities for sustained growth. For instance, some small honey producers in Brazil initially experienced strong demand for their organic honey in open marketplaces, and hoped to sustain growth by marketing to supermarkets. However, inadequate capabilities inhibited them from achieving this goal because inappropriate technology prevented them from satisfying the formal packaging requirements of supermarkets (Nichter, 2004).

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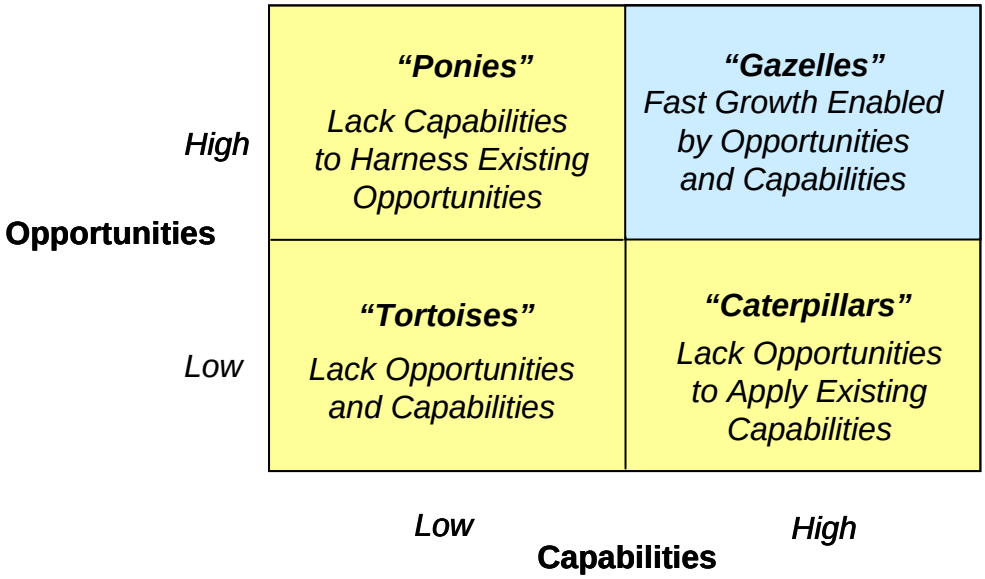
[1] In the interests of consistency and simplicity, this paper defines MSEs as firms with up to 50 workers that are engaged in non-primary activities and sell at least 50 percent of their output.

[2] MSE owners and workers do tend to be disproportionately poor, with the incidence of poverty within MSEs typically higher than in medium-sized and large firms.

[3] This paper defines MSE growth as an increase in the number of employees over time (see Annex A for more discussion).

FIGURE 1: TYPOLOGY OF MSE GROWTH PROFILES

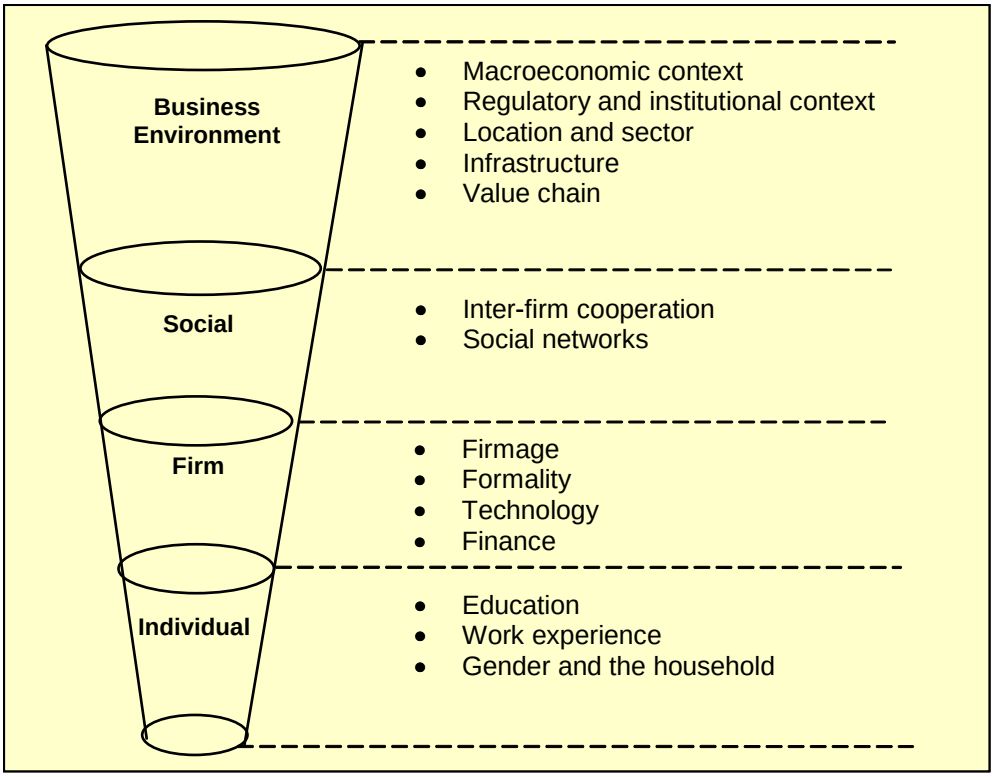


On the other hand, MSEs may have substantial capabilities, but lack viable opportunities to capitalize on them. For example, a village tailor in India may have the ability and capacity to produce more saris, but faces weak local demand and has limited access to external markets. While such entrepreneurs' may experience lackluster growth for long periods, new opportunities (such as broader market access) can catalyze rapid expansion. Just like a "caterpillar" awaiting its metamorphosis, these MSEs exhibit substantial latent opportunities for growth.

Many MSEs lack both profitable business opportunities and a host of capabilities such as skills, resources, and technology. These "tortoises" demonstrate the least proclivity toward growth, and their owners frequently focus instead on firm survival. Despite their lack of growth, these MSEs play a crucial role. In development, business growth should be considered within a broader perspective that includes income diversification and survival strategies. Even "tortoises" without employment growth often provide essential sustenance for their owners and workers. In some cases, slow or nonexistent firm growth is attributable to the entrepreneurs' competing interests rather than a lack of capabilities. Women MSE owners, for example, may be especially likely to use business proceeds to purchase household necessities, to invest in parallel enterprises, or to assist their offspring in launching new firms. Such strategies are discussed later in the paper.

This paper explores MSE growth by building on this conceptual framework of opportunities and capabilities. A range of factors play an important role in shaping the growth performance of a particular MSE, by influencing the opportunities available to owners and employees and their capabilities to take advantage of such opportunities. Figure 2 shows the factors grouped into four broad categories: contextual factors related to the business environment, social or relational factors, firm characteristics, and individual entrepreneur characteristics. The funnel shape of Figure 2 emphasizes that the factors range from broad (contextual) to narrow (related to the individual entrepreneur). The discussion that follows identifies key factors for which sufficient evidence exists in the literature, discussing how each affects MSE growth in developing countries.

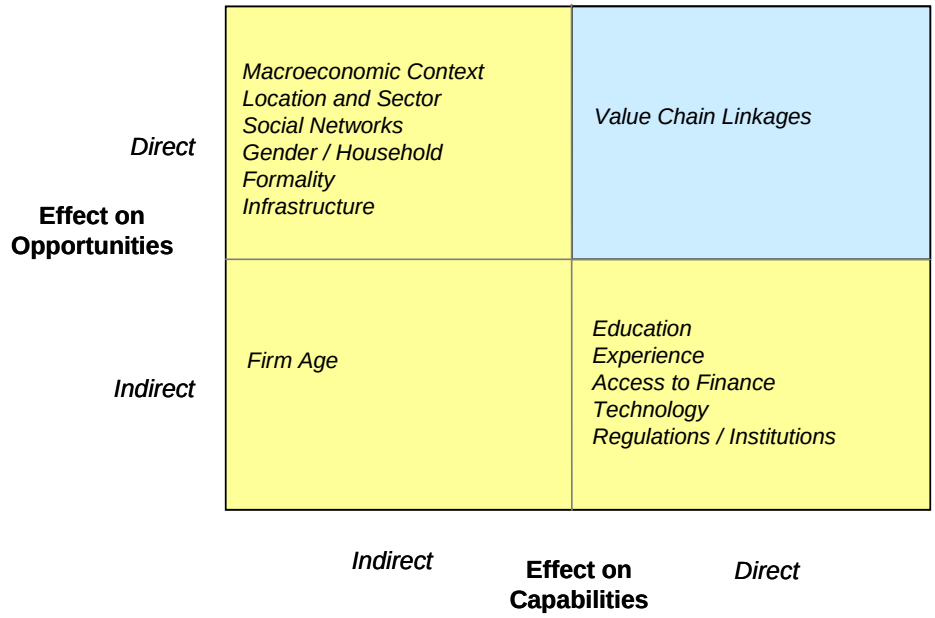
FIGURE 2: KEY FACTORS AFFECTING MSE GROWTH



Each of these factors has effects on MSE opportunities and capabilities. Figure 3 provides an overview of whether the effect of each key factor is direct or indirect. For example, the macroeconomic context can have substantial direct effects on MSE opportunities—in many cases, recessions eliminate profitable market niches by limiting demand for elastic consumption goods. The macroeconomic context frequently also has indirect effects on MSE capabilities. For instance, when central banks raise interest rates to curb inflation, MSEs often become more credit constrained (even from informal sources). Thus, the macroeconomic context has an indirect effect on MSE capabilities through another factor—access to finance. Similarly, education may not only directly enhance the capabilities of MSE owners, but also indirectly expand business opportunities through contacts and social networks. Both direct and indirect effects can substantially shape MSEs' growth trajectories.

Figure 3 highlights how important the characteristics of value chain linkages can be. By enhancing coordination between like firms (horizontal linkages) or between buyers and their suppliers (vertical linkages), or by enabling the transfer of technology, skills, or finance from one firm to another, value chain linkages can have direct effects on both firm opportunities and capabilities. For example, a lead firm sourcing electronics parts from small suppliers can offer critical expertise and access to technology, while providing steady demand for MSE products. Value chains with certain characteristics, such as a non-hierarchical governance structure (discussed below), can provide a context conducive to the development of strong vertical and horizontal linkages, thus enhancing MSE opportunities and capabilities.

FIGURE 3: GROWTH FACTORS' EFFECT ON MSE OPPORTUNITIES AND CAPABILITIES



PRODUCTIVITY AND GROWTH

MSE growth defined simply as an increase in the number of firm employees may not be sustainable, but growth accompanied by improvements in productivity is likely to contribute to the desired development effects discussed earlier, such as broad-based economic growth.[4] As any businessperson will attest, firms exhibiting fast growth tend to be more productive than are their slow-growth competitors. What does this correlation imply? Does MSE growth cause higher productivity, or does higher productivity cause MSE growth?

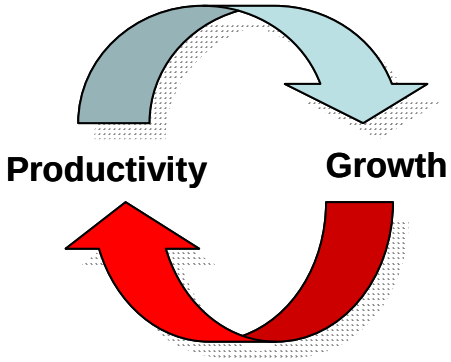
The argument that firm growth causes higher productivity is based on the assumption that economies of scale exist—meaning that firms experience a decline in average costs as output increases. The flaw in this argument becomes clear when one considers that MSEs tend not to operate in industries where economies of scale are present (Tybout, 2000), precisely because these are not industries where they are likely to be competitive.

On the other hand, economic theory supports the premise that higher productivity causes MSE growth, since productivity can be a source of competitive advantage such as low-cost production. Adopting the framework presented above and its treatment of the role of capabilities in MSE growth, the causal model would go something like this: factors such as education and experience can directly increase the capabilities of MSE owners and employees; these individuals are then more likely to adopt or create practices that heighten productivity levels, and this added productivity then contributes to growth.

In reality, both of the arguments presented above appear to hold some truth.

[4] Firm productivity refers to how much output a firm can produce with a given a level of inputs, and can be measured in various ways (see Annex A for more detailed definition).

FIGURE 4: CYCLICAL EFFECT OF PRODUCTIVITY AND GROWTH



One exceptionally rigorous World Bank study found that the initial productivity of firms is a significant determinant of subsequent growth (Aw, 2001). As shown in Figure 4, an endogenous, virtuous cycle ensues where more productive firms get larger and, in the process, obtain access to resources and information that enables them to become even more productive.

If productivity contributes to growth, the question that remains is whether MSEs are productive. Some evidence suggests that while MSEs are not inherently unproductive, one-person enterprises do tend to be systematically less productive than larger enterprises. Growth and Equity through Microenterprise Investments and Institutions (GEMINI) research found that relative to one-person firms, MSEs with two to five workers had substantially higher efficiency (in terms of returns per hour of family labor), and those with six to nine workers had even higher efficiency (Mead and Liedholm, 1998). The studies suggested that the productivity costs of being small were attainable, once the business crossed the one-worker threshold.

Last, during the firm life cycle, changes in productivity tend to be lumpy. For firms of all sizes, adding one or more units of capital or labor may not always result in immediate productivity increases. For example, new investments can result in temporary excess capacity.

2. CONTEXTUAL FACTORS

THE BUSINESS ENVIRONMENT

Contextual factors play a major role in shaping the opportunities of MSEs in developing countries. Most obviously, the overall state of the economy directly influences the availability of profitable business opportunities. Growth opportunities within existing markets, as well as the prevalence of untapped, profitable market niches, wax and wane as the business cycle evolves. It is hardly a surprise, then, that MSEs tend to grow more quickly during periods of overall economic growth (Liedholm, 2002). There are, however, some important nuances in the relationship between MSE growth and the overall business cycle: the overall MSE sector *expands* during economic downturns due to an increase in survivalist-type activities, although individual MSEs may stagnate or contract. Further, during *severe* economic crises MSEs may be more resilient than their larger counterparts.

Macroeconomic and relative price volatility is also an important issue, as experience has shown in Latin America and Sub-Saharan Africa (cf. Tybout, 2000; Berry, interview, 2004). The International Finance Corporation (IFC) recently conducted surveys of more than 10,000 firms in 80 countries, finding that both inflation and the exchange rate tend to afflict MSEs more than larger firms (Schiffer and Weder, 2001).[5] Macroeconomic trends may also affect MSEs indirectly—for example, credit constraints can limit firm capabilities, as discussed in the previous section.

The regulatory and institutional environment in developing countries—notoriously burdensome when compared with developed countries—frequently hampers small enterprise growth. Econometric analyses underscore how these challenges disproportionately harm smaller enterprises (Beck, 2004). For instance, strict regulations and high taxes may keep firms small and informal (De Soto, 1989), thereby contributing to increased transaction costs from problematic property rights protection and contract enforcement. Regulatory and institutional challenges may also deter MSE owners from making growth-enabling investments. For example, import duties on capital equipment (for example, sewing machines) may disproportionately hurt MSEs. Typically, larger firms can bypass these duties by qualifying for investment promotions, and they may be preferred in allocations processes (Liedholm, 2001). In addition, special subsidies and trade protection may offer greater benefits to larger firms, who are often more capable of lobbying (Tybout, 2000). Smaller firms more frequently report government policies to be unpredictable, and this uncertainty may be yet another factor reducing growth-enabling investments (World Bank, 2005).

Ironically, government policies that actually aim to benefit MSEs may also suppress growth if they provide disincentives for employment expansion. For example, India offers attractive incentives to small enterprises, but by some accounts, these measures backfire because growth beyond a specified level entails losing valued benefits (Mitra and Pingali, 1999; Little, 1987). For example, the manufacture of certain products in India is reserved for small firms, which reduces incentives for firm expansion (World Bank, 2005). Some owners even split up their MSEs into several enterprises in an effort to make them look smaller (Kashyap, 1988).

While there appears to be consensus on what constitutes a negative business environment, much less has been written about what a positive one looks like. There are a few generally agreed upon characteristics. These include consistency, so that business owners know what to expect and can assess risks; a stable macroeconomic environment, again, knowing what to expect from the future can be as or more important than having a low inflation rate or favorable currency position today; the

[5] The findings of this survey provide an indication of firm owners' perceptions of factors affecting their MSEs, and not necessarily the actual impact of inflation and exchange rates.

existence of mechanisms for contract enforcement and dispute resolution; an uninhibited flow of capital for foreign and domestic investment; supportive labor laws; access to information, and investment in education and technology.[6]

VALUE CHAINS

A value chain refers to the "full range of activities which are required to bring a product or service from conception, through the different phases of production, delivery to final consumers, and final disposal after use" (Kaplinsky and Morris, 2001, p. 4). Consider the value chain for apparel. By most accounts, the apparel value chain includes five main parts: 1) the supply of raw materials (e.g., fibers); 2) the provision of components (e.g., yarn and fabrics); 3) production networks made up of garment factories; 4) export channels established by trade intermediaries; and (5) marketing networks at the retail level (Gerrefi and Memedovic, 2003). Within a given value chain, MSEs may be involved in any number of activities, including primary production, assembly, and service provision.

Value chain characteristics can hold implications for the type and nature of opportunities for MSE growth. These include growth and demand, sector and industry, and the organization or governance structure of the value chain. Conventional wisdom tell us that chains need to grow quickly to provide opportunities for business growth all around, while stagnant or shrinking chains are likely to exhibit trends such as consolidation and "weeding out" of less competitive firms. However, experience in development also shows that value chain growth may be necessary but not sufficient to guarantee MSE participation or to ensure that MSEs benefit from growth. The discussion below highlights characteristics in addition to value chain growth that appear critical to MSE development.

An important dimension of growth or potential growth in a value chain is strong demand from the end market, whether local, regional, or international. While an increase in the volume of goods demanded by the end market may provide opportunities for MSE growth, a related factor is the type of goods demanded. In commodity chains with standardized products, participating firms will feel pressure to compete based on low costs, whereas consumers demanding differentiated products are likely to be willing to pay higher prices, which may translate into higher margins throughout the chain.

A sophisticated consumer in local markets is one of the best indicators to predict whether developing-country firms—and by implication, MSEs—are likely to participate in the value-added functions of production. Fairbanks and Lindsay (1997) refer to the ways in which demanding customers in the home market give international producers their competitive edge. "If you can sell shoes to an Italian woman, you can sell shoes anywhere in the world," says Fairbanks[7]. A lesser known but perhaps more appropriate example is the success that Brazilian bikinis have had in markets around the world. Certainly, Brazilians possess a large, diverse, and sophisticated consumer base for bikinis, and producers, both large and small, have turned that to their advantage when selling in faraway markets. Some small and little-known Brazilian bikini producers, looking to export during the local off-season, have been able to sell their products to high-end boutiques in European capitals.

Without demanding local consumers it is less likely that developing-country firms, much less MSEs, can access the higher margins and value-added functions associated with international high-end market segments. Often, lead firms in developed countries use MSE producers as sources of flexible, low-cost wage labor. MSEs may not even interact directly with develop country firms but rather act

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[6] Within these broad policy guidelines a number of specific decisions—for example, how investments in education or technology are allocated—will determine how important they are to overall economic growth and MSE participation in the economy.

[7] Presentation at the Brazilian National Development Bank (BNDES), Rio de Janeiro, April 2001.

as subcontractors to large developing-country manufacturers. In such cases, the pathways for upgrades and growth may be blocked.

In addition to the characteristics of demand, certain sectoral tendencies have shown to favor the participation—and survival over time—of MSEs. One of the most enduring works on small enterprise development, *Modern Small Industry in Developing Countries*, by Staley and Morse (1965), identifies five characteristics of industry functions that bode well for small firm participation: 1) seasonal activities; 2) low capital requirements; 3) relative labor intensiveness; 4) non-repetitive production processes, and 5) small production volumes.[8] In addition, additional characteristics may relate specifically to the industry in question, such as agriculture or agribusiness, textiles, handicrafts. In agriculture, for example, high population density makes smallholder collaboration—and thus cultivation—more viable; also, specific crop strains may offer advantages to smallholders, depending on the inputs, land conditions, and other requirements associated with their cultivation.[9]

Also important is the organization of the value chain, especially inter-firm relationships and power dynamics. Models described in the literature range from buyer driven (top-down and not very conducive to MSE participation) to producer-driven (usually seen in high-tech chains where producers are relatively sophisticated) to network or non-hierarchical chains where power relationships are more balanced. These (network) chains may hold the most promise for MSE participation and growth because they allow for inter-firm cooperation.

INTER-FIRM COOPERATION

Firms that participate in value chains (all, with the possible exception of subsistence agriculture) must, by definition, interact with other firms and related entities such as universities and regulatory agencies. This section explores the concept of inter-firm cooperation as a driver for MSE growth, with emphasis on three aspects: vertical linkages, horizontal linkages, and supporting markets. Individual firms form commercial relationships—referred to in this paper as vertical linkages—with their buyers and suppliers. In some cases, similar firms may group themselves or be organized by an outside party to work together—these are referred to as horizontal linkages. Supporting markets are also important in value chains—for services such as finance; consulting, legal, and tax advice; market information; and skills training.

- **Vertical linkages.** A number of mechanisms are used to form vertical linkages, ranging from loose and informal understandings to rigid buyer-supplier agreements known as subcontracting[10] or outsourcing. Contracts may be exclusive and legally binding, and include precise specifications regarding price, quantity, delivery dates, raw materials, and production processes.

  Vertical linkages can facilitate MSE growth by expanding a firm's set of viable business opportunities and improving firm capabilities. Agreements with buyers can decrease the risks and costs associated with entering new markets by providing a guaranteed flow of orders, critical information about market requirements, and, in some cases, reducing the need for capital investments (Aw, 2001). Sometimes relationships with larger firms can help link rural industries to urban and international markets (cf Berry, Rodriguez, and Sandee, 2002). In addition to

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[8] Indeed, GEMINI and other research have shown that MSEs tend to be concentrated in just these types of sectors. Growth by sector, however, is harder to analyze and depends on a number of local factors.

[9] Wild plants in remote areas are more amenable to MSE harvesting. Non-perishable products are easier for MSEs to market because the risk of spoilage is eliminated. For more detail, see Steen, Magnani, and Goldmark (2005) forthcoming.

[10] Most subcontracting arrangements are vertical, though horizontal subcontracting also exists involving the parceling out of certain tasks to similar firms.

fostering growth through expanded business opportunities, vertical linkages can lead to improved firm capabilities by providing opportunities for learning and innovation—such as when corporate buyers assist with quality, maintenance, and technical issues (Berry, Rodriguez and Sandee, 2002)—or when input suppliers offer training or information related to the use of improved technologies.

- **Horizontal linkages.** Among the many legal and organizational options to institutionalize horizontal cooperation are cooperatives, associations, consortia, producer groups, and other collaborative structures. Horizontal linkages can help MSEs overcome many of the disadvantages of being small, for example by providing a way to consolidate production, improve their negotiating position with buyers or suppliers, access market information or services, or lobby for political or regulatory changes.

  Geographic and sectoral agglomerations of enterprises, or *clusters*, are also a vehicle through which MSEs may participate in rapid growth. Clusters inevitably involve external economies: one firm's investments spill over to other firms in the cluster (Schmitz, 1999). In addition, clusters may involve consciously pursued joint action, such as sharing machinery or developing a product together. In cases where clustered firms seek to serve the same market, competition, as well as cooperation, can drive innovation critical to competitive performance.

  The mere presence of clusters does not guarantee dynamic growth for MSEs (McCormick, 1998). The advantages from participation in clusters relate directly to the strength of vertical and horizontal linkages, and relationships with supporting organizations including trade associations, universities and vocational schools, financial institutions, and local and national-level government agencies. These actors, in addition to private business service providers, are key players in supporting markets.

- **Supporting markets.** Services provided through supporting markets are often directly related to improvements in capacity. For example, skills training may allow firms to offer new products, while finance may allow them to produce greater volumes. Access to market information or new technologies, on the other hand, may help firms respond to new opportunities. While topics such as access to finance and technology are treated below in the section on firm-level characteristics, it is useful to recognize that supporting services may be offered directly to MSEs on a fee-for-service basis or embedded in firm relationships, that is, delivered through vertical or horizontal linkages.

Value chain relationships, including horizontal and vertical linkages, and connections to supporting markets, offer many tangible, indispensable advantages to MSEs. These advantages include increased production capacity and ways to consolidate production; increased efficiencies; mechanisms to spread both costs and risks; increased bargaining power for inputs or raw materials; and channels to obtain information about and improve techniques used for production, marketing, transportation, and technology. These relationships, then, play a critical role in facilitating MSE growth. Linkages can expand business opportunities and enhance firm capabilities at the same time. Further, inter-firm collaboration can help boost productivity, whether through upgrading[11] opportunities within value chains, increasing collective efficiency within clusters, or raising productivity among subcontracting firms.

[11] See Annex A for a definition and discussion of upgrading. Though upgrading is not equal to growth—MSEs, in principle, can upgrade while remaining small—upgrading is likely to result in growth through improved productivity.

3. SOCIAL NETWORKS

The term social networks[12] is used here to refer to relationships between individuals, while social capital[13] refers to the pooling of intangible resources that typically occurs in groups such as those made up of family and friends, professionals or entrepreneurs with similar profiles or educational backgrounds, or even between acquaintances in the broader community. (Connections "across" different groups are associated with mobility and may be especially useful for MSEs trying to overcome regulatory or other obstacles.)

Having an extensive social network is a valuable asset, as it can help an entrepreneur obtain access to information (e.g., leads about profitable business opportunities) and resources (e.g., credit). While social networks can enhance MSE growth in any context, they can be critical to firms' growth prospects in environments with pervasive market failures, such as inordinately low levels of information and competition. Examples in the literature point to the role social networks can play in helping entrepreneurs overcome obstacles related to transaction costs, contract enforcement, and regulation.[14] Entrepreneurs often take advantage of opportunities to invest in social networks when there is an apparent payoff in terms of MSE growth. For example, a family may opt to perform specific ceremonies when planting cocoa, given that it will require additional labor and resources from others within the social network (Berry, 1993).

Social networks do have numerous potential downsides. In some cases, social networks may be too expensive for or inaccessible to the poorest entrepreneurs, or systematically exclude or provide unequal access to resources for marginalized entrepreneurs such as women. In other cases, social networks are deeply rooted in societal traditions that may run counter to free initiative or entrepreneurship—such as loyalty and submission bonds deriving from the Chinese ethic observed in Taiwan (Luo, 1997). Other potential downsides of social networks include requests for profit distributions, unequal access to resources, and a lack of stability. For example, research in Bali showed that social networks can actually serve to hinder economic production, as social claimants preferred profit distributions rather than reinvestment necessary for growth (Geertz, 1978; Luo, 1997). Last, the sustainability of social networks is also an issue. If a network grows, a greater number of participants offer increased resources, but the network's usefulness may decline as it becomes more inclusive. Partially for this reason, immigrant groups often segregate by spatial location to avoid overloading duties on network members.

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[12] Social networks refer to micro-level relationships between agents in an economy (Barr, 2000). Social networks can be considered individual assets, but are distinct from physical and human capital because they include interpersonal relations (Portes and Landolt, 1996).

[13] Social capital refers to the norms and networks enabling people to share resources and work together (Woolcock, 2004). The literature distinguishes between three types of social capital: bonding (between like individuals), bridging (across different groups), and linking (across power differentials).

[14] Examples include buyer-seller bargaining in Morocco's bazaar economy (Geertz, 1978); the overwhelming preference of Ghanaian firms to do business with individuals they already know (Fafchamps, 1996); Jewish diamond merchants in New York lending gems to each other overnight to inspect potential contracts to save lawyer fees (Portes, and Landolt, May 1–June 1, 1996); and MSE owners turning to experienced neighbors for help in registering a new business.

4 INDIVIDUAL ENTREPRENEUR CHARACTERISTICS

There is some literature—and also a body of practice in both development and fields such as venture capital—that claims to identify which *personal* characteristics of individual entrepreneurs might lead to firm growth and success. The discussion below, however, focuses on characteristics that can be objectively determined and for which there is empirical evidence.

EDUCATION

Intuitively, one might expect higher levels of formal education to spur MSE growth by enhancing firm capabilities. For example, formal education may provide entrepreneurs with a greater capacity to learn about new production processes and product designs, offer specific technical knowledge conducive to firm expansion, and increase owners' flexibility. However, exploring the relationship between education and MSE growth in developing countries reveals greater complexity.

Developing-country MSE owners and workers are relatively less educated than the majority of the population. Not only do they operate in countries with relatively low overall educational attainment, but they also tend to have less-educated owners and workers than larger firms. This lower level of educational attainment among MSE owners and workers is remarkable when contrasted with developed countries, where those with higher education are more likely to be self-employed (Woodruff, 1999). One reason for this contrast is that the poor in developing countries often create survival-oriented MSEs due to a lack of alternative employment opportunities.

Given the relatively low level of education within the MSE sector in developing countries, do MSEs with more highly educated owners tend to grow more quickly? On the surface, the evidence appears contradictory. For example, an Inter-American Development Bank (IDB) study found that secondary school attainment had no discernible impact on firm growth in Latin America (Kantis, Angellini, and Koenig, 2004). On the other hand, GEMINI studies in Sub-Saharan Africa revealed that entrepreneurs completing secondary school were more likely to grow in Kenya and Zimbabwe but found no significant effect of primary education on MSE expansion (Mead and Liedholm, 1998; Parker, 1995; McPherson, 1991). Some clarity emerges when recognizing the *threshold* effect of education (Mead, interview, 2004). MSEs with more highly educated owners tend to grow more quickly, but a country-specific threshold must be reached to observe this growth effect. For example, whereas a threshold of secondary education may identify high growth potential in the African countries just mentioned, a higher threshold of university education appears to exist in Latin America.

Examining the relationship between a factor and productivity can illuminate the process by which a factor shapes MSE opportunities and capabilities. Most empirical evidence confirms that firms with better-educated owners and managers tend to be more productive (Little, 1987; Burki and Terrell, 1998; Tan and Batra, 1995). Despite these potential benefits, education may also harm MSE growth in cases in which owners divert their attention to other attractive opportunities. Research on small manufacturing firms in Chile found that university education did not induce higher efficiency, because the highly educated owners paid little attention to monitoring their labor force (Alvarez and Crespi, 2003).

WORK EXPERIENCE

Any development practitioner or businessperson can attest that MSE owners acquire a substantial amount of skills and knowledge while operating their firms. Such work experience proves to be highly important for developing capabilities within MSEs, as entrepreneurs with more years of work experience typically have faster-growing MSEs. For example, one empirical study found that Kenyan

entrepreneurs with at least seven years of work experience expanded their firms more rapidly than those without such experience (Mead and Liedholm, 1998; Parker, 1995).

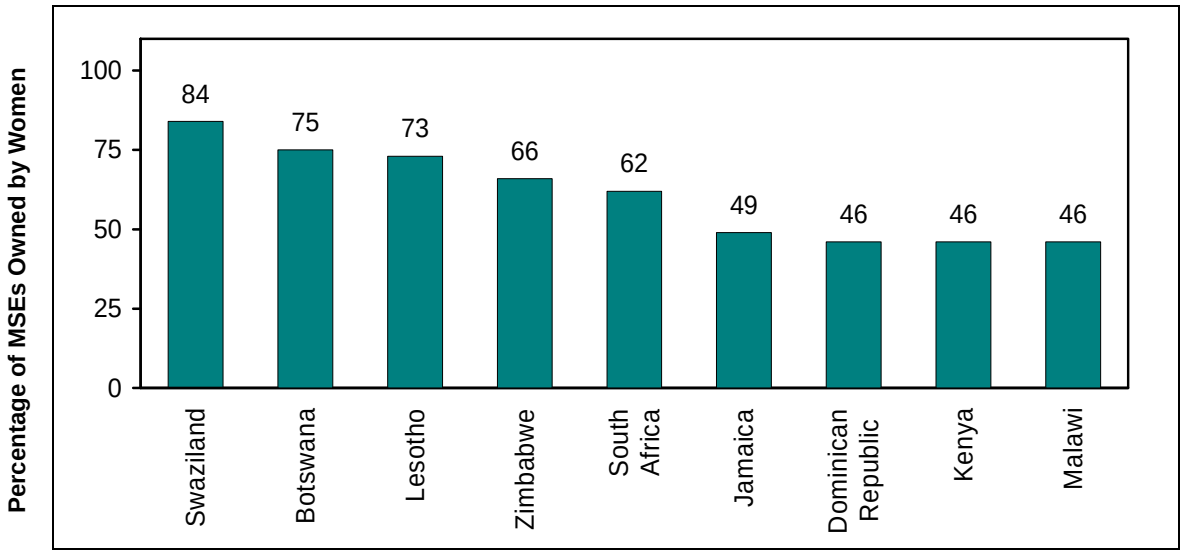
While the benefits of on-the-job experience are frequently mentioned, the importance of *prior* work experience may be even more helpful, especially if that experience came within the same sector or in small to medium-sized enterprises. An empirically rigorous IDB study of high-growth entrepreneurs provides telling insights about the importance of skills and business contacts gained during past employment (Kantis, Angellini, and Koenig, 2004). Among Latin American and East Asian entrepreneurs, contacts were found to be a key benefit of work experience, helpful in identifying business opportunities, obtaining financing and other resources, and alleviating management challenges (Kantis, Angellini, and Koenig, 2004). Other developing regions, such as Africa, are characterized by a systematic lack of opportunities to gain relevant work experience.

Work experience thus contributes to MSE growth in two ways: *directly,* by expanding the capabilities of MSE owners and employees through the acquisition of skills and knowledge; and *indirectly,* by expanding entrepreneurs' social networks.

GENDER AND HOUSEHOLD

Women own and operate the majority of MSEs in many developing countries (see Figure 5), in part because of the ease of entry and their limited access to alternate opportunities (Rubio, 1991). Yet women often face particularly difficult challenges that suppress the growth of their firms. In some cases, women choose not to grow their firms, for the reasons outlined below.

FIGURE 5: PREVALENCE OF WOMEN-OWNED MSEs



Source: Liedholm and Mead, 1999

Downing and Daniels (1992) provide an insightful analysis of many of the challenges constraining women's opportunities for MSE growth. All too often, women face asymmetrical rights and obligations limiting their labor mobility and burdening them with disproportionate household responsibilities. Due to gender-specific roles and time constraints, even university-trained women may choose to weave tapestries within the household. Temporal discontinuities in women's ability to

work frequently leads to a loss of economic skills, and at times even lowers career and educational aspirations. Women in some countries face greater problems with innumeracy, illiteracy, and a lack of business skills. In addition, women commonly have unequal access to markets. Studies have shown that men travel farther geographically than women to buy inputs, enabling them to enjoy lower prices and higher quality. Men also sell in multiple markets more frequently than women, allowing them additional growth opportunities. As a result of such factors, women frequently focus their MSEs on a relatively narrow range of industries.

Women-owned MSEs often play a crucial role in increasing and diversifying household incomes. Downing and Daniels (1992) review various studies analyzing how households simultaneously engage in survival and mobility strategies, with activities performed on a gendered basis. For example, women may engage in survival strategies, operating MSEs with small but regular contributions to income, which enables their husbands to pursue mobility strategies, such as focusing on higher-risk but potentially lucrative growth-oriented MSEs. Following such survival strategies, women may strive to grow laterally; instead of specializing in their MSEs by expanding their size, they may opt to diversify by creating additional firms. Indeed, one study found that many urban female entrepreneurs in Lesotho owned two to four firms.

What consequences do the challenges and strategies mentioned above imply for MSE growth? Empirical evidence suggests that women's MSEs tend to grow more slowly than those owned by men. One contributing factor to the slower growth of female-owned MSEs is that their firms have an especially high probability of being physically located within the household (ILO, 2004). MSEs located in the household are not only significantly smaller on average, but also are less likely to grow than other MSEs (Mead and Liedholm, 1998). Firms within the household may benefit from resources such as family labor and electricity, but they may also reinvest few profits as funds are tapped for daily household needs. At lower income levels and with smaller firm sizes, the line that distinguishes the MSE from the household in these instances is frequently blurred.

Despite the growth constraints discussed in this section, women are likely to be highly effective firm owners, performing particularly favorably on metrics such as productivity and survival rates. GEMINI studies also show that women-owned MSEs have comparable closure rates due to business reasons as firms owned by men (Mead and Liedholm, 1998). However, women-owned MSEs demonstrate significantly higher closure rates resulting from personal reasons, largely due to their disproportionate obligations and responsibilities.

Some of the slow or nongrowth patterns mentioned above, most evident in women-owned enterprises, appear to be quite common for a number of the smallest, survival-oriented MSEs. In such cases, it is not necessarily a lack of capabilities, but rather a lack of attractive opportunities as perceived by the entrepreneur that inhibits growth. Given competing household priorities or high risk levels, the entrepreneur may make a conscious decision not to grow his or her enterprise. Similarly, he or she may opt to pursue strategies of horizontal growth—launching or maintaining several enterprises at the same time.

5. FIRM CHARACTERISTICS

Certain firm characteristics may correlate positively or negatively with MSE growth tendencies. This section explores the relationship between MSE growth and three widely studied firm-level factors: firm age, formality (or informality), and access to finance. Other factors, such as technology, location, and sector, are discussed only to the extent that they relate to these three variables, which are easier to measure and thus more commonly explored in empirical studies.

FIRM AGE

The relationship between firm age and growth in the MSE sector is particularly robust. Young MSEs grow substantially more rapidly on average than their older counterparts. Studies in both Africa and Latin America show that young MSEs are more likely to show high rates of growth compared with MSEs that have been in existence longer (Mead and Liedholm, 1998; Paxton, 1995). A recent IDB study revealed that the major expansion of dynamic enterprises occurs during their third year of operation (Kantis, Angellini, and Koenig, 2004), and numerous other studies have shown that the average growth rate of firms decreases with age (Burki and Terrell, 1998).

Why might young MSEs grow more quickly than old MSEs? A seminal theoretical paper by Jovanovic (1982) offers one possible explanation. Jovanovic proposes a learning model in which firm owners discover their efficient sizes of operation gradually. This theory predicts that a firm will expand quickly at first, then taper off its growth as the firm approaches its optimal size. Notice that while growth slows, productivity is expected to increase as the firm ages and the owner comes to learn the company's optimal size of operations.

In reality, the effect of firm age on productivity is not so clear. On one hand, as they age, firms may benefit from learning by doing, which enables them to develop expertise in production, management, and marketing. Indeed, several recent econometric studies on small firms in the United States show that firm age benefits productivity, even when controlling for firm size (Audretsch, 2002). On the other hand, several studies in developing countries suggest that firms suffer productivity losses as they age (Burki and Terrell, 1998). Some experts' explanation of such findings is that these firms frequently fail to invest sufficiently in existing or emerging technology, leaving them with relatively outmoded equipment and hindering productivity levels relative to younger firms.

Marrying the theory and empirical evidence presented above, it is worth noting that individual businesses are likely to experience both positive (learning by doing, increases in productivity) and negative (crises, decreases in productivity) moments in their lifetime. Also, productivity increases in MSEs can be "lumpy" when a lag occurs between capital investments and a firm's ability to use all of its capacity (Rubio, 1991). Recognizing that the "learn-as-you-go" model may be too simplistic, some researchers have developed frameworks based on a life-cycle approach to explaining firm growth (see text box).

A Life-Cycle Approach to Explaining Firm Growth

The following typologies represent some of the current approaches to qualifying and explaining the different stages of firm growth:

Stages of development: Churchill and Lewis's (1983) model breaks the growth continuum into six stages of development: existence, survival, success–disengage, success–growth, takeoff, and resource maturity. At each stage of a firm's growth, different critical factors tend to become important, such as owner objectives, managerial skills, access to capital, technology, and human resources.

Family firms: This typology integrates into the Churchill and Lewis model issues specific to family firms. Factors that make family firms different from other small businesses include 1) a strong identification of individuals with the business itself; and 2) the challenge of establishing a balance between family and business concerns (compare Mitra and Pingali, 1999).

Women-owned firms: Building again on the Lewis and Churchill model, Mitra (2002) offers a typology of women entrepreneurs in India that correlates the entrepreneur's motivation with the growth trajectory of her firm: 1) achievement-oriented entrepreneurs; 2) block-factor entrepreneurs (women who left their jobs to start up new businesses, feeling the progress of their careers was "blocked" due to gender issues); 3) family-driven entrepreneurs; and 4) financial-need/additional income–driven entrepreneurs.

Crisis: The crisis approach is based on identifying dominant crisis types faced by firms over time and coordinating the solution to these problems with different growth stages. In this framework, firms can be understood as progressing linearly over time from one stage to another as one management problem after another is solved. Examples are starting and cash crises, delegation and leadership crises, finance and prosperity crises, and succession crises (Patel, 1995, as cited in Mitra and Pingali, 1999).

FORMALITY (OR INFORMALITY)

For the purposes of this paper, informality refers to businesses that are unregistered yet derive income from the production of legal goods and services.[15] Not only does informality in itself reduce the chances for growth, it is associated with several other characteristics that make growth difficult.

It is commonly believed that informal firms frequently face growth-inhibiting disincentives and costs. Although small informal MSEs may be able to circumvent government regulations and taxation, as they grow they risk becoming more visible, creating disincentives to expand beyond a certain size (Snodgrass and Biggs, 1996). Informal firms may therefore need to "keep their heads down," ruling out large size and rapid growth, as well as close relations with formal firms (Winter, 1995). Contracts with international or government buyers, for example, are off-limits for informal firms because they require legal documentation that these MSEs lack. And while formal MSEs in developing countries may have problems accessing financial and legal systems, informal enterprises face even greater difficulties in obtaining formal credit and assistance from law enforcement agencies and courts.

For these and other reasons, informal MSEs appear to grow more slowly than do their formal counterparts. A particularly rigorous econometric study in Côte d'Ivoire found that even while controlling for efficiency, size, and age of firms, formal status has an additional positive effect on the growth of the firm (Sleuwaegen and Goedhuys, 2002).[16] Analysts at McKinsey and Co. argue that because "informal companies operate fully or partially outside the formal fiscal and legal environment, they tend to be subscale, subinvested and subskilled, they also tend to produce substandard products and services" (Capp, Elstrold, and Jones Jr., 2005, p. 2). While such an

[15] Hence, all economic activities that would generally be taxable were they to be reported to the state (tax) authorities (Schneider, 2002). See Annex A for alternative definitions and a more detailed discussion of the concept of informality.

[16] The authors used instrumental variables to control for endogeneity.

assessment may be overly pessimistic, the Côte d'Ivoire study suggests two reasons for formal firms' greater efficiency: formal firms enjoy a larger range of production factors and broader choice of input suppliers (Sleuwaegen and Goedhuys, 2002).

Certain MSE characteristics make it particularly likely that they will operate in the informal economy, a point underscored by McPherson and Liedholm's empirical research in Africa (1996). Even though their study focused on countries with divergent policy and regulatory environment, evidence surprisingly did not suggest that the likelihood of registration depended on country. On the other hand, they found that MSE registration does depend on numerous firm-specific factors. The following econometric results hold other factors constant:

- Rural MSEs are 69 percent less likely to be registered. They get fewer benefits from registering and face less enforcement, but incur higher indirect registration costs (e.g., transportation).
- Enterprises operated within the household, which are much less visible, are 42 percent less likely to be registered.
- Sector matters—garment producers are the most likely to register, while metal firms are 41 percent less likely to register.
- Women-owned MSEs are 23 percent less likely to be registered than those owned by men.
- Registration varies with firm size, with only 36 percent of one-person firms registered in Swaziland, versus 80 percent of those with two workers or more.

Such empirical evidence helps to clarify the characteristics associated with informality, but it remains unclear how to stimulate formalization of these enterprises. One familiar argument is that high registration costs pose the most formidable challenge. A well-known analysis by Hernando De Soto (1989) revealed the costs and time associated with obtaining business licenses, such as 289 days for a small factory and 43 days for a store in Peru. Based on such evidence, De Soto advocates slashing direct and indirect registration costs, which impose disproportionate barriers to entry for smaller firms. However, it is not so clear that registration costs always represent a binding constraint on formalization efforts. For instance, informality persists in Niger, even though officials personally visit firms to ease the registration process (McPherson and Liedholm, 1996). Despite reportedly low costs and regulatory burden, entrepreneurs surveyed were typically unaware of the benefits of registration and how to proceed.

ACCESS TO FINANCE

For various reasons ranging from a lack of collateral to bias against small firms, MSEs tend to face greater financial constraints than do larger firms. Empirical studies provide evidence about the ways in which reduced access to finance hinders firm growth. MSEs in developing countries apply for and receive formal bank loans relatively infrequently, and thus rely on other types of credit such as trade credit, overdrafts, and informal loans. Microfinance institutions also provide important sources of financing for MSEs, but their outreach is more limited than that of traders, especially in rural areas. In some sectors, such as agriculture, the supplier credit portfolio may be as much as 100 times the size of the traditional microfinance loan portfolio.[17]

[17] Estimate from Zimbabwe: Don Greenberg, Eliot Takaindisa, Doreen Chimwara, and Paul Bundick, Linkages for Advancement of Economically Disadvantaged (LEAD) project, Development Alternatives, Inc. Email interview May 14-15, 2004.

Across the world, entrepreneurs typically start firms primarily through their own savings because of limited access to startup capital (Mason, 1998). Even after MSEs overcome the start-up hurdle, a lack of credit frequently hinders their growth during earlier years, because younger firms tend find financing even more difficult than older firms (Schiffer and Weder, 2001). Over the life of the firm, growth also can be hindered by credit constraints that curb investment to maintain or improve technology.

While MSE owners often claim that insufficient credit is their most pressing obstacle, entrepreneurs' perceptions may not always correspond to actual growth trends. Interestingly, few empirical studies have explicitly tested the positive link between access to finance and firm growth or success rates. As development finance practitioners have long preached, a loan does not create a viable business opportunity. Like many of the factors discussed in this paper, access to finance may be necessary but is not a sufficient condition for growth.

6. CONCLUSION

The discussion on MSE growth presented in this paper may raise more questions than it answers—as research often does. The paper provides specific insights about each of a set of factors that contribute to MSE growth in developing countries (findings by variable are summarized in the following textbox). More importantly, it conveys how firm growth results from the interaction of a number of variables, offering a framework based on *opportunities* and *capabilities*. In the causal model used by this paper, productivity is an important mediating variable—contributing to growth via enhanced firm-level capabilities.

Understanding the interaction of the many variables that feed into firm growth is complex. Even if one could perform statistical work based on large samples of firms in a number of developing countries, cross-country generalizations about the growth of MSEs would be difficult to make and even harder to believe. Examining the empirical evidence available about each variable that contributes to MSE growth, as this paper does, can at least shed light on the "whys"; the "hows", and the nuances of how each variable affects MSE growth; permitting experienced practitioners to draw some of their own conclusions as these apply to local conditions.

The paper helps clarify that the "firm" in itself is one of a number of social constructs, embedded in and overlapping with a larger set of other systems: the business environment, the value chain, social networks, and the household. The discussion is organized around a specific constellation of factors, which include:

- The business environment, which defines the world of opportunities and incentives available to all firms, as well as specific incentives/disincentives or obstacles to growth;
- The nature of the value chain, including the types of relationships MSEs can have with other firms;
- Social networks, which in positive cases represent an asset that entrepreneurs can leverage for multiple purposes, and
- Individual and firm-level characteristics, which relate primarily to capabilities.

There are "contextual" variables outside the firm's control, such as economic policy or regulatory practices; value chain characteristics, social mores and customs, and so on. There are also factors internal to the firm: characteristics of the entrepreneur; age and formality of the firm, and available resources such as access to finance. These resources will enable firms to survive, succeed, grow, and upgrade.

Firm-level resources in developing-country MSEs are extremely limited. The factors that are most likely to lead to growth offer access to both opportunities and improvements in capabilities: for example, prior work experience has been shown to provide entrepreneurs with business contacts and relevant skills. Linkages between firms also emerge as a powerful way for small firms to access additional resources; for example, small producers may receive credit as well as critical technical information from input suppliers, intermediaries, or other business partners. Horizontal linkages are especially important to MSEs. Well-organized horizontal groupings enable small firms to harness the market power of a larger entity through product consolidation, while maintaining some of the advantages of smallness, such as flexibility and low overhead costs.

Factors that enhance only opportunities or only capabilities are unlikely to catalyze MSE growth. For example, providing market access to unprepared producers is not sustainable—firms will, literally, "not deliver." Moreover, working to improve firm capabilities without the "pull" factor—tangible market demand for the MSE product—is not likely to yield impressive results. Critical to

understanding how MSEs grow is the observation that productivity appears to drive growth, contributing to a virtuous cycle in which growth then leads to additional productivity increases (until some optimal firm size is reached). Development interventions that aim to increase employment or firm output should consider explicitly how productivity will contribute to MSE growth.

Summary of Key Findings by Factor

A number of variables influence firm growth. These may affect growth directly, indirectly, or both. Our research found that:

- The business environment may affect MSEs directly and indirectly in a variety of ways.
  - There are important nuances in the relationship between MSE growth and the overall business cycle: the overall MSE sector *expands* during economic downturns due to an increase in survivalist-type activities, although individual MSEs may stagnate or contract. In addition, during *severe* economic crises MSEs may be more resilient than their larger counterparts.
  - Regulatory obstacles represent a disproportionate burden for smaller firms.
- Value chain characteristics such as the rate of industry growth and the strength and nature of demand from end markets, as well as the type of organization or *governance* structure of the chain, can make MSE growth more or less likely.
- Inter-firm cooperation, such as horizontal and vertical linkages, can be an especially powerful catalyst to growth when it expands business opportunities and enhances firm capabilities *at the same time.*
- Social networks can help entrepreneurs identify business opportunities as well as overcome a number of obstacles related to transaction costs, contract enforcement, and regulation. In some cases, however, traditional customs associated with these networks may hinder MSE growth.
- Individual characteristics of entrepreneurs and their households exhibit the following influences on MSE growth:
  - More education correlates with MSE growth above on a *country-specific threshold*. Highly educated MSE owners, however, may abandon or neglect their firms for other opportunities.
  - Experience—gained on the job or through prior employment—is a critical growth factor.
  - Women-owned firms face multiple challenges. Although evidence shows they are as effective as men owner/managers, women often use their firms as part of household survival strategy and opt not to grow.
- Firm characteristics are related to growth in the following ways:
  - Youth correlates strongly to robust growth.
  - Informality reduces chances for growth, and is associated with several other characteristics that make growth difficult.
  - Lack of access to finance is widely accepted as a major obstacle to MSE growth. The converse—a positive link between finance and growth—has not been demonstrated, however.

IMPLICATIONS FOR DEVELOPMENT PRACTITIONERS

The MSE sector is large and heterogeneous. Development policies and programs that include "small enterprise growth" among their explicit or implicit objectives by definition may be targeting the majority of firms in a country. The insights from this study can help to formulate a more defined strategy. When programs take a sectoral or value chain approach to enterprise development, insights about MSE growth are relevant to sector and cluster selection and to the design of interventions at the

firm level. Findings about which types of MSEs are likely to grow should also be useful for programs working with small firms across sectors.

Program designers and implementers will want to have a clearly developed causal model that shows how the intervention works to achieve small enterprise growth. By improving our understanding of how small firms grow without specific development assistance, the discussion in this paper offers insights that can help USAID program designers answer the following questions:

- How is MSE growth linked to other development objectives such as increased employment, incomes, or overall economic growth?
- How can a development intervention stimulate MSE growth?

In addition, development practitioners will want to have a clear idea of how the intervention will influence firm opportunities, capabilities, and productivity, and understand how the characteristics of the targeted MSE population—and its environment—might increase or reduce the likelihood of firm growth.

In many developing countries, the majority of small firms are MSEs, and this sector employs the majority of the population. A subset of growth-oriented MSEs, termed "gazelles" in this paper, have the potential to contribute substantially to value chain productivity and, ultimately, to economic growth. At the other end of the spectrum, one-person firms—often informal, owned by women, and located within the home—contribute to household survival strategies.

While the small business sector in the United States has long been viewed as an important source of jobs and growth, some skeptics discount the potential or abilities of developing country MSEs.[18] There are, however, some striking similarities between the developed and developing-country MSE sectors—elements of "churn" that characterize the sector overall, the presence of a small group of outstanding achievers (the "gazelles"), and the importance entrepreneurs attribute to their personal networks in obtaining success. The major differences among small firms in developed and developing countries are more salient at the lower end of the spectrum. For example, one-person firms in developed countries tend to have highly educated owners, whereas the opposite is true for one-person firms in developing countries. In both contexts, a small subset of MSEs—the "gazelles"—drive aggregate figures and are responsible for most of the small enterprise sector's contribution to employment and output.

A qualitative analysis of the evidence tells us that "gazelles" grow faster and earlier, and are more productive than the average MSE. In developing countries, they are more likely to be located outside the household, be male-owned, be formal, and participate in firm-to-firm linkages (i.e., their final customers are most often other businesses). MSEs, overall, and "gazelles," in particular, tend to locate themselves in sectors where economies of scale *do not* dominate, but rather where their small size and inherent flexibility—or their unique product, or location—confers some sort of market advantage. Indeed, the observation that the most dynamic firms tend to grow rapidly in the early years of existence, coupled with a decision point identified early in the life cycle of most firms when owners choose between ambitious expansion or more conservative goals (identified by Churchill and Lewis [1983] as "success-growth or success-disengage"), implies that there may be significant benefits to intervening early in the life cycle of firms—i.e., when they are still micro- or small enterprises rather than once they have grown to become medium-sized firms.

[18] Many of these skeptics tend to favor development initiatives that target small and medium-sized enterprises rather than MSEs.

How does all this help someone who wants to catalyze MSE growth through a development program? Designers of enterprise development programs might want to segment the small enterprise sector according to certain variables to target those firms more likely to grow, or to match specific interventions and services to certain populations. In cases where firm growth *per se* is not the objective, programs could be designed with an explicit recognition of the important role survivalist MSEs play in maintaining employment and incomes among poor populations. A program designed with a clear understanding of this phenomenon could, for example, avoid wasting resources on interventions designed to encourage the *growth* of large numbers of one-person, women-owned MSEs, but instead explicitly target future generations of entrepreneurs (the "launching effect") or MSE workers living in these households (targeting income, employment, and poverty alleviation).[19]

In cases where MSE growth or competitiveness is the goal, practitioners will want to pay attention to the nature of value chain linkages. Beneficial linkages can simultaneously expand MSE *opportunities* (providing steady product demand) and *capabilities* (by transferring skills and knowledge necessary to improving productivity, such as in process or product upgrading). Implementers of development programs should look for ways in which they can strengthen firm linkages and build local capacity, such that MSEs and their partners are equipped to solve ongoing problems that arise in their value chain. This "problem-solving" in successful cases represents the beginning of a virtuous productivity-growth cycle in which MSE growth and upgrading is a continuous process.

[19] Many microfinance programs target exactly this group. Over time, impact studies have shown that microfinance can smooth incomes, resulting in reduced vulnerability to shocks and increased household incomes (Snodgrass and Sebstad, 2002). The link to enterprise growth is less strong; although some qualitative research has shown that microfinance clients, while not investing directly in their own business, may facilitate the start-up and launch of their children or other relatives' businesses. These lessons have contributed to a reformulation of the stated goals of microfinance programs—rather than seeking to catalyze enterprise growth, they aim to provide access to a range of financial services including, but not limited to, business loans. This shift in focus is appropriate, given the low probability that many microfinance clients' businesses will grow.

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ANNEX A: LITERATURE REVIEW

This annex presents supporting data gathered from the literature review and expert opinion interviews conducted for the paper "Understanding Micro and Small Enterprise Growth." The annex should be useful to researchers interested in understanding "what the data says"—that is, which of the paper's assertions are supported by empirical evidence, which are based on qualitative research, which were the contributions of expert interviewees, and where the authors may have contributed their own ideas. The annex, which follows the paper's framework from contextual to relational to individual and firm-level variables, can also be used as a reference for readers interested in deepening their understanding of particular variables and their effect on MSE growth.

METHODOLOGY

Research for this paper was conducted using two techniques: a literature review and expert opinion interviews. First, the authors reviewed a large number of empirical studies and drew from selected strains of economic theory and qualitative research. The majority of empirical studies cited in this paper were published in highly ranked, peer-reviewed academic journals. Assessing the rigor of empirical studies involved consideration of not only the theoretical models underlying the econometric analyses, but also the extent to which econometric problems such as endogeneity, omitted variables bias, and selection effects were addressed through techniques ranging from instrumental variables to fixed effects. Qualitative studies were carefully vetted as well, paying close attention to the number of respondents and sampling techniques employed. Within the literature review, studies employing particularly large sample sizes have been have explicitly identified.

During the final phase of the research, the authors conducted a limited number of interviews with leading economists and academics widely recognized for their expertise in the field of small enterprise development. The interviews were used primarily to probe issues of interest and to clarify nuances in areas where the data are inconclusive or controversial. Input from the expert interviewees was especially useful in developing the paper's framework and testing the authors' preliminary conclusions.

OVERVIEW OF MSE GROWTH

In most developing countries, MSEs constitute the vast majority of firms, generating a substantial share of both overall employment and output. Box A-1 defines MSEs as firms with up to 50 workers, which are engaged in non-primary activities and sell at least 50 percent of their output.

Box A-1: Defining MSEs

- Definitions often vary from country to country and, in some cases, even within countries depending on the government agency or economic sector in question. Metrics used typically include the number of employees, revenues, or fixed assets.
- This paper defines MSEs as firms with up to 50 workers that are engaged in non-primary activities and sell at least 50 percent of their output. The MSE category includes microenterprises, which have up to 10 workers, as well as small enterprises, which have between 11 and 50 workers.
- This definition has been previously employed in various USAID projects, including GEMINI studies.

EMPLOYMENT

Relative to developed countries, MSEs generate a greater share of overall employment in developing economies, which frequently have a stronger emphasis on small-scale production (Tybout, 2000). MSEs' contribution to employment levels can be observed in many contexts:

- In five African countries (Botswana, Kenya, Malawi, Swaziland, and Zimbabwe), GEMINI studies revealed that MSEs generate nearly twice the level of employment as registered, large-scale enterprises and the public sector (Mead and Liedholm, 1998).
- Half of all Indonesian workers are employed in firms with fewer than five workers, and two-thirds of workers are employed in firms with fewer than 20 workers (Berry, Rodriguez and Sandee, 2002).
- In many Latin American countries, microenterprises generate more than half of overall employment. Firms with fewer than 10 workers constitute 58 percent of total employment in Paraguay, 54 percent in Mexico, and 53 percent in Bolivia (ILO, 2003). Moreover, MSEs' share of total employment increased in many Latin American countries over the 1990s.

NUMBER OF FIRMS AND CONTRIBUTION TO OUTPUT

MSEs are highly prevalent in developing countries, comprising 97 percent of all firms in countries such as Mexico and Thailand (Kantis, Angellini, and Koenig, 2004; Simmons, 2004). Evidence suggests that the MSE sector not only contributes substantially to overall employment, but also generates an appreciable magnitude of economic output. Consider, for example:

- In Pakistan, MSEs contribute approximately 11 percent of GDP (SMEDA, 2002).
- In the Dominican Republic, MSEs generate an estimated 31 percent of overall GDP (IDB, 1998).
- Official statistics suggest Kenyan MSEs generate 13 percent of GDP (Gamser, 2003; Daniels, 1999). However, some experts argue that their role may be much more prominent in Kenya, contributing up to 40 percent of GDP (Gamser, 2003).

As the discrepancy between Kenyan figures illustrates, official statistics may underestimate the role of MSEs in terms of number of firms, as well as employment and output contributions. Some researchers estimate that the actual number of MSEs in countries may actually be double that of official statistics (Mead and Liedholm, 1998).

RELATIONSHIP TO POVERTY

MSE owners and workers tend to be disproportionately poor, with the incidence of poverty within MSEs typically higher than in medium-sized and large firms. For instance, a recent IDB study revealed that 26 percent of microenterprise workers across Latin America earn less than $2 a day, ranging from 4 percent in Uruguay to 64 percent in Honduras (Orlando and Pollack, 2000). The overall incidence rate of poverty among microenterprise workers was twice the level among non-microenterprise workers (Orlando and Pollack, 2000). High poverty levels within MSEs are partly due to their role as survival mechanisms for many developing-country individuals with limited employment options.

MSE GROWTH

This paper defines MSE growth as an increase in the number of employees over time (see Box A-2).

Box A-2: Defining MSE Growth

This paper defines firm growth as an increase in the number of employees over time. This metric is frequently employed in research on MSEs primarily because using employment levels is believed to yield the most accurate and comparable data. MSE owners are typically able to remember their number of employees over time, even if they fail to maintain reliable written records. In addition, using the number of employees circumvents the need to deflate or otherwise adjust currency figures, which is necessary when using revenue and other monetary metrics.

Employing other measures of growth may influence findings. For example, using revenues as a metric for firm growth would likely yield results with higher volatility. During a period of economic stagnation in Jamaica, MSE employment levels declined 20 percent, while MSE revenues demonstrated higher volatility by declining 35 percent. It is recommended that future research on this topic explore a range of growth metrics.

—Source: Mead and Liedholm, 1998

Past research conducted under the auspices of the GEMINI program provides a particularly robust source of data on MSE growth. Surveys of 28,000 MSEs operating in five African countries and the Dominican Republic revealed that MSE employment growth averaged nearly 17 percent annually, generally at least double the overall rate of GDP growth in each country (Mead and Liedholm, 1998).

Overall growth rates are often fueled by the rapid expansion of a narrow group of highly performing MSEs. In the GEMINI surveys, for example, just one-quarter of MSEs generated all of the remarkable employment growth mentioned above, while the remainder of firms stagnated or contracted (Mead and Liedholm, 1998). As a result, only 1 percent of MSEs starting with four or fewer workers "graduated" from the MSE category by growing to more than 10 workers.

PRODUCTIVITY AND GROWTH

Firm productivity refers to how much output a firm can produce with a given a level of inputs, and can be measured in various ways (see Box A-3 below).

Box A-3: Defining Firm Productivity

At the most basic level, firm productivity refers to how much output a firm can produce with a given a level of inputs. Economists differentiate between three primary types of productivity: labor productivity (output per unit of labor), capital productivity (output per unit of capital), and total factor productivity (output per unit of labor, capital, and other inputs combined). Although labor and capital productivity are easier to measure, total factor productivity is generally considered a more indicative measure of relative productivity levels, since it takes into account all of the possible ways that productivity could rise, and is not affected by simple substitutions (for example, labor productivity might rise simply because capital is substituted for labor). For this reason, this paper refers to total factor productivity whenever "productivity" is mentioned, unless otherwise noted.

In the literature on competitiveness, Michael Porter defines productivity as "the value of goods and services produced per unit of labor and capital" (Porter, 2001). In addition, Porter explains that productivity refers to the value of products or services produced as measured by the prices a firm can command.

One might argue that MSE growth causes higher productivity. However, this argument implicitly assumes that MSEs operate in industries with economies of scale. Actually, most MSEs do not. For example, several econometric studies in India, Indonesia, and Africa examined sectors with MSE participation and found no evidence of economies of scale (Tybout, 2000), rendering much less convincing the economies of scale argument that growth causes productivity gains. A likely explanation for this lack of economies of scale is that MSEs in developing countries tend to avoid sectors where they would be at a substantial cost disadvantage compared to larger incumbents (Tybout, 2000).

An exceptionally rigorous World Bank Institute study by Bee Yan Aw provides evidence that the relationship between firm productivity and growth is endogenous (Aw, 2001). Aw finds that the initial productivity of firms is a significant determinant of subsequent growth. An endogenous, virtuous cycle ensues: more productive firms get larger and, in the process, obtain access to resources and information enabling them to become even more productive. The study's findings, however, are based primarily on an econometric analysis of 100,000 small and medium firms in Taiwan, so caution must be taken when applying these results to MSEs in developing countries.

Are MSEs productive? Some MSEs manage to achieve high levels of productivity, while others do not. A World Bank study of 65,000 firms in five countries found that many MSEs are "efficient," in the sense that they demonstrated relatively high productivity in comparison to other firms in the same industry (Tan and Batra, 1995). More specifically, the study found that in Taiwan, three-fifths of MSEs were classified as efficient, compared to half of MSEs in Colombia and Indonesia, and one-third of MSEs in Malaysia and Mexico. In fact, although average productivity levels increased with firm size in all five countries, a significant number of small firms demonstrated higher productivity than their larger counterparts.

Some evidence suggests that while MSEs are not inherently unproductive, one-person enterprises do tend to be systematically less productive than larger enterprises. GEMINI research found that relative to one-person firms, MSEs with two to five workers had substantially higher efficiency (in terms of returns per hour of family labor), and those with six to nine workers had even higher efficiency (Mead and Liedholm, 1998). The studies suggested that productivity costs of being small were surmountable, once the one-worker threshold had been traversed. Unfortunately, the threshold was extremely difficult for many microentrepreneurs to cross, as the majority of MSEs remained one-person enterprises (e.g., 79 percent of MSEs in Lesotho).

THE BUSINESS ENVIRONMENT

MACROECONOMIC CONTEXT

MSEs tend to grow more quickly during periods of overall economic growth (Liedholm, 2002). However, at the same time that individual MSEs stagnate or contract during economic declines, employment in the overall MSE sector frequently swells (Liedholm, 2002). Many new MSEs are created during economic declines as survival mechanisms, even if returns are marginal (Mead and Liedholm, 1998). The vast majority are one-person enterprises, which as discussed previously are the least efficient of all firms (Liedholm, 2002).

During severe economic crises, MSEs may be more resilient than their larger counterparts. For example, during the East Asian economic crisis, experts argue that small-scale firms fared better than larger companies in Indonesia (cf Berry, Rodriguez and Sandee, 2002). Various reasons may account for this frequently observed phenomenon. One often-cited explanation is that MSEs are more flexible in changing their lines of business. Another explanation is that MSE resilience stems from their limited access to formal sector funds: since MSEs typically rely less on formal financial markets, they

are less affected by the increased costs of borrowed funds in the aftermath of a crisis (Berry, Rodriguez, and Sandee, 2002).

Macroeconomic and relative price volatility is also an important issue, especially due to severe volatility in Latin America and Sub-Saharan Africa (cf Tybout, 2000; Berry, interview, 2004). The IFC recently conducted surveys of 10,000 firms in 80 countries, finding that both inflation and the exchange rate tend to afflict MSEs more than larger firms (Schiffer and Weder, 2001).

REGULATORY AND INSTITUTIONAL CONTEXT

Regulatory challenges and underdeveloped institutions frequently impose a disproportionate burden on smaller companies because larger firms are better able to maneuver around obstacles or cope with the high fixed costs they impose (Tybout, 2000). The World Development Report 2005 provides three particularly illustrative examples:

- The World Bank's Doing Business Project shows that while setting up a new business takes just 2 days in Australia and 9 days in Turkey, the same task takes more than 200 days in Haiti. Long delays mean that small, nascent firms face regulatory obstacles from the outset, with limited resources to overcome them.
- Large firms in Peru are almost three times more likely than small firms to obtain help from lawyers with application procedures for permits and licenses.
- Small formal firms in Tanzania must pay the same operating license fees as larger firms, meaning that they spend an average of 0.4 percent of their revenues for an operating license, whereas large enterprises pay only about .01 percent of their revenues.

The IFC report discussed previously also identified a significant bias against small firms, as well as regional variation in the relative severity of constraints (Schiffer and Weder, 2001).

These regulatory and institutional challenges facing MSEs stifle growth in a multitude of ways. For instance, strict regulations and high taxes may keep firms small and informal (De Soto, 1989), thereby contributing to increased transaction costs from problematic property rights protection and contract enforcement. Regulatory and institutional challenges may also deter MSE owners from making growth-enabling investments. For example, import duties on capital equipment (e.g., sewing machines) may disproportionately hurt MSEs. Typically, larger firms can bypass these duties by qualifying for investment promotions, and they may be preferred in allocations processes (Liedholm, 2001). In addition, special subsidies and trade protection may offer greater benefits to larger firms, that are often more capable of lobbying (Tybout, 2000). Smaller firms more frequently report government policies to be unpredictable, and this uncertainty may be yet another factor reducing growth-enabling investments (World Bank, 2005).

Ironically, government policies that actually aim to benefit MSEs may also suppress growth if they provide disincentives for employment expansion. For example, India offers attractive incentives to small enterprises, but by some accounts, these measures backfire because growth beyond a specified level entails losing valued benefits (Mitra and Pingali, 1999; Little, 1987). The manufacture of certain products in India is reserved for small firms, which reduces incentives for firm expansion (World Bank, 2005). Some owners even split up their MSEs into several enterprises in an effort to make them look smaller (Kashyap, 1988).

VALUE CHAIN LINKAGES

A summary of the extensive and burgeoning literature on value chains is not included here. Rather, key strands within the literature on value chains, on clusters and competitiveness, and on subcontracting are examined as they relate to the effects that value chain linkages can have on MSE opportunities and capabilities.

VALUE CHAINS

With the exception of subsistence agriculture, all firms participate in value chains. A value chain refers to the "full range of activities which are required to bring a product or service from conception, through the different phases of production, delivery to final consumers, and final disposal after use" (Kaplinsky and Morris, 2001).

Some types of value chains are more likely to expand participating MSEs' opportunities and capabilities through "upgrading," (defined in Box A-4). The concept of upgrading is frequently mentioned in the literature on value chains, and refers to the process of innovating to increase value added, by which firms can improve their processes, products, or functions, or move into new sectors. Different value chain characteristics—such as the nature of vertical or horizontal linkages, or incentives and opportunities for learning and innovation—can influence MSEs' potential for upgrading. Though upgrading is not equal to growth because MSEs, in principle, can upgrade while remaining small, upgrading is likely to result in growth via improved productivity.

Box A-4: Defining Upgrading

The concept of upgrading has long been mentioned in the literature on competitiveness, and has recently proliferated in discussions about value chains (Humphrey and Schmitz, 2000; Pietrobelli and Rabellotti, 2004). While some authors simply define upgrading as "innovating to increase value added," a wide variety of definitions exist (Pietrobelli and Rabellotti, 2004). As John Humphrey and Hubert Schmitz (2002) emphasize, "While all authors stress the importance of upgrading, it remains an elusive concept that has been difficult to pin down".

More recently, Humphrey and Schmitz (2002) developed a typology of upgrading that has proved highly influential. They identified four types of upgrading:

1. Process upgrading: transforming inputs into outputs more efficiently by reorganizing the production system or introducing superior technology.
2. Product upgrading: moving into more sophisticated product lines (which can be defined in terms of increased unit values).
3. Functional upgrading: acquiring new functions (or abandoning existing functions) to increase the overall skill content of activities.
4. Inter-sectoral upgrading: firms move into new productive activities. For example, knowledge acquired in producing televisions might be used to make monitors and other computer equipment.

Building on these definitions, this paper defines upgrading as the process of innovating to increase value-added, by which firms can improve their processes, products, functions, or move to new sectors. Upgrading often involves a change in mindset and improvements in skills.

The concept of upgrading is closely related to productivity (see Box A-3). Process upgrading, which involved "transforming inputs into outputs more efficiently," would by definition yield higher productivity, which can be defined as "producing more output with a given level of inputs." In addition, given Porter's inclusion of "prices a firm can command" in his definition of productivity, product upgrading—which involves moving into products with increased unit values—could also boost productivity.

Private sector governance structures—identified in value chain literature as the various forms of market coordination that exist between firms—are a critical determinant of the types of growth and upgrading opportunities that exist for smaller firms. Value chains typically have one or more "lead firms" responsible for coordinating interactions between the other firms in the chain. The nature of the relationship between lead firms and other firms in the chain may range from hierarchical to relational or network-based, as discussed below.

Most value chains have either buyer-driven or producer-driven governance structures, while a few are organized in less hierarchical networks (Gereffi, 1999, Humphrey and Schmitz 2000). The most common type of chain in developing countries, buyer-driven chains typically involve labor-intensive consumer goods, such as clothing, handicrafts, and consumer electronics. By contrast, producer-driven chains are industries where large manufacturers coordinate production networks, and typically include industries that use large amounts of capital or technology, such as automobiles or computers.

Buyer-driven chains usually involve large retailers, marketers, and branded manufacturers setting up decentralized production networks. MSEs in buyer-driven chains tend to have broader opportunities for growth, because they have greater opportunities for upgrading than their counterparts in producer-driven chains (Dolan and Humphrey, 2000). For instance, within buyer-driven apparel chains, MSEs enjoy growth-enabling upgrading opportunities by learning from global buyers about how to improve production processes, attain consistent and high quality, and increase their speed of responsiveness. On the other hand, important limits exist even within buyer-driven chains. Opportunities for moving into other parts of the value chain through functional upgrading can be limited, because lead firms often vigorously defend their own core competencies.

In network arrangements, suppliers and buyers cooperate on an almost equal basis, both responding to market incentives. Network arrangements are more likely to occur when, "buyer and supplier share complimentary competencies in the market and are closer to the innovative technology or market frontier" (Humphrey and Schmitz, 2000). In the case of small suppliers, this may be possible due to some unique competence or advantage.

A study by Calvin and Barrios (1998) on winter vegetable exports from Mexico illustrates how small producer markets have grown and how this growth has benefited both suppliers and buyers equally because of network arrangements. The trade in vegetables between the Mexican state of Sinaloa and the United States began with U.S. buyers going to Mexico and purchasing "on the spot" at the point of production. As the market grew, a growers' association developed to facilitate trade and provide quality and quantity requirements for U.S. markets and inspection depots for transports. Coinciding with this development in Mexico, "U.S. distributors searched for growers and provided them credit, technology and marketing knowledge" (Calvin and Barrios, 1998). By growing their network in conjunction with the buyers' investment in the market, the small producers have been able to maintain their autonomy and their advantage.

INTER-FIRM COOPERATION

The two sections below discuss how horizontal and vertical linkages can enable MSE growth in the context of clusters and subcontracting, the areas that have been most documented in the literature.

CLUSTERS

MSEs may participate in clusters, which can be characterized as geographic and sectoral agglomerations of enterprises (Schmitz, 1992; McCormick, 1998). Clusters may consist of firms seeking to serve the same market. In such cases, lateral linkages among competitors, a high degree of competition as well as cooperation, and vertical linkages to upstream firms drive innovation critical to

competitive performance. In addition, clustered firms often access knowledge and services through related and supporting organizations including trade associations, universities and vocational schools, financial institutions, and local and national-level government agencies. The close interplay between firms, their suppliers, and the business environment in clusters has led competitiveness theorists and practitioners to focus on "clusters" as the locus of action, as opposed to individual firms or broad sectors.

By facilitating linkages with other firms, dynamic clusters have the potential to foster MSE growth through expanded opportunities and capabilities. Active participation in clusters can help small firms enjoy the advantages of both large and small sizes (i.e., achieve market power and high production volumes while maintaining flexibility and low overhead costs). As Schmitz explains, one way by which clustering facilitates MSE growth is that it "breaks down investments into small, riskable steps…the enterprise of one creates a foothold for the other," so that "ladders are constructed which enable small enterprises to climb up and grow" (Schmitz, 1999). For example, not only can clustered firms take advantage of attractive opportunities with fewer equipment investments than would be needed for independent production, but they may also need less working capital if they can obtain inputs from other nearby members of their cluster.

Clusters can also shape MSEs' growth trajectories through enhanced "collective efficiency." Greater "collective efficiency," which refers to competitive advantage from local external economies and joint action (Schmitz, 1995; McCormick, 1998), expands the feasible set of viable business opportunities and improves the capabilities of clustered firms. Clusters inevitably involve external economies: one firm's investments spill over to other firms in the cluster, since it is impossible to capture all benefits in the sale price of a product (Schmitz, 1999). In addition to incidental external economies, clusters also involve consciously pursued joint action. Joint action can include both bilateral cooperation between firms, such as sharing machinery or developing a product together, as well as multilateral cooperation, such as forming a business association (Schmitz, 1999).

The simple presence of clusters, if they do not enjoy high levels of inter-firm cooperation or are not linked to a source of market demand, will not necessarily foster MSE growth. For example, some GEMINI studies in Africa found no evidence to suggest that clusters resulted in growth benefits (Liedholm, 1999). One explanation may be that clustering involves few linkages when trust is minimal, thereby limiting potential benefits (Liedholm, 1999; McCormick, 1998). For example, linkages between clustered garment producers in Nairobi, Kenya, are surprisingly weak (McCormick, 1998). Another aspect affecting MSE growth prospects involves the markets to which clusters are linked. Rural clusters connected to isolated markets are likely to have growth capped at local demand conditions, whereas firm growth has been shown to be more probable when clusters are linked to urban or international markets (Berry, Rodriguez, and Sandee, 2002).

SUBCONTRACTING

"Vertical" subcontracting involves selling output to firms operating in another part of the value chain, whereas "horizontal" subcontracting involves the parceling out of certain tasks to similar firms (Luo, 1997).

Subcontracting can facilitate MSE growth by expanding a firm's set of viable business opportunities and improving firm capabilities. More business opportunities become viable as subcontracting decreases the risks and costs associated with entering new markets. An MSE starting up production under a subcontracting arrangement is exposed to less risk because a ready market exists for output. In addition, costs are reduced, as the entrant typically needs to make fewer capital investments (Aw, 2001). Moreover, subcontracting with larger firms has the potential to link rural industries to urban and international markets (cf Berry, Rodriguez, and Sandee, 2002). In addition to fostering growth

through expanded business opportunities, subcontracting can improve firm capabilities. Subcontracting can provide opportunities for learning and innovation, such as when corporate buyers assist with quality, maintenance, and technical issues (Berry, Rodriguez and Sandee, 2002). The existence of such learning opportunities may be one reason that subcontracting firms in Pakistan have significantly higher productivity levels than other firms (Burki and Terrell, 1998).

Despite the potential benefits of subcontracting, the practice is relatively uncommon in many contexts. Subcontracting is widely visible in East Asia, but far less prevalent in Africa and Latin America (Kantis, 2002; Liedholm, 2001). Indeed, GEMINI studies found that 96 percent of MSEs in several African countries, and 87 percent of Jamaican MSEs, sell primarily to individuals instead of other firms (Liedholm, 2001). Even in these environments, subcontracting remains more frequent among highly performing firms. For example, even though subcontracting is relatively uncommon in Latin America, the principal clients of high-growth Latin American firms are other firms (Kantis, 2002).

SOCIAL NETWORKS

Social networks refer specifically to relationships between individuals, making them easier to define and measure than the more nebulous concept of "social capital" (discussed in Box A-5).

Empirical studies on the effects of social networks are relatively limited, due to both the topic's recent emergence as well as measurement challenges. The available evidence does suggest that entrepreneurs with more extensive social networks have faster growing firms. In Sub-Saharan Africa, for example, social networks based on ethnicity helped minority entrepreneurs' firms to start larger and grow significantly faster than indigenous-owned African firms (Ramachandran and Shah, 1999).

Box A-5: Defining Social Networks and Social Capital

Social networks refer to micro-level relationships between agents in an economy (Barr, 2000). Social networks can be considered individual assets, but are distinct from physical and human capital because they inhere in interpersonal relations (Portes and Landolt, 1996). Social networks may provide entrepreneurs one or more types of social capital, which refers more broadly to the norms and networks enabling people to share resources and work together (Woolcock, 2004). As Woolcock explains, social networks may provide the following types of social capital:

Bonding Social Capital—Social networks can provide strong ties through bonding social capital within similar groups. These are connections with people "like you," and are often associated with survival.

Bridging Social Capital—Social networks can also provide weak ties through bridging social capital across different groups. These are connections with people "not like you," and are often associated with mobility.

Linking Social Capital—Social networks can also provide linking ties across power differentials. These connections can prove particularly helpful for overcoming bureaucratic obstacles.

Much of the minority entrepreneurs' success stemmed from sharing credit information and technology within their ethnically based social networks. Entrepreneurs with more extended social networks also tend to be more productive, as expanded access to information and resources enables them to produce more output from a given set of inputs. An econometric study focused on small-scale manufacturing in Ghana showed that entrepreneurs with larger and more diverse sets of networks are more productive (Barr, 1998).

The apparently subjective nature of social networks might appear to diverge from economic theory. However, these personal relationships are not incongruent with the "invisible hand" of the market economy. As is discussed in Box A-6, in the presence of market imperfections, relationships between economic actors play an important role in economic theory.

Box A-6: Social Networks and Market Imperfections

Neither economic theory nor practical experience suggests that free markets should automatically lead to efficient outcomes. Although economic models often suggest that markets will achieve productive efficiency by themselves, such analyses hinge crucially on strict assumptions such as perfect information and perfect competition (Fafchamps, 1998). In reality, such assumptions do not hold, especially not in developing nations. Information asymmetries are rife, potentially leading to thin or non-existent markets (Akerlof, 1970). At the same time, high transaction costs and contract enforcement difficulties reduce the viability of many types of economic exchange (McMillan, 2002).

Since the assumptions of neoclassical economics are too stringent, in reality markets may neither be perfect nor achieve efficient outcomes by themselves. As a result, relationships between economic agents play a pivotal role in market transactions, facilitating economic exchange and counterbalancing market imperfections that would otherwise undermine Adam Smith's "invisible hand" (Fafchamps, 2002).

Social networks help to reduce the impact of market imperfections, by helping entrepreneurs lower transaction costs, enhance contract enforcement, and address regulatory and institutional obstacles. The literature focuses on these three areas, discussed below.

LOWERING TRANSACTION COSTS

Morocco's bazaar economy provides a vivid example of how transaction costs can stymie entrepreneurs' efforts to obtain inputs, and how social networks are used to alleviate their impact. In bazaars, costs and prices lack transparency, and the quality of goods is difficult to ascertain. Such information is critical for effective bargaining, yet would be prohibitively costly to obtain for every transaction. Imagine a fledgling entrepreneur entering the bazaar for the first time—searching high and low for goods of a certain quality, uncertain about whom to trust, and spending hours bargaining with complete strangers. Instead of searching for new providers each time, entrepreneurs develop long-term relationships with suppliers through repeat purchases. These relationships foster trust and cooperative behavior, obviating the continuous need to search for goods, determine their quality, and negotiate prices. Not only do the buyer and seller have past experiences with each other, but they also offer one another the prospect of lucrative future interactions. Even though both parties may continue to haggle with each other, bargaining within existing relationships is typically more productive than bargaining between disparate buyers and sellers (Geertz, 1978).

ENHANCING CONTRACT ENFORCEMENT

Contract enforcement is a major challenge facing MSEs in developing countries. Limited access to information makes it arduous for entrepreneurs to determine whether customers or suppliers will be trustworthy, and MSEs frequently lack access to formal enforcement mechanisms. Unfortunately, in many countries MSEs have relatively few options when customers or suppliers renege on a deal. Formal mechanisms are frequently unresponsive and far too costly for smaller firms to use, and may be altogether unavailable to informal firms.

Social networks have the potential to mitigate this problem, because long-term relationships can reduce screening costs and provide reputation incentives. Not only do past experiences allow for less costly screening of potential clients and suppliers, but social networks also enable firms to exchange

information about other market participants with whom they have done business, imposing a reputational cost if a firm chooses to renege on a contract.

Primarily for these reasons, one study found that Ghanaian firms expressed an overwhelming preference to conduct business with individuals they already know, even if that meant dealing with only a few individuals (Fafchamps, 1996). For transactions not involving immediate payment, Ghanaian firms sell to clients with whom they have an average ongoing relationship of six years, and buy from suppliers with whom they have an ongoing relationship of eight years. Researchers from the IDB identified similar behavior among small enterprises in Peru (Llisterri, interview, 2004). Entrepreneurs in developed countries rely on social networks as well—for example, Jewish diamond merchants in New York lent gems to each other overnight to inspect potential purchases without formal contracts, thereby saving lawyer fees (Portes, and Landolt, May 1–June 1, 1996).

In the context of contract enforcement, networks providing weak ties by bridging social networks may be necessary to foster growth. In other words, entrepreneurs will often need to reach beyond family and friend networks to make commercial connections that provide new business opportunities. Conducting business strictly within strong-tie relationships can limit access to input, factor, and output markets.

ALLEVIATING REGULATORY AND INSTITUTIONAL OBSTACLES

Social networks can help MSEs address regulatory and institutional obstacles through a variety of mechanisms ranging from simple information sharing to collective action. Members of networks frequently benefit from bonding social capital within networks by turning to other entrepreneurs for help (Singerman, 1995). For example, MSE owners may turn to experienced neighbors for help understanding the complicated administrative procedures involved in registering a business. In addition, entrepreneurs benefit from networks that reach across power differentials and include connections with public sector officials (Woolcock, 2004).

Social networks are often fluid in nature, providing entrepreneurs with the possibility of expanding their networks, and entrepreneurs often take advantage of opportunities to invest in social networks when there is an apparent payoff in terms of MSE growth. For example, in many African societies social identity and status is both achieved and ascribed. Many families invest in funerals and initiation rites to gain respect and create obligations. Their level of investment in such rituals sometimes depends on their anticipated need for social networks in a given year. For example, a family may opt to perform specific ceremonies when planting cocoa because it will require additional labor and resources from others within the social network (Berry, 1993).

DOWNSIDES OF SOCIAL NETWORKS

Social networks may be too expensive for or inaccessible to some entrepreneurs. Investments in social networks may be prohibitively high for the poor. For example, in part to develop and maintain social networks, households spend seven times their annual income on wedding ceremonies and dowry in Karanataka, India (Rao, 2001). Also, some social networks are deeply rooted in societal traditions, making them difficult to acquire for entrepreneurial purposes. For example, in the Taiwanese context, strong-tie ‘guanxi,’ which includes family members, relatives, and close friends, is often attributed to the strong loyalty and submission bonds involved in Chinese ethics (Luo, 1997).

The potential downsides of social networks include requests for profit distributions, unequal access to resources, and a lack of stability. In Bali, research showed that social networks can actually serve to hinder economic production, as social claimants preferred profit distributions rather than reinvestment necessary for growth (Geertz, 1978; Luo, 1997). Social networks may also involve unequal access to

resources, which can both corrode ties and systematically exclude some marginalized members, such as women, from much needed resources. The sustainability of social networks is also an issue. If a network grows over time, a greater number of participants offer increased resources, but the network's usefulness can also decline as it becomes more inclusive. Partially for this reason, overseas Chinese often segregate spatially to avoid an overloading of duties on network members. (Luo, 1997).

INDIVIDUAL ENTREPRENEUR CHARACTERISTICS

This section explores the three areas best covered in the literature: education, work experience, and gender and the household.

EDUCATION

Over the past 40 years, governments and development agencies have expended considerable resources on education. Not only have the intrinsic benefits of education long been emphasized, but its role in economic growth through human capital formation has also gained increasing attention (e.g., Mankiw, Romer, and Weil, 1992; Klenow and Rodriguez-Clare, 1997). Although worker training can also contribute to human capital, this section focuses specifically on formal education.

Large investments in education have already increased education levels in many countries: the median primary enrollment rate across the world increased from 80 percent in 1960 to 99 percent in 1990 (Easterly, 2002). Many more students also now have the opportunity to attend secondary school, with the median rate of secondary enrollment nearly quadrupling from 13 to 45 percent during the same period (Easterly, 2002).

While education remains widely recognized as an important facet of development, increased schooling levels have not been the panacea that many once expected (Easterly, 2002). Although human capital is believed to be a key determinant of economic growth, in many countries, increased education levels have not resulted in economic growth. An empirical study found no positive association between growth in education and growth in output per worker (Pritchett, 2001). Such findings may suggest that enrollment in formal schooling is a poor measure of skill creation, or that creating skills without opportunities to use them does not foster economic growth (Easterly, 2002).

This broader context underscores the importance of assessing carefully how education affects MSE growth. Intuitively, one might expect higher levels of formal education to spur MSE growth by enhancing firm capabilities. However, exploring the relationship between education and MSE growth in developing countries reveals greater complexity.

First, developing-country MSE owners and workers are relatively less educated than the majority of the population. Not only do they operate in countries with relatively low overall education attainment, but also they tend to have less-educated owners and workers than larger firms. Despite significant investments in human capital levels mentioned earlier, primary education completion rates remain only 55 percent in Sub-Saharan Africa, 78 percent in South Asia, and 89 percent in Latin America (World Bank, 2001). These regional disparities in educational attainment escalate even further when considering secondary education. Within countries, MSE owners and workers tend to be relatively less educated than their counterparts in larger firms:

- Among manufacturing firms in Ghana, microenterprise employees have an average of 9.6 years of formal education, compared to 11.3 years for employees of large firms (Soderbom and Teal, 2001).

- An IDB study found that owners and workers of Latin American microenterprises tend to have fewer years of education on average than their counterparts in larger firms (Orlando and Pollack, 2000).
- Research in Chile revealed that MSE owners and workers are less likely to be university educated: only 21 percent of microenterprise owners have Bachelor's degrees, compared to 42 percent of small firm and 55 percent of medium firm owners (Alvarez and Crespi, 2003).

This lower level of educational attainment among MSE owners and workers is remarkable when contrasted with developed countries, where those with higher education are more likely to be self-employed (Woodruff, 1999). One reason for this contrast is that the poor in developing countries often create survival-oriented MSEs, due to a lack of alternative employment opportunities.

Given the relatively low level of education within the MSE sector in developing countries, do MSEs with more highly educated owners tend to grow faster? On the surface, evidence appears contradictory. For example, an IDB study found that secondary school attainment had no discernable impact on firm growth in Latin America (Kantis, Angellini, and Koenig, 2004). On the other hand, GEMINI studies in Sub-Saharan Africa revealed that entrepreneurs completing secondary school were more likely to grow in Kenya and Zimbabwe, but found no significant effect of primary education on MSE expansion (cf Mead and Liedholm, 1998; Parker, 1995; McPherson, 1992). Glancing at such ostensibly conflicting evidence, it seems difficult to discern a clear relationship between education and MSE growth.

Clarity emerges when recognizing the threshold effect of education (Mead, interview, 2004). MSEs with more highly educated owners tend to grow faster, but a country-specific threshold must be reached to observe this growth effect. For example, whereas a threshold of secondary education may identify high growth potential in the African countries just mentioned, a higher threshold of university education appears to exist in Latin America. Indeed, the IDB study found that 6 of every 10 Latin American entrepreneurs with high-growth firms are university graduates, whereas less successful entrepreneurs have substantially less education (Kantis, Angellini, and Koenig, 2004). Therefore, a relationship between education and MSE growth emerges, but only after country-specific thresholds are taken into account. While there is evidence that more highly educated owners' MSEs tend to grow faster, the definition of what constitutes "highly educated" differs significantly by country.

EDUCATION AND FIRM PRODUCTIVITY

Most empirical evidence confirms that firms with better educated owners and managers tend to be more productive. In Pakistan, primary education enabled small firms to produce 8 percent more output with the same level of inputs, holding other factors constant (Burki and Terrell, 1998). Similarly, a widely cited study focusing on India, Korea, and Taiwan found that entrepreneurs' literacy improves firm efficiency (Little, 1987). In addition, workers' education levels contribute to firm productivity. A World Bank study including 50,000 small firms found that worker education is significantly and positively related to firm productivity in Indonesia, Mexico and Malaysia (Tan and Batra, 1995).

Despite these potential benefits, education may also negatively affect MSE growth in cases where owners divert attention to other attractive opportunities. One of the commonly cited benefits of education is its ability to expand individuals' employment opportunities. Nevertheless, having more alternatives increases owners' opportunity costs of focusing effort on their MSEs. At the highest levels of education, MSE owners' opportunity costs may indeed counteract education's otherwise positive effect on firms. For example, research on small manufacturing firms in Chile found that university education did not induce higher efficiency (Alvarez and Crespi, 2003). The authors

reasoned that owners with higher education may face higher opportunity costs for monitoring their labor force, thus leading them to focus less on these tasks. Higher education can expand an entrepreneur's opportunity set, but ironically, might hinder the growth of his or her MSE.

WORK EXPERIENCE

Work experience proves to be highly important for developing capabilities within MSEs, as entrepreneurs with more years of work experience typically have faster growing MSEs. For example, one empirical study found that Kenyan entrepreneurs with at least seven years work experience expanded their firms more rapidly than those without such experience (Mead and Liedholm, 1998; Parker, 1995). An empirically rigorous IDB study of high-growth entrepreneurs provides telling insights about the importance of skills gained during past employment (Kantis, Angellini and Koenig, 2004). Exploring small firms' dynamism in four East Asian countries revealed that successful entrepreneurs benefited in particular from marketing, administration and negotiation skills developed in previous jobs.

The IDB study of high-growth entrepreneurs suggests that while East Asian entrepreneurs frequently have past work experience in a sector related to their new enterprise, such experience is less common in Latin America. On the other hand, Latin American entrepreneurs were more often found to have prior work experience in small or medium sized firms, whose organizational structures may be especially conducive for developing entrepreneurial skills relevant for MSEs.

Some regions are characterized by a systematic lack of opportunities to gain relevant work experience. Whereas entrepreneurs in Latin America frequently develop their skills within SMEs, Africa has few firms of this size—a curious phenomenon termed "the missing middle." Many African entrepreneurs thereby lack a valuable training ground, which could otherwise provide not only important skills, but also business contacts. Such contacts are a key benefit of work experience, as they can potentially help to identify business opportunities, obtain financing and other resources, and alleviate management challenges (Kantis, Angellini, and Koenig, 2004). Evidence in Africa underscores the low level of work experience: in Ghana, MSE owners and workers average only five years of work experience, compared to ten years for their counterparts in larger firms (Barr, 1998).

GENDER AND THE HOUSEHOLD

Women in developing countries have a strong tendency to enter the MSE sector, in part because of ease of entry and their limited access to alternate opportunities (Rubio, 1991). In five of nine African and Latin American countries reviewed in a GEMINI report, women owned more MSEs than men (Liedholm, 1999; Downing and Daniels, 1992). More recent research by the Global Entrepreneurship Monitor (GEM) also demonstrates that a substantial, though not necessarily a majority, share of startups are founded by women in both developing and developed economies (GEM, 2004).

Downing and Daniels provide an insightful analysis of many of the challenges constraining women's opportunities for MSE growth (1992). Because of such factors, women frequently focus their MSEs on a relatively narrow range of industries. Several GEMINI studies found that women-owned MSEs tend to be restricted to a few activities in each country (Mead and Liedholm, 1998). Activities varied by country, but included beer brewing, knitting, dressmaking, cane work and retailing. Women frequently face particular difficulties obtaining credit, which may lead women to work in industries where growth strategies are based on frequent injections of working capital for purchase of inputs for processing or resale, rather than capital investments (Downing and Daniels, 1992). Albert Berry and his colleagues provide a particularly illustrative example from Indonesia, which demonstrates how these factors can converge to prejudice the ability of women to grow, or even maintain, their MSEs (Berry, Rodriguez, and Sandee, 2002).

Women-owned MSEs frequently play a crucial role in increasing and diversifying household incomes. Downing and Daniels review various studies analyzing how households simultaneously engage in survival and mobility strategies, with activities performed on a gendered basis (Downing and Daniels, 1992). For example, women may engage in survival strategies, operating MSEs with small but regular contributions to income, which enable their husbands to pursue mobility strategies, such as focusing on higher risk but potentially lucrative growth-oriented MSEs. Following such survival strategies, women may strive to grow laterally; instead of specializing in their MSEs by expanding their size, they may opt to diversify by creating additional firms. Indeed, one study found that many urban female entrepreneurs in Lesotho owned between two and four firms.

Empirical evidence suggests that women's MSEs tend to grow more slowly than those owned by men. For example, GEMINI research found that employment in male-headed MSEs grows an average of 11 percent a year, versus 7 percent for female-headed MSEs (Mead and Liedholm, 1998). This difference in growth rates is partially due to women's MSEs location in slow-growing sectors, but a statistically significant difference remains even when controlling for sector. Similarly, recent IDB research in Latin America, Asia and Europe found that only one in ten firms growing to at least 15 employees is woman-owned (Kantis, Angellini, and Koenig, 2004). Other research has suggested that employment growth differences between MSEs owned by men and women are particularly significant in firms with fewer than five workers (Downing and Daniels, 1992).

One contributing factor to the slower growth of female-owned MSEs is that their firms have an especially high probability of being physically located within the household. Indeed, a recent International Labour Organization (ILO) statistical report indicated that 80 percent or more of "homeworkers," defined as "industrial outworkers who work at home," in developing countries are women (ILO, 2004). MSEs located in the household are not only significantly smaller on average, but also are less likely to grow than other MSEs (Mead and Liedholm, 1998). Firms within the household may benefit from resources such as family labor and electricity, but may also reinvest few profits as funds are tapped for daily household needs. To be sure, at lower income levels and with smaller firm sizes the line that distinguishes the MSE from the household is frequently blurred.

Despite the growth constraints discussed above, women are likely to be highly effective firm owners, performing particularly favorably on metrics such as productivity and survival rates. For instance, a study in the Dominican Republic found that female-owned textile MSEs actually have higher levels of labor productivity than those owned by men, even though they experience slower growth (cf Downing and Daniels, 1992). GEMINI studies also show that women-owned MSEs also have comparable closure rates due to business reasons as firms owned by men (Mead and Liedholm, 1998). However, women-owned MSEs demonstrate significantly higher closure rates resulting from personal reasons, largely due to disproportionate obligations and responsibilities.

FIRM CHARACTERISTICS

This section explores the relationship between MSE growth and three widely studied firm-level factors: firm age, formality, and access to finance.

FIRM AGE

Empirical evidence strongly supports the consensus that younger MSEs tend to exhibit faster growth than older MSEs. Several GEMINI studies in Eastern and Southern Africa, as well as in the Dominican Republic, revealed that younger MSEs were more likely to show higher rates of growth, compared to MSEs that had been in existence for a longer period (Mead and Liedholm, 1998; Paxton, 1995). A recent econometric study by other researchers in Côte d´Ivoire yielded comparable results. In Latin America, higher rates of growth are also experienced by younger firms: a recent IDB study

of entrepreneurship revealed that the major expansion of dynamic enterprises occurs during their third year of operation (Kantis, Angellini, and Koenig, 2004). Similarly, numerous other widely cited studies have also shown that the average growth rate of firms decreases with age (cf Burki and Terrell, 1998).

Why might younger MSEs grow faster than older MSEs? A seminal theoretical paper by Jovanovic offers one possible explanation (1982). Jovanovic proposes a learning model, in which firm owners discover their efficient sizes of operation gradually over time. This theory predicts that a firm will expand quickly at first, but then growth will taper off as the firm approaches its optimal size. While growth slows, productivity is expected to increase as a firm ages because its owner learns about the optimal size of operations.

While Jovanovic's learning model unambiguously predicts that older firms will be more productive, in reality the effect of firm age on productivity is not so clear. On the one hand, several recent econometric studies on small firms in the United States find a positive impact of firm age on productivity, even when controlling for firm size (Audretsch, 2002). On the other hand, a number of studies in developing countries suggest that firms actually suffer productivity losses as they become older. For example, studies in both India and Pakistan have found that efficiency falls with firm age (Burki and Terrell, 1998). Some experts' explanation of such findings is that older firms frequently fail to invest sufficiently in existing or emerging technology, leaving them with relatively outmoded equipment and hindering productivity levels relative to younger firms.

FORMALITY

Informality is a nebulous term often referring to a vague and dizzying array of activities. In fact, the popularity of the term "informal sector" may well stem directly from its conceptual fuzziness: because the term's definition is so abstract, it can be employed in many different ways depending on contexts and objectives (Peattie, 1987). Many researchers focus on firm characteristics when defining informality, including firms with up to a certain number of employees, or using the decision criterion of whether or not an enterprise or its employees are legally registered. On the other hand, the ILO views informality as a characteristic of employment, which can take place inside or outside a registered firm of any size.

While specific methods of defining the informal sector are a subject of debate, the sector's ubiquity in most developing countries is unmistakable. In terms of sheer quantity, the number of informal firms typically dwarfs the number of officially registered enterprises. Concerning employment, the ILO reports that the share of the informal economy in the non-agricultural workforce ranges from 55 percent in Latin America to 45 to 85 percent in Asia to nearly 80 percent in Africa (ILO, 2004). Moreover, the informal sector contributes a substantial share of economic output in developing countries. Quantifying the informal sector is notoriously challenging, but Freidrich Schneider's noteworthy analysis has recently been cited by several development agencies (Schneider, 2002). Schneider estimates that the average size of the informal economy in developing countries was 41 percent of officially reported economic output in 2000, compared to just 18 percent in OECD countries.

There are competing perspectives of the informal sector in developing countries. Some view informality as resulting from a shortage of "decent" jobs in the formal sector, but others stress the entrepreneurial character of the informal sector and argue that people may choose to work there. For example, rather than decry informality, Maloney (2004) maintains that "informal entrepreneurship can be a viable…alternative to formal sector work" and can offer "an opportunity for independence and an outlet for entrepreneurial energies" (cf Snodgrass and Winkler, 2004).

It is commonly believed that informal firms frequently face growth-inhibiting disincentives and costs. Although smaller, informal MSEs may be able to circumvent government regulations and taxation, as they grow, they risk becoming more visible, creating disincentives to expand beyond a certain size (Snodgrass and Biggs, 1996). Informal firms may therefore need to "keep their heads down," ruling out large size and rapid growth, as well as close relations with formal firms (Winter, 1995). Contracts with international or government buyers, for example, are off-limits for informal firms because they require legal documentation that these MSEs do not have. Moreover, while formal MSEs in developing countries may have problems accessing financial and legal systems, informal enterprises face even greater difficulties in obtaining formal credit and assistance from law enforcement agencies and courts.

For these and other reasons, informal MSEs appear to grow more slowly than their formal counterparts. A particularly rigorous econometric study in Côte d'Ivoire found that even while controlling for efficiency, size, and age of firms, formal status has an additional positive effect on the growth of the firm (Sleuwaegen and Goedhuys, 2002). Analysts at McKinsey and Company argue that because "informal companies operate fully or partially outside the formal fiscal and legal environment, they tend to be subscale, sub-invested and sub-skilled, they also tend to produce sub-standard products and services" (McKinsey and Compnay, 2004). While such an assessment may be overly pessimistic, the Côte d'Ivoire study suggests two reasons for formal firms' greater efficiency: formal firms enjoy a larger range of production factors and a broader choice of input suppliers (Sleuwagen and Goedhuys, 2002).

Certain characteristics of MSEs make it particularly likely that they will operate in the informal economy, a point underscored by McPherson and Liedholm's empirical research (1996). Even though their study focused on two African countries with divergent contexts—Niger with an onerous legal and regulatory environment and Swaziland with relatively supportive policies toward MSEs—evidence surprisingly did not suggest that the likelihood of registration depended on country. One the other hand, they found that MSE registration does depend on numerous firm-specific factors. The following econometric results hold other factors constant:

- Rural MSEs are 69 percent less likely to be registered. They get fewer benefits from registering and face less enforcement, but incur higher indirect registration costs (e.g., transportation).
- Enterprises operated within the household, which are much less visible, are 42 percent less likely to be registered.
- Sector matters. Garment producers are the most likely to register, while metal firms are 41 percent less likely to register.
- Women's MSEs are 23 percent less likely to be registered than their male-owned MSEs.
- Registration varies with firm size, with only 36 percent of one-person firms registered in Swaziland, versus 80 percent of those with two workers or more.

Such empirical evidence helps to clarify the characteristics associated with informality, but it remains unclear how to stimulate formalization of these enterprises. Of course, one familiar argument is that high registration costs pose the most formidable challenge. A well-known analysis by Hernando De Soto (1989) revealed the costs and time associated with obtaining business licenses, such as 289 days for small factory and 43 days for a store in Peru. Based on such evidence, De Soto advocates slashing direct and indirect registration costs, which impose disproportionate barriers to entry for smaller firms. However, it is not so clear that registration costs always represent a binding constraint on formalization efforts. For instance, informality persists in Niger, even though officials even personally visit firms to ease the registration process (McPherson and Liedholm, 1996). Despite

reportedly low costs and regulatory burden, entrepreneurs surveyed were typically unaware of the benefits of registration and how to proceed.

ACCESS TO FINANCE

MSEs appear to be disproportionately afflicted by the underdeveloped nature of financial institutions in developing countries. For various reasons ranging from a lack of collateral to bias against small firms, MSEs tend to face greater financial constraints than do larger firms.

From the perspective of MSE owners, insufficient credit is frequently the most obvious and pressing challenge hindering firm growth. MSE owners in many countries incessantly bemoan their inability to obtain loans for investment and working capital needs, as evinced by numerous studies showing that they report credit to be their chief constraint to firm expansion (cf Grosh and Somulakae, 1996). Demonstrating how widespread this focus is, an IFC study of 10,000 firms found that more than any other obstacle across 80 countries, financing was ranked as one of the firms' top three challenges (Schiffer and Weder, 2001). Entrepreneurs' own perceptions may not always correspond to actual growth trends. Interestingly, a lack of access to capital appears to be widely accepted as a growth constraint, yet few empirical studies explicitly test the link between access to finance and firm growth or success rates. A number of sources discussed below, however, do provide evidence about the ways in which reduced access to finance hinders firm growth.

It does appear that small firms are affected more severely by capital constraints. Numerous empirical studies on financial markets identify biases against small firms. Surveying owners of large and small firms also suggests that credit constraints are perceived to be more frequent within smaller enterprises. For instance, a USAID study in Romania found that 81 percent of micro and 77 percent of small enterprises mentioned capital as a constraint, relative to 64 percent of medium firms (CEU Labor Project and USAID, 2002). Across 80 countries, the IFC study cited above also confirms that credit constraints are mentioned more frequently in smaller firms (Schiffer and Weder, 2001).

MSEs receive formal loans relatively infrequently, and must therefore rely on other types of credit. A World Bank study of nearly 2,800 manufacturing firms in Cameroon, Ghana, Kenya, Zimbabwe, Burundi, and Côte d'Ivoire underscores this point (Bigsten et al., 2000). As shown in Table A-1, while 20 percent of firms with more than 100 employees receive formal loans, this figure is only 2 percent for firms with one to five employees. Higher percentages of MSEs outside Africa typically obtain formal loans, but similar patterns emerge. For instance, a study in Chile found that 31 percent of micro firms had some type of bank loan, versus 49 percent among small firms and 60 percent among medium firms (Alvarez and Crespi, 2003).

TABLE A-1: CREDIT MARKET PARTICIPATION BY FIRM SIZE IN SIX AFRICAN COUNTRIES

	Micro (1-5 employees)	Small (6-25 employees)	Medium (26-100 employees)	Large (100+ employees)
Received Formal Loan	2%	7%	11%	20%
Firms with Trade Credit	32%	53%	70%	90%
Firms with Overdraft Facility	10%	30%	64%	86%
Firms with Informal Debts	16%	16%	9%	9%

Source: Bigsten, et al., 2000

Note: Sample drawn from a World Bank survey of 2,780 manufacturing firms in Burundi, Cameroon, Côte d'Ivoire, Ghana, Kenya, and Zimbabwe. Author's descriptions of firm sizes as "micro" and "small" reflect the number of employees shown in the above table.

Rather than formal loans, Table A-1 reveals that MSEs in the African context use trade credit, overdraft facilities, and informal debts to finance their operations. Through trade credit, the most important source of financing identified in the World Bank study, suppliers effectively provide working capital loans to MSEs by allowing them to pay for inputs a certain length of time after delivery. Trade credit is frequently allocated selectively based on trust, reaffirming the importance of social networks (Fafchamps, 1999). Overdraft credit represents another important source of financing in countries ranging from Kenya to Brazil. Although costly and often insufficient, overdraft facilities can sometimes act as a substitute to formal loans, to the extent that researchers may overemphasize firms' inability to access bank financing if failing to account for overdraft credit (Vandenburg, 2003).

Microfinance institutions also provide important sources of financing for MSEs. Since their inception in the 1970s, microfinance institutions have become increasingly visible, providing many MSEs excluded from the formal sector with working capital and investment loans, as well as other financial services. In many developing countries, however, microfinance portfolios are still tiny in comparison with large volumes of informal trade credit. In some sectors, such as agriculture, the supplier credit portfolio may be as much as 100 times the size of the traditional microfinance loan portfolio.

Informal mechanisms such as rotating savings and credit associations (ROSCAs) are also common, reaching up to 80 percent of the population in some African countries (cf Vandenburg, 2003). Although penetration is high, ROSCA financing is often designed to finance consumer purchases or household needs (savings) rather than enterprise expansion.

Across the world, entrepreneurs typically start firms primarily through their own savings because of limited access to startup capital (Mason, 1998). Indeed, an IDB study in Latin America, Asia, and Europe found that personal savings was the most important source of startup financing in all countries, especially in Latin America where access to banking is relatively more limited (Kantis, Angelelli, and Koenig, 2004). Even after the start-up hurdle is overcome, a lack of credit frequently hinders growth during MSEs' earlier years, because younger firms tend find financing even more difficult than older firms (Schiffer and Weder, 2001). Over the life of the firm, growth can also be hindered by credit constraints that curb investment to maintain or improve technology:

- In Pakistan, MSEs' insufficient access to formal and informal capital markets creates difficulty meeting investment needs. As a result, older firms typically use outmoded tools and machines (Burki and Terrell, 1998).
- In Chile, smaller firms typically invest less due to credit constraints, leading to lower capital per worker and older machinery than in older firms (Alvarez and Crespi, 2003).
- In Kenya, purchases of new machines are primarily funded through the slow process of accumulating retained earnings. Two-thirds of small firms relied solely on savings to finance their most recently purchased machine (Vandenburg, 2003).

Dynamic firms do tend to seek credit more actively. Indeed, the earlier-mentioned IDB study revealed that in Brazil and Mexico, dynamic firms have a greater desire to use better, more expensive technology, and are thus relatively more affected by financing constraints (Kantis, Angelelli, and Koenig, 2004).

ANNEX B: EXPERTS INTERVIEWED

1. **Thorsten Beck**
   Financial Economist
   Development Research Group
   World Bank
   June 30, 2004

2. **Albert Berry**
   Munk Centre for International Studies
   University of Toronto
   June 29, 2004

3. **Ronald Cooper**
   Senior Policy Analyst
   U.S. Small Business Administration
   Office of Technology
   February 24, 2005

4. **Gustavo Crespi**
   University of Sussex
   Author of study on Chilean Microenterprises
   PyME en Chile: Nace, Crece y Muere
   June 29, 2004

5. **Antonie De Wilde**
   Program Manager
   Southasia Enterprise Development Facility (SEDF)
   World Bank Small and Medium Enterprise Division
   Dhaka, Bangladesh
   June 23, 2004

6. **Brian Headde**
   Economist
   U.S. Small Business Administration
   February 24, 2005

7. **Hugo Kantis**
   Universidad Nacional de General Sarmiento
   Author of *Entrepreneurship In Emerging Economies: The Creation and Development of New Firms in Latin America and East Asia*
   June 27, 2004

8. **Juan Jose Llisterri**
   Senior Enterprise Development Specialist
   Inter-American Development Bank
   March 10, 2004

9. **Donald Mead**
   Professor Emeritus
   Michigan State University
   July 30, 2004

10. **Reshmi Mitra**
    Professor of Economics
    XLRI Jamshedpur, India
    July 3, 2004

11. **Carlos Moreno**
    Gerente General
    SODIMAC Colombia
    June 27, 2004