Is Small Beautiful and Worthy of Subsidy?
Literature Review

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Introduction:

This literature review was commissioned as part of an evaluation of IFC Project Development Facilities. In supporting Project Development Facilities to assist small and medium enterprises (SMES), IFC presumed that (i) development of SMES is important for achieving sustainable job creation and poverty reduction and (ii) subsidies are needed and justified to foster their development. As part of the evaluation effort, a literature review was needed to assess the weight of the empirical evidence underpinning these assumptions. The terms of reference for the review asked three important questions: What empirical evidence exists (if any) to support the belief that SMES make special contributions to employment, growth and poverty reduction? What are the rationales that have been used to justify subsidies to foster the development of SMES? And what empirical evidence exists (if any) to support or substantiate these rationales for intervention?

The paper has three sections. Section 1 reviews the evidence for the assertion that SMES make special contributions to the economy. Section 2 examines the rationales often made for subsidies to support the development SMES and reviews the empirical evidence underpinning these rationales. The "bottom line" case for subsidies is then presented in section 3. We begin with a brief word about the definition of SME and the correlation of firm-size with behavioral characteristics of the firm.

The definition of SME varies by country, or more specifically, by market size. Countries with large economies like the US and member states of the EU use cut-of points of fewer than 500 workers to describe SMES. In developing countries, where market size and average firm size are both much smaller, cut-of points of fewer than 100 workers or 250 workers are often used. Although these

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arbitrary employment-size cut-of points roughly correspond to variations across countries in market size and average firm size, they often do not correlate perfectly with behavioral characteristics of firms. Enterprise behavioral characteristics (conduct and performance) are better described by form of ownership, degree of "informality," market power, and level of technological sophistication, which do not always correlate with firm-size. SMES are also a heterogeneous group – ranging form small workshops making furniture, metal parts and clothing to medium-sized manufactures of machinery and services providers, such as restaurants, consulting and computer software firms. Some are traditional, "livelihood" enterprises that are satisfied to remain small; others are "growth-oriented" and "innovative." Firm size is interesting in part because of the many size-related regularities, often anomalous, that have been uncovered. We review many of these in this paper.

I. Do SMEs Make Special Contributions to the Economy?

The small business development literature argues that SMEs embody special advantages that proffer at least three unique contributions to the economy. Perhaps the most frequently stated claim is that SMEs create a preponderant share of newly generated jobs and therefore hold the key to employment and poverty reduction. Furthermore, the jobs created by SMEs are said to be brought about at relatively lower capital cost than those generated by large enterprises, and therefore are more consistent with the relative abundance of labor and shortages of capital characteristic of developing counties. Second, SMES are championed as the "seedbed" for future industrial growth. They are said to be a source of considerable innovative activity and to contribute to the development of entrepreneurial talent and export competitiveness, which form the basis for future industrial expansion. Third, encouraging the presence of SMES in the economy is alleged to increase competition and to add flexibility to the industrial structure, thereby promoting greater economic dynamism and speedier and less costly adjustments to economic shocks. What evidence is there to substantiate these claims?

Job Creation

The idea that small firms are a particularly effective engine for job creation was elevated to "conventional wisdom" by repeated pronouncements of the U.S. Small Business Administration and a range of political leaders in the 1980s. Their view of the job generation process in America was guided by the work of David Birch (1979, 1981, 1987) who revealed the startling finding in 1979 that 8 out of 10 new jobs in America, in the 1970s, had been generated by firms with fewer than 100 employees. Almost from the beginning, however, Birch's methods and conclusions were questioned by other researchers.

Armington and Odle (1982) pointed out that Birch had not controlled for the fact that many new or small establishments, owned by large firms, play an important role in generating jobs. This meant that when a new Walmart outlet opens, its 80 employees would be counted as evidence of small firm growth rather than evidence of expansion by a large enterprise. Dunne, Roberts and Samuelson (1987) noted the fact that a great many of the jobs created in Birch's study were also destroyed due to the high failure rates among small enterprises. If short-lived jobs are excluded, the higher failure rates for small businesses make the share of non-transitory jobs generated by small firms even smaller. Jonathan Leonard (1986) argued that Birch's findings may be a statistical artifact resulting from the expansion of business who for whatever reason are less than their optimal sizes and the contraction of business who for whatever reason are larger than their optimal sizes – a regression-to-the-mean effect. In subsequent years, work by Brown, Hamilton, and Medoff (1990) and Davis, Haltiwanger and Schuh (1993) identified several more flaws in the statistical logic underlying Birch's analysis. Today it would appear that the accumulated heft of this critique has substantially revised the conventional thinking on the subject of the job generating power of small firms.

As Davis, Haltiwanger and Schuh argue, there are three issues of interpretive error in the analysis of the U.S. data, which affect the conclusions drawn. First, one must distinguish between gross and net job creation. Small firms *are* disproportionate creators of new jobs, but they are also disproportionate

destroyers of jobs, given their greater instability and much higher observed failure rates. Accordingly, we should be interested in *net* job creation. Second, there are some transitory causes of measured enterprise employment-size in the a given year (due to measurement error and so on); hence, there is a tendency for some very large firms to shrink in subsequent years, and for some small to grow. Such a pattern may be observed even though no systematic relationship exists between size and employment growth over longer time periods. Third, the use of cut-off points to define broad size classes, established on base-year size, causes employment in the small firm cohort to be overstated. The exaggeration results from shrinkage of formerly medium-sized firms into the small-firm size category. Given this sort of shifting among size classes, job creation can look to be disproportionately robust in the small firm cohort even though a firm-by-firm examination would show job creation to be an increasing function of size.

When the U.S. manufacturing data is analyzed, taking these problems into consideration, the following conclusions can be drawn about the relationship between firm size and job creation. Gross rates of job creation and destruction are high in both large and small firm cohorts, however they are higher in the small firm categories. Thus, while small manufacturing firms with fewer than 500 employees accounted for about one-third of employment, they accounted for just under 50 percent of job creation and destruction between 1973 and 1988. *Net* job creation is highest in the large firm size-class. Large firms (>500 workers) employ the lion's share of workers and have more stable jobs and therefore dominate the calculation of net job creation in terms of absolute numbers. Lastly, there is no systematic relationship found between *rates* of net job creation and firm size. Therefore, there is no reason to believe that *net* job creation would be changed if the structure of manufacturing were populated by many SMES or by a few very large firms with thousands of employees.

While the strongest empirical evidence on the question of the job-creation prowess of SMES comes from advanced countries like the U.S., where data are abundant, there is some empirical support for the Davis, Haltiwanger and Schuh findings in the developing country context. Biggs and Shah (1998), using panel data from enterprise surveys in five countries in Sub-Saharan Africa, report that

large firms (>100 employees) over a three year period in the early 1990s emerge as the dominant source of net job creation in manufacturing in all the countries where there had been aggregate net job additions. Large firms in the sample contributed 56 percent of net job creation in Ghana, 74 percent in Kenya, 76 percent in Zimbabwe, and 66 percent in Tanzania. Only in Zambia, where there was an overall net job loss for the period, did the small firm cohort out perform its larger counterpart in net job creation. Unfortunately, these African results are the only available findings for developing countries. Data limitations have made it difficult to study the demographics of populations of business firms in areas. There is little reason, however, to doubt the transferability of the critique of the view of SMES as superior job generators. As the African data indicate, most generalizations offered on the subject seem to correspond to what is found in advanced countries. One finds, for example, that higher rates of enterprise mortality at the small end of the size distribution of firms are a familiar pattern in all countries. It would therefore appear to be the case that small enterprise mortality would be an important factor in gross job destruction (and in net job creation) in almost all countries. Hence, the developed country results on the relation between job creation and firm size seem likely to be relevant to developing nations.

An important issue in the discussion of job creation is the quality of jobs created. While interesting, the number of jobs created begs the question of the welfare impact, which must be answered to understand the precise importance of different sized firms in the labor market. There is a large body of empirical evidence from developed and developing countries showing that large firms offer much higher wages than small firms, even when differences in worker education and experience and the nature of the industry are considered.[1] In advanced countries, the wage differential between large and small firms for similar job categories is found to be as much as 35 percent (Brown, Hamilton and Medoff, 1990), while in developing countries it can be as large as 50 percent (Mazumdar, 1999; World Bank,1995; Rosenzweig,1988). Large employers also offer better

[1] The observations regarding the superior quality of jobs in large enterprises might not hold for some public enterprises in the developing countries.

benefits in the form of pension plans, life, health and accident insurance. Moreover, large firms, just about everywhere, have better working conditions. This is especially true in developing countries where working conditions in the informal sector can be particularly harsh. Finally, the jobs generated by large firms generally provide greater security than those generated by small firms, as the layoff rates are much lower in large businesses than in comparable small ones. It would thus appear that smaller firms may not be generating an equivalent share of sustainable new compensation (wages plus benefits) even in cases where they have generated a proportionate share of jobs.

A final point regarding the labor intensity of small enterprises, it is often claimed that SMES are more labor-intensive than large firms and thus more consistent with the relative abundance of labor and shortage of capital characteristic of developing countries. On closer examination this claim does not hold up well. The empirical evidence suggests that firm size is not a reliable predictor of labor intensity: many small firms are in fact, more capital intensive than large firms in the same industry (Little, Mazumdar, Page 1987; Snodgrass and Biggs 1996). In addition, industrial census data for many countries indicate that there is a wider variation in labor intensity across industries than there is among firm-size cohorts within industries. This suggests that countries would be better off in terms of job creation focusing on such things as policies to promote international trade, which will alter the pattern of demand and the composition of output in favor of labor-intensive industries, than on interventions to promote a particular size category of enterprise within industries.

"Seedbed" for Innovation and Entrepreneurship

At least since the 1971 Bolton committee in the UK the "seedbed" function of SMES – seedbed for innovation, seedbed for entrepreneurship and worker learning – has been hailed as a vital contribution of small firms to the long-run health of an economy. What evidence is there, if any, to back this "seedbed" claim?

Innovation: Do SMES contribute more than their share of innovations? The empirical evidence from the U.S. indicates the answer may be yes, in some

industries. Acs and Audretsch (1987) find that the innovation rate per 1000 employees, on average, is higher in small firms (<500 workers). But this average figure conceals a good deal of variation across industries. More generally they also find that there does not appear to be evidence of increasing returns to R&D expenditures in producing innovative outputs. Diminishing returns to R&D expenditures appear to be the rule. Across various industries the data indicate that small firms have higher innovation rates in what can be classified as "high technology," skill-intensive industries, such as computers, and larger firms have the innovative edge in "lower technology," capital-intensive industries, like chemicals, industrial machinery and food. Thus, the answer to the question, "Which firm-size is more innovative?" is it depends on the industry.

But how are these small, and frequently new firms able to generate innovation outputs at such disproportionate rates, while undertaking only negligible amounts of investment in knowledge-generating inputs, such as R&D? Link and Rees (1990) and Acs, Audretsch, and Feldman (1992, 1994) conclude that one answer is through exploiting knowledge created by research expenditures at universities and R&D expenditures in large corporations. Large firms appear to be more active in funding university-based research, but SMES are apparently better able to exploit their university-based and corporate associations to generate marketable innovations. There seem to be some diseconomies of scale in the production of innovations, due to the inherent bureaucratization process which inhibits both innovative activity and the speed with which new innovations move through the corporate system towards the market.

These findings on the propensity of SMES to innovate in the advanced economies are not, unfortunately, completely transferable to the developing world. At earlier stages of development technology transfer from abroad is the force driving technological progress, not innovation (Rosenberg 1976, 1986; Baumol (1993). Very little investment in basic R&D is undertaken by either large or small firms in low-income countries. Rather, time and resources are spent

searching for, importing, and adapting foreign technologies to local conditions.[2] The principal mechanisms for technology transfer into these countries revolve around the business activities of larger enterprises - multinational firms and large domestic enterprises - which have the resources to search for new techniques and undertake local adaptations necessary to make them work. It generally follows that the new technology (new products, new production and new management techniques) then diffuse down through the size distribution of firms within industries. Of course, there are exceptions to this general proposition. Entrepreneurs managing small firms with technical capability and resources do sometimes play a role in the technology transfer process. But, it is more often that firms with financial wherewithal, sufficient technical and engineering personnel, and foreign connections play the leadership roll in what is sometimes called the "imitation process."

Biggs, Shah and Srivastava (1996) show that it is these technology transfer connections which give larger firms a productivity advantage over small firms in sub-Saharan Africa. Rodriguis-Clare (1996) indicates a similar result for Latin America, and Pack (1992) and Pack and Westphal (1986) for Asia. Such being the case, it is difficult to argue for developing countries, as one might for developed countries, that small firms play an important role in the economy by serving as agents of change through their innovative activity.

Exports*:* The seedbed function of small firms does not extend to exports in most countries. The propensity of small firms to export is quite low, particularly in developing countries (the low propensity of small firms to export is seen in data for Africa, Bigsten et. al. 1998 and Biggs et. al. 1995; Asia, Regnier, 1993; Latin America Cortes, Berry, and Ishaq 1987). There are exceptions, of course, in Hong Kong, Taiwan and a few other countries. But even in these exceptional cases large trading companies play an important role in facilitating the exports of small firms. If SMES are involved in world markets at all, they tend to be involved as indirect exporters, supplying intermediate inputs or subcontracting to larger export firms. The reason is the high transaction costs of dealing with

[2] R&D Expenditures begin to rise when countries reach semi-industrialized status, as can be seen in R&D data for East Asia countries. But even here technology transfer countries to play a leading role.

international markets, which can be exceedingly high for small firms, as they generally face higher transaction costs per unit of transaction than large firms (Nooteboom 1993). Small firms are burdened more from the cost of acquiring and processing information and have greater difficulty coping with export opportunism and other contract enforcement problems.

Notwithstanding the fact that SMES are generally integrated into world markets as indirect exporters, it must be noted that their contribution can be substantial. Fast and efficient SME subcontractors and suppliers add critical flexibility and provide "just-in-time" benefits to the supply chain, which are important aspects of competitive advantage in international markets (Porter, 1990). As countries like Taiwan, Hong Kong, and Italy have shown, it is also not impossible for SMES to compete directly in export markets. Working through industry-based "clusters," SME exporters in these countries have created competitive niches in world markets and prospered. However, the ability to develop competitive industry "clusters" is seen to be highly dependent on family-based social networks particular to these countries, which work to reduce the substantial transaction costs involved in the high number of market exchanges taking place in the "clusters" in day-to-day operations.

In developing countries, an important reason why large enterprises tend to be at the center of the technology transfer process is their superior links, by way of exporting, with world markets. One of the chief mechanisms for enterprise learning is via the day-to-day interactions that take place between buyers and suppliers in world markets. International buyers and suppliers provide critical information on product design, on market trends and prices, on production technology, and even on choosing the right expert technical consultants in cases where they are needed.

Firm Formation*:* New firms in an industry help to promote new products, generate competition, and ultimately, play a role in shaping the evolutionary path of the sector. And we know that most new plants and firms enter on a relatively small scale (Acs and Audretsch 1991). What is not often put into perspective is the magnitude of this entry. In net terms entry is found to be small in most countries, suggesting a somewhat limited role for this "seedbed" function of small

firms. In U.S. manufacturing, there is an increase, on average, of only just slightly more than one percentage point in the number of establishments each year (Acs, Carlsson and Thurik 1996). Gross entry is, of course, much higher. Between 1980 and 1986, for example, new manufacturing firms entered at a rate of 45.8 percent. At the same time, however, because of the very high proportion of small firm death, firms exited at a rate of 38.6 percent, resulting in a 7.2 percentage point change over the seven-year period. Most European countries show even slightly lower net entry rates of about .7 percent per annum. In a study addressing the same issues in the context of Indonesia, Behrman and Deolalikar (1989) for the period 1975-85 report entry and failure rates that reveal a picture consistent with the patterns identified in advanced countries.

The impact of new firm formation on employment is also found to be modest. Auddretsch (1995) finds that, while at any point in time nearly one-third of all US manufacturing firms can be considered “new”(a higher figure than the Acs, et.al numbers above imply), in the sense that they were started within the last six years, only about 5 percent of all employment is accounted for by such new enterprises. Johnson (1986) found in the UK that over a typical ten-year period only about 10 percent of total end-year employment can be attributed to new firm formation.

The importance of new firm formation and its economic impact, however, varies considerably across industries. New firm formation is lower in industries, which are capital intensive and where scale economics exist. Similarly, the role of new firms is clearly less important in concentrated industries and in markets where advertising plays an important role. On the other hand, new firm formation is highest in high-tech industries (high R&D intensity and high rate of small firm innovation), but even here new firm’s contribution to employment in high-tech industries is low. In fact, the impact of new firms on employment in these industries surprisingly tends to be lower than it is other industries (Audretsch, 1995). One explanation may be the greater product diversity in such industries, enabling new firms to survive by occupying distinct product niches. Another explanation is that these new firms have managed to gain a toehold in the

industry, but remain on the fringe without exerting any major impact on overall economic activity.

New firm formation and its economic impact are also affected by the prevailing economic conditions in a country. Studies of new firm formation show that formation rates go up in both good economic times and in bad, but for different reasons. Andretsch (1995) finds, in the US, that positive business cycle variables influence formation rates. New firm formation increases during periods of high economic growth and declines when interest rates are high. Storey and Jones (1987), on the other hand, find in the UK that the rate of new firm formation goes up in times when job shedding increases. So economic conditions appear to have a "push" and "pull" affect on formation rates. As unemployment increases during bad economic times more workers are "pushed" into self-employment by the lack of jobs, and as economic growth picks up, increasing opportunities and profitability in various industries, more workers are pulled into forming new business by the new possibilities. The literature does not present evidence on the survival rates of firms formed in these divergent economic settings. However, one could surmise that firms started in bad times because workers are pushed into self-employment might have relatively lower survival and growth rates and, in turn, smaller impacts on overall economic activity, as many would fold when good times return and jobs are available.

This type of "push-generated" new firm formation is familiar in the informal sectors of many developing countries, where rural-urban migration and low labor absorption in the formal sector meet to create rising unemployment. As Liedholm and Mead (1987) point out for Africa and De Soto (1987) for Latin America, many of the small enterprises in poor countries are created as a last resort by people in need of income. Firm formation rates are thus often counter-cyclical, although this need not always hold, particularly in urban centers. Most of the limited information we have on small, informal enterprises indicates that very few ever grow up to have a significant impact on employment or output. Biggs, Ramachandran and Shah (1999) indicate that less than 10 percent of firms in the size-class with fewer than 10 workers ever grow to a size of 50 workers in Africa. In the next size-class (10-49 employees), where fewer firms were classified as

"informal," there was more mobility. Twenty-two percent of the firms (most with start-up sizes averaging about 40 employees) had been able to grow into the 100+ employee size-class since their inception (average firm age was about 12 years old).

Entrepreneurship: Are SMES incubators for entrepreneurs? That is, do small enterprises provide a better incubator environment for stimulating the growth of entrepreneurial aspirations and learning than larger plants? As it turns out, research on the effect of firm size on new firm formation indicates that they may, in some industries (Johnson and Cathcart 1979, O'Farrell and Crouchley 1983). New firm formation – measured in terms of the number of new business founders per thousand employees –is found by Johnson and Cathcart to be greater among smaller firms in the UK (<200 employees). It might be the case, however, that although the employees of larger firms start *fewer* new firms, the new businesses, which are formed by founders from large companies, are more successful. For example, founders of new businesses with experience in large firms may be able to draw on more sophisticated managerial experience in their approach to their new ventures, and will therefore be able to identify more accurately their potential markets. This does not appear to be the case. When success is measured by total employment five years after new firm formation, it is found that success is unrelated to incubation size. Firms started by founders with experience in small firms were found to have the same probability of success as founder with backgrounds in large firms.

This evidence of SME'S contribution to entrepreneurship is consistent with some preselection by potential firm founders. Entrepreneurs may deliberately seek employment in small firms before setting up in order to gain relevant experience. Conversely, the less entrepreneurally minded may tend to go for the larger firm, which provides a more secure environment. In the end, however, the evidence for small firms as incubators may say more about barriers to entry in particular industries than anything else. Audretsch (1995) finds that inter-industry variations in the percentage of employment in small firms have a significant positive effect on variations in new firm formation across industries. The small firm incubator result may thus simply reflect differences in the capacity of

different industries to generate new firm formation. Unfortunately, none of the studies reviewed above control for *industry* in their analysis of firm-level data.

***Dynamism and Flexibility vs. Economics of Scale*:** It is widely accepted that SMES can add dynamism and flexibility to business activity and improve economic performance (Carlsson 1996). Small businesses create dynamism by way of new firm formation and innovation, particularly in high-tech industries as we noted earlier, as well as through their contribution to competitive forces in domestic markets. Flexibility is enhanced through SME'S suppleness in substituting factors of production and by means of their faster and less costly adjustments to economic shocks (Acs and Andretsch 1993; Invernizzi and Revelli 1993; Nguyen and Reznek 1992). As the economic literature emphasizes, however, there is a balance to be drawn between flexibility and dynamism, which come from a large share of small firms in the economy, and returns from economics of scale (Thurik 1994). Policy makers in both advanced and developing countries have been interested in the determinants of this balance and the consequences of any anomaly in the size structure of firms for long-run economic growth.

There are considerable differences among countries in the share of small firms in total economic activity. The greatest difference is generally to be found in the comparison between low income countries, which average about a 60 percent share of SMES (< 100 employees) at $500 or less per capita income, and high income countries, which average about a 30 percent share of SMES at $5000 or more per capita income (Snodgrass and Biggs 1996). But there are also significant differences among more advanced countries. For example, in the U.S. small firms in manufacturing (<500 employees) have an employment share of about 35 percent, Japan 35 percent, Sweden 25 percent, Germany 57 percent, Italy 61 percent, and, in Eastern Europe in the early 1990s, 1 to 11 percent, depending on the country. Given these differences in the dynamic role played by small business in industrial development, the balance between economic dynamism and returns from economies of scale will also differ among countries (Acs, Carlsson, and Thurik 1996). The literature focused on advanced countries is concerned about cases, such as Eastern Europe and, more modestly

some areas of Western Europe, where policy has tipped the balance too far toward large enterprises and over exploitation of scale economies, with concomitant negative effects on dynamism and economic growth. Conversely, the literature on developing countries is concerned about the issue of too many small enterprises and unexploited scale economies.

Behind these concerns about size-related irregularities is a notional shape of the size distribution of firms in different economic contexts and the factors that condition it. The literature does not contend that there is an "ideal" or "optimal" size distribution of firms, but rather that there is an "equilibrium" size structure, determined by such factors as prevailing consumption patterns, market size, resource endowments, technology, institutions, and degree of market competition (Snodgrass and Biggs 1996, Hallberg 2002). Some of the determinants are "natural" in the sense that they are not particularly amenable to policy interventions. Others, such as the degree of competition in markets, taxation, R&D expenditures, transaction costs, transportation costs and so on, can be influenced by policy.

In places like Eastern Europe, where state policy stifled private enterprise and subsidized large-scale operations, the size distribution of firms became highly skewed toward very large firms. The resulting lack of an innovative and entrepreneurial small-business sector has proved to be one of the major obstacles to economic growth in the post-communist era (Acs 1996). There are indications that similar policy imposed problems, although in a milder form, are also afflicting the industrial structures of some Western European countries (Carlsson 1996). Carlsson argues that an over-expanded public sector, extraordinarily high taxation, and the dominance of large domestic firms all fostered by government policy over several decades, created a domestic economic climate that was inhospitable to growth of small business. The lopsided size distribution of firms that resulted, he contends, reduced dynamism, in terms of stifling new firm formation and innovation, causing economic growth to slow.

The major concern in developing countries is that policy has tipped the balance in the other direction, toward a preponderance of small firms, creating a

serious problem of scale inefficiency and, in some cases, worsening the problem of dualism in the size distribution (i.e. a "missing middle"). Decades of heavy-handed import-substitution policies created incentives for inefficient industrialization and protected the monopoly positions of a few large foreign and domestic companies. Excessive taxation and regulation kept many firms small and informal, cutting off the growth process by which better managers and technologies gain market share. Labor laws inhibited the expansion and contraction of firms, limiting competitive pressures. And inadequate infrastructure development and management of infrastructures kept transport costs high, fragmenting markets and protecting inefficient producers.

Many researchers, particularly in simulation studies, have assumed that the ratio of average to marginal cost is above 1.10 for the typical plant in developing countries (Tybout 1998).[3] Studies which have examined industrial census data across the developing world, despite much variability, find evidence of unexploited scale economies in manufacturing as whole and generally monotonicly increasing productivity with firm size (Ho 1980 for Korea; Cortes et. al. 1987 for Columbia; Snodgrass and Biggs 1996 for India, Philippines, Thailand, Columbia, Korea, Taiwan). Evidence at the industry level is more mixed. The simplest studies, relating output per worker and output per unit capital to scale, find it difficult to detect any systematic variation in labor or capital productivity with firm size. (See for example Little, Mazumudar and Page 1987 for Indian industries). Leidholm and Mead (1987) also find that small enterprises are "at least as efficient as others" in various industries in Sierra Leone, Honduras, and Jamaica. However, using more sophisticated econometric techniques to examine multi-factor productivity across size classes, a large number of studies report mildly increasing returns to scale at the industry level in various countries (Fikkert and Hassan 1996 on India; Tybout and Westbrook 1995 on Mexico; Aitken and Harrison 1994 on Venezuela; and Aw and Hwang 1995 on Taiwan). The increasing returns found in these efforts range from 1.05 to 1.10.

The basic message from this econometric evidence is that there *are* unexploited economies of scale in many developing countries, but they appear to be small.[4] Trade protection and policy barriers to entry and growth, which are purported to cause scale inefficiency in plants and keep small firms informal, do not appear to create crippling efficiency costs in most countries. An exception may be Africa, where larger returns to scale have been found. Biggs et. al. (1995) derives econometric estimates of scale economics, using survey-based data for manufacturing in several Africa countries. All the estimates are clearly above the top end of the developing country range (Ghana 1.13; Kenya 1.14; Zimbabwe 1.12). In addition, there is evidence of much more cross-firm variance in productivity levels in Africa than in the rest of the developing world (Tybout 1998; Biggs et. al. 1995). Most of the studies of productivity in developing countries, using the stochastic frontier method, find average deviations from the efficient frontier *not* typically larger than those observed in advanced countries. Mean technical efficiency levels around 60 to 70 percent of the best practice frontier are found in both regions. In Africa, however, mean technical efficiency levels are estimated to be in the range of 50 to 60 percent of best practice, implying that markets may be relatively more tolerant of inefficient firms due to policy-imposed and other types of distortions.

Summing up, there *is* evidence that size-related irregularities in the distribution of firms can influence the health of the economy. The evidence from Eastern Europe and parts of Western Europe suggests there are important linkages between the dynamism of the small business sector and the health of the economy. By contrast, evidence from developing countries suggests that productivity gains can be achieved, although perhaps smaller than expected, by removing policy-imposed distortions (e.g. Some regulations, taxes and bureaucratic red-tape) that constrain the growth of small firms and skew the size distribution towards the small end or limit growth in the middle.

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[3] Devarajan and Rodrik (1991) assume a ratio of 1.25 for Cameroonian Manufacturing, Brown and Deardorff and Stein (1991) 1.33 for Mexico, and de Melo and Roland-Holst (1991) assume ratios varying between 1.10 and 1.20 for Korea.

[4] It should be emphasized here that none of these studies really deals effectively with the informal sector. In formal firms are generally not included in industrial census data. If the informal sector were to be included in these efforts, it is likely that greater scale inefficiency would be detected.

It would appear, however, that it is the extremes of policy and size-irregularities that matter. In between the lopsided, large enterprise dominated economics of Eastern Europe and the small enterprise dominated economies of many African countries, there is a vast middle, where it would appear variations in size structures of enterprise have more to do with business strategy than with policy-imposed distortions. Here, as Michael Porter points out, "overall size is largely irrelevant," the "British tend to manufacture relatively standard products in long runs, German manufactures, by contrast produce a great variety of high-quality goods in small batches. Surprisingly enough, this strategy has involved no apparent sacrifice in productive efficiency – German output per employee is roughly twice that in the UK" (Quoted in Acs, Carlsson and Thurik 1996). The same type of strategic differences has been noted in developing countries in a study of the export performances of Korean conglomerates and Taiwanese SMES. Despite significant differences in industrial size structures both countries moved up market in export quality at roughly the same speed (Biggs and Yoon, 1989).

II. Rationales for SME Subsidies

Reviewing the literature on SME assistance programs one can find four economic rationales for subsidies:

- SMES make special contributions to economic development and poverty alleviation (e.g., job creation, and the list of other such contributions reviewed above);
- Market failure creates problems for SMES in accessing markets and raising technological capabilities;
- Institutional failure raises SME transaction costs, and limits their ability to take advantage of economic opportunities;
- Strategies, structures, and core capabilities of SMES are inadequate and the "learning mechanisms" needed to upgrade them are weak or missing.

It is also often asserted that fostering the development of SMES has beneficial political and equity implications. It is posited that increasing participation of

SMES strengthens bourgeois values and enhances political stability, thereby, promoting economic development and democracy. Moreover, it is stressed that SMES are owned and run by the poor; hence support for them improves the distribution of income. Are these rationales for intervention justifiable? And what empirical evidence exists, if any, to support them?

Special Economic Contributions of SMES:

If it could be shown that SMES confer special benefits on the economy, then subsidies might be justifiable. But the case for tilting the playing field to the advantage of SMES by means of such subsidies must rest ultimately on what an extra dollar of encouragement will do.

Taking the job creation claim first, the case for assisting SMES on the basis that they are generators of a disproportionately large number of good jobs is on shaky ground for several reasons. First, the evidence from the manufacturing sector in a number of countries indicates that the true proportion of jobs generated by small firms is about equal to their actual share of the work force, especially when the short life of small firm jobs is taken into account. Even in developing countries, where the share of small firms in the manufacturing workforce tends to be larger, the lion's share of employment still generally resides in large enterprises and this fact dominates the calculation of net job creation in terms of absolute numbers. It is not clear that the results would be much different in the service sector. There is not much evidence available for the service sector, but, in most service businesses where entry is often easier, the numbers on volatility and job attrition are even worse than in manufacturing. Whereas exit rates average about 40 to 50 percent over an average five or six year period in manufacturing, in retailing it is known that attrition for the same time span averages 60 to 65 percent (Pakes and Ericson 1992). Considering these higher average attrition rates, one might expect small retailing firms to be subject to greater "turbulence" than small manufacturing firms, which could mean even lower net job creation.

Second, concern for the proliferation and growth of small firms should be weighed against concern for the welfare of the workforce. There is certainly no

case for favoring SMES with assistance, as against larger firms, based on the quality of jobs generated in the small enterprise sector. Third, and most important, even if SMES were found to be disproportionate creators of jobs, the merits of job creation as a criterion for subsidies is not obvious. Efforts to increase employment without attention to productivity and efficiency impacts could have unintended adverse consequences for output and employment in the longer run. Favoring small firms with subsidies to create jobs could result in a shift of scarce capital toward firms with lower productivity or with lower growth rates, leading to decreased incomes and lower employment demands in the future. Bendick and Egan (1987) find evidence in British and French start-up assistance programs for unemployed workers that subsidies stimulated the formation of businesses by entrepreneurs who were not sufficiently efficient to make a go of it on their own. They were also more likely to fail than firms started by entrepreneurs without government assistance. The authors question whether such programs are a cost-effective means of creating new jobs.

Third, the claim that the SME sector is a seedbed for future growth and development of the economy has some truth to it, but again does not provide a compelling case on its own for subsidies. In advanced countries, SMES do appear to contribute more than their share of innovations, particularly when one considers their superior ability to move innovations into the marketplace. But this contribution of SMES is mostly an advanced country phenomenon. In developing countries, where invention is largely replaced by “imitation”, large firms generally play the leading role in technical change. SMES also appear to provide more than their share of opportunities to young, inexperienced workers and to nascent entrepreneurs. However, the empirical evidence does not make a case that SMES have extraordinary prowess in this respect, particularly in developing countries. Large enterprises do most of the formal worker training in all countries and their employees are responsible for a significant share of new firm formation. Finally, in the area of export development SMES generally play a distinctly subordinate role. As suppliers, they often add flexibility and efficiency to the development of competitive advantage, but export development is generally

instigated and sustained by large enterprises, although exceptions to this proposition can be found in several countries.

Fourth, any justification for subsidies to spur economic dynamism and flexibility would have to be based on cases of extreme size-related irregularities caused by policy-imposed distortions. Many observed differences in the size distribution of firms across countries are related to what might be called "natural" causes, such as differences in the level of development or in business strategy. For example, a "missing middle" in the enterprise size structure is predictable at early stages of industrial development when direct foreign investors and a few large domestic firms are beginning to enter into a sea of small, locally oriented producers. However, if extreme dualism persists after 40 years of industrial development, as was evident in the Philippines in the late 1980s, there is clearly a problem to be addressed (Biggs, Oppenheim and Schmitz, 1986). A "missing middle" at this stage of development is symptomatic of persistent policy distortions. A similar diagnosis can be made in the case of the highly lopsided size structures observed in Eastern Europe. Considering that there is a policy-imposed size-irregularity problem to address in each case, the "first-best" approach to policy design would be to reform the offending policy distortions. It is conceivable in such cases, however, that subsidies might be needed to complement policy reforms in order to promote the creation of more small firms.

In short, most of the rationales for subsidies to SMES, based on their purported special contributions to the economy, do not appear well grounded in fact or in what an extra dollar of subsidy would bring in social (economic) benefits. Furthermore, it is clear that SMES face real disadvantages in such areas as borrowing money and in buying inputs. And it is clear they have high failure rates. But it is not clear in all cases that they fail, or do not grow, or do not enter, because of costs associated with policy and regulatory compliance and high barriers to entry.

As Tybout (1998) argues, markets in developing countries, in most cases, do not appear to tolerate a great deal of firm-level inefficiency, which would attest to the effect of such problems. With the exception of perhaps Africa, and the cases of extreme size-irregularities noted above, unexploited economies of scale

appear to be small, inter-firm productivity dispersion is on a par with what is found in advanced countries, and competition appears, for the most part, to be adequate. Therefore, with some exceptions, it does not seem that extraordinary steps are needed, in the form of subsides or special exemptions, to reduce the compliance costs of policy on SMES beyond what is needed to reform policies for all firms.

***Market Failure**:*

A significant body of theoretical and empirical literature points up the fact that markets can fail in several ways to form socially appropriate prices, both in terms of their performance of the rationing function and in terms of the incentive signals provided to enterprises. Markets fail because of "appropriation" problems and because of difficulties caused by "asymmetric information." The public-good attributes of technology (defined broadly as techniques, information, and new organizational ideas) means that enterprises engaging in R&D or in importing new production techniques and organizational structures have problems appropriating the full gains from their investments, as some of the benefits "spill over" to other firms free of charge. This inability to capture or appropriate the full benefits from such investments means that society's benefits from technology transfer are generally greater than the returns to any individual firm that undertakes it. As a result, the private sector will invest too little in technology transfer relative to what is socially optimal.

Similarly, firms investing in worker or manager training (particularly basic training) have difficulties appropriating the full benefits of their investments because workers or managers may leave the firm taking some of the benefits with them to other firms. Again, the inability to appropriate the full benefits from training may cause firms to under-invest in upgrading the skills of their employees. Finally, the difficulty (high cost) of obtaining information on borrowers in financial markets causes lenders to ration certain borrowers from the market rather than let interest rates perform their clearing function. Absent good information on potential borrowers, rising interest rates attract riskier

borrowers into the market, reducing lender's profits. Information-intensive, small enterprises are generally the first to be rationed from credit markets.

The empirical evidence for such market failures comes from several sources. In the area of technology, there is a great deal of work substantiating under investment problems in R&D for high-tech industries in the U.S. and Europe (Katz 1986; katz and Ordover 1990; Borrus 1993; Branscomb 1992; CBO 1991) and for technology transfer problems in the developing countries (Baumol 1993, Lall 1987; World Bank 1993; Freeman and Lundvall 1998). Lynch (1994) and Lalonde (1992) detail market failure problems for enterprise training in the U.S. and Aw and Tan (1993) for developing countries. Credit rationing has received a lot of attention in both developed (Fazzari, Hubbard and Peterson 1992), and developing countries (Tybout 1984 for Latin America; Biggs et. al. 1995 for Africa, World Bank 1993 for Asia). In the case of credit rationing, SMES are the focus of attention as they are the first to be denied access to the market because of information and enforcement problems. Market failures in the areas of technology and training affect all firms. There is, however, a separate "size effect" in both these areas. The cost of searching for and acquiring new technologies, and training employees, per unit of sales, is much higher for small enterprises than for larger concerns. As a result, data in all countries indicate that small firms invest less in these areas as a percentage of revenue.

Correcting problems of under-investment in technology and training calls for appropriate subsides to investors to raise investment up to more socially optimum levels. Accordingly, we see programs in developed and developing countries, such as "matching grant schemes," which fund cost-sharing grants to firms to stimulate R&D efforts or technology transfer programs, as well as programs to promote enterprise training in various ways. Many types of programs have addressed credit-rationing problems over the years, ranging from subsidized loans to small firms and training programs for bankers to development of borrower credit-cooperatives.[2]

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[2] ***It should be mentioned that, in addition to the obstacles to optimality generated by the sources of market imperfection, self-destructive interventions of***

While the appropriation (or asymmetric information) rationale provides a reason for government support to private technology transfer and training, it only provides a general guide for specific policy choices. That is, it only provides a general guide for selecting the specific types of technology transfer and training projects that should be supported by public funding, for determining the size of the subsidy to be provided, and for deciding the duration of the intervention. The market failure rationale makes clear that removing obstacles to optimality should generate social (economic) benefits and the size of the subsidy provided should be based on these benefits. Like any other government funding program the guide for specific policy choices in each case will depend on the local economic context and on two important criteria for projects funded with public funds. First, they must be projects that promote "additionality" rather than funding something SMES would have done anyway. Second, the social (economic) returns on the projects (the "spillovers") must be high enough to equal or exceed the return on other available public investments like a road or a school. The criteria for selecting projects in each case must be clear about these two points, as are key to promoting an effective government role.

Note that these criteria impose only general funding limits and put no restrictions on the types of projects funded. They simply stress that the projects selected must generate broad social benefits. Put simply, the accent should be placed on funding projects which generate "spillovers" to the broader community of enterprises, enhancing the information richness of the business environment, not just the private profitability of an individual firm.

***Institutional Failure**:*

The failure of public institutions in many developing countries to properly enforce business contracts and property rights, and to provide adequate information on

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governments in many developing countries impede the process of technology transfer from abroad, reduce incentives for training and hamper the workings of financial markets. Policy reforms in many of these areas should come first before efforts to address market failure by way of subsidy programs.

markets, raises the costs of governing market exchanges, sometimes prohibitively. In such high transaction-cost environments, the extent of the market for individual business firms is limited by the number of business transactions that can be governed by relational contracts. Firms often cannot take advantage of profitable opportunities outside their local networks of personal relations because of information and enforcement problems (Williamson 1985; North 1990).

Large firms frequently provide private substitutes that fill the gaps in the general institutional structure of these economies. Large firms make their own arrangements to protect their property from external threats, make costly efforts to access information, and invest in diverse ways in enforcing their external transactions. In each of these cases, the private institutional arrangements created are intimately tied to the large firm's narrowly defined production and business activities. As Winter (1995) puts it, they are "one level up" from those activities – a private institutional structure that is superordinate but very nearby. Large firms even find it efficient to implement such private institutional structures in developed countries where the public institutional arrangements for these purposes are high, and often guard the autonomy of their own customized structures relative to the public's broader ones.[5]

SMES, of course, have analogous needs for private institutional structures, particularly in high transaction-cost environments. Their ability to deal with such problems is, however, limited. One of the major reasons is economies of scale in creating private institutional arrangements to deal with external transactions, information, and thieves. A small enterprise involved in a complex division of labor among firms many have a lower ratio of value-added to sales and many more market transactions per unit of sales than a more integrated large firm. Also, as noted earlier, there are fixed cost elements to searching out and acquiring business information relevant to the firm's needs (information, for example, on a business associate's net worth or creditworthiness), and thus small firms, on a per unit sales basis, carry a heavier burden to stay informed.

Empirical research indicates that the level of economic success of SMES in all countries has derived from the degree to which they have been able to overcome institutional failure by being embedded in substitute, private institutional support systems, "one level up" (Piore and Sabel 1984; Levy 1994, World Bank 1994). In some cases, the substitute institutions have been provided by large firms to smaller ones, by way of various linkages, particularly through sub-contracting networks. In others, cooperative relations among firms, organized in business associations or local community structures ("clusters"), perform these functions. Sometimes these private institutional arrangements receive support from governments and NGOs.

The call for subsidies to address institutional failures in the form of interventions like "linkage" programs to assist in developing sub-contracting and other connections between large and small firms, and local network-building initiatives, would appear warranted in this respect. However, one might add that, in countries where public institutions are severely underdeveloped, and where there is only a rudimentary rule of law operating, even these types of private networks will be difficult to achieve. Hence, building stronger public institutions will also have to be part of the solution. Moreover, it should be emphasized that building appropriate "one level up" institutions for support of SMES may not just require subsidies to assist small firms. It is clear that it takes an efficient set of large enterprises to develop a supportive institutional environment for an efficient set of SMES. Where support is required to build appropriate SME institutional frameworks, they might also be utilized to assist large firms to expand their private arrangements in support of SMES. In short, one should not simply look at what can be done to enhance the effectiveness of SMES themselves, but also at what can be done to support the institutions on which efficient SMES depend.

***Strategies, Structure, and Core Capabilities of SMES**:*

The standard presumption in the discussions of both market and institutional failure just presented is that the requisite virtues already exist in

[5] Even in developed countries, it is overwhelmingly the case that business firms (not courts) settle disputes and firms take costly steps to avoid disputes in the first place.

firms. If markets and institutional arrangements were put "right," the thinking goes, then firms have the knowledge and capacity to respond. The underlying model of firm behavior posited assumes that firms face known choices and have no difficulty in choosing the correct action within those choices that is best for them, given their objectives of profit maximization. Thus, what firms do is determined by the conditions they face. The focus is on the market and institutional conditions, there is no mention of the "innards" of firms or of the possibility of discretionary behavior in terms of response.

In the real world, as opposed to the more theoretical orientation of the textbook model of firm behavior above, firm's choices are not always obvious to it and there is difficulty in choosing the action within those choices that is best (Nelson, and Winter 1982). In such a situation, there will be a discretionary element to firm behavior; firms will have to figure out different kinds of *strategies* and *structures*, and develop *core technical capabilities* to respond appropriately to the new market and institutional conditions they face. Changes to each of these variables will involve considerable cost to the firm and requires access to an array of "dynamic learning mechanisms," which facilitate and shape the evolution of strategies, structure, and capabilities (Teece, Pisano, and Shuen 1990; Nelson 1991)

The rationale for SME assistance revolves around both the processes of change in firm capabilities and the strength and weaknesses in the "learning mechanisms" available to firms engaged in these processes. The nature of "learning" (the process of upgrading the firm's strategy, structure and technical capabilities) requires that firms have to do it themselves – opportunity, context, mechanisms, and incentives may be subject to external influence. Firms cannot "learn" simply by down-loading a "blueprint' from the Internet. "Learning" takes place chiefly by doing, or attempting to do, something quite specific in a specific context. It involves a lot of uncertainty, experimental groping, and learning by making mistakes and correcting them. And it is often best accomplished by way of direct interaction with experienced practitioners from more advanced countries. The issue of "absorptive capacity" also comes into play. It is fundamental to understanding firms' limited ability to learn from sources other

than their own accumulated experience: whatever the learning experience is, you have to command the prerequisites to benefit from it.

All over the world enterprise learning takes place via a wide set of market and non-market mechanisms: interactions with buyers and suppliers, in-house and external training, hiring of employees from advanced countries, hiring of technical consultants, linkages with government or private research organizations. In developing countries many of these ”learning mechanisms” are weak, or missing in some cases, and enterprise “learning” is restricted. Biggs, Shah and Srivastava (1996) provide empirical evidence that weaknesses in these mechanisms, in sub-Saharan Africa, have detrimental affects on enterprise productivity.[6] Of particular importance are links with foreign learning channels. Firms with foreign technical assistance contracts, some foreign ownership, or foreign employees have distinctly higher productivity. Levy (1994) and World Bank (1993) indicate that the strength of these market and non-market mechanisms are crucial for SME learning in Asia and Latin America and have been an important determinant in achieving productivity growth and export success.

SMES have special problems in upgrading their capabilities the literature argues. SMES are generally oriented toward domestic markets and do not have many links with foreign technology flows. As already noted, the cost per unit of sales to utilize available market and non-market learning mechanisms is higher for SMES. Further, SMES do not have the technical and engineering personnel available to facilitate learning from some of the mechanisms used by larger firms. Finally, it is argued that the existing learning environment in many developing countries is just not deep enough to service the “special needs” of small firms even in the best of circumstances. Small firms often “don’t know what they don’t know,” and their absorptive capacity is unlike that of large firms. Therefore, markets for business development services need to be “facilitated,” to strengthen and to create additional learning mechanisms available for small firms. Moreover, demand for these services needs to be “stimulated” because of SMES

low existing knowledge and capabilities (Hallberg 2000). Facilitation of the market here means the development of low-cost services that meet the needs and willingness-to-pay of the small scale clients.

The subsidies inherent in the interventions needed to strengthen SME capabilities and the learning mechanisms available to upgrade them are justified on the basis that they complement other efforts to correct market and institutional failures. Without such interventions the response of SMES to initiatives to address obstacles to optimality in the areas of technology, training and finance could be much weaker. Accordingly, they can be viewed as necessary development investments to build SME capabilities, address coordination problems, and stimulate the development of markets for business development services.[3]Of course, as with all public investments, these interventions must earn a return equal to the return on other available public investments.

Political and Equity Dividends:

Some advocates argue that promoting SMES enhances political stability, strengthens bourgeois values and improves the distribution of income, and by means of these virtues promotes economic development, as well as other goals such as democracy and justice. While some or all of these logical connections of SME promotion with economic development may have some truth in them, it is not clear that improving the lot of SMES is the best way to approach policy design to deal with any of these objectives. Surely more direct approaches to these problems would be more effective. But it may depend a bit on the context one is dealing with. In the case of Eastern Europe, promoting the revival of a small business sector would probably bear more fruit in terms of political stability and equity than in other places.

Apart from the problem of whether SME promotion is the best way to attack these objectives, it is questionable whether SMES “deliver the goods” as advertised. The claim that SME promotion will improve the income distribution is

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[6] Weaknesses in mechanisms in Africa stem from the fact that buyers and suppliers are not coming to the region in large numbers, direct foreign investment is quite low, both public and private training facilities are either weak or non-existent, local technical consulting services are few-and-far-between.

based on two presumptions: (i) that SMES are particularly effective vehicles for expanding employment and (ii) that growth of SMES and the employment they create disproportionately benefit the poor. As it happens, both of these conclusions are questionable. As we detailed earlier in this paper, the evidence indicates that SMES do not appear to be any more effective at job creation than large firms. The quality of jobs created by SMES has also been shown to be inferior. Hence, concern for the growth of small firms should be weighed against concern for the welfare of the workforce. The owners of small firms have also been found to have incomes and assets higher than those of the average citizen in advanced countries (Brown, Hamilton and Medoff 1990). There some reasons to believe this is also true in developing countries. Similarly, one might question whether the employees of SMES are among the poorest of the poor, particularly in urban areas.

The Bottom Line:

In reviewing the rationales for subsidies to promote SME development, one comes to the general conclusion, as did Hallberg (2000), that a good SME development strategy, first and foremost, is in reality a good "private sector development strategy". Having said this however, there are several areas where a case might be made for selective subsidies.

First, policy-imposed distortions in some cases may reduce the number of SMES below efficient levels (i.e. cause extreme size irregularities in the distribution of firms) by imposing fixed costs that bear more heavily on small firms. Removing the policy distortions would be the first order of business in the presence of such problems. However, it is conceivable that a second-best approach, in extreme cases, would involve complementary subsidies to stimulate the formation of more small firms.

Second, market failure, particularly in the areas of technology transfer, training, and finance, often needs to be addressed in developing countries. Interventions to address such problems, however, would generally be aimed at

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[3] A prime reason why business development services are unavailable is markets are small in most developing countries. The development of services of all kinds depends crucially on the extent of the

all firms. But there are some special size related issues in these areas that need to be considered. Finance, for example, is a special case where information and enforcement problems can lead to rationing of small firms from the market. Thus, in addition to programs to improve financial market development, there may be a need for interventions to assist SMES in overcoming information and enforcement problems to gain greater access to the market. Similar examples apply in the areas of technology transfer and training.

Third, SMES need appropriate institutions to prosper. In many developing countries interventions may be helpful in building up the appropriate "one-level-up" institutional structures that have been shown to be especially beneficial to small firms. However, as an efficient set of large enterprises is required to develop these appropriate institutional structures for small enterprises, assistance to large enterprises may also be needed to extend their institutional reach to SMES.

Fourth, even if we can effectively intervene with appropriate subsidies to correct market and institutional failure, it is not clear in all countries that SMES have the prerequisites to respond to the new, subsidy-induced structure of incentives. Often their capabilities are too low, or the learning mechanisms available to upgrade their capabilities too weak, to take advantage of them. In such cases, interventions should aim to strengthen the existing learning environment and to expand markets for business development services.

In addressing the general criteria for interventions, it should be emphasized that the rationale for government support to SMES, as with any other public investment, suggests that only certain types of projects (interventions) should be performed with government funds. First, subsidies must go to projects that promote "additionality" rather than funding something SMES would have done anyway. Second, the social (economic) returns on the projects funded by public subsidies must be high enough to equal or exceed the return on other available public investments. The criteria for selecting interventions to assist SMES in each case must be clear about these two points, as they are key to promoting an effective government role.

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market..

Finally, while we have specified areas where the rationales for intervention are sound, the ability to implement projects to address these rationales (i.e. the ability to promote additionality and large social benefits) is also a critical issue. The debate over subsidies to SMES involves both issues and the difficulties of effective implementation should not be underestimated. The problems of implementation are, however, beyond the scope of this paper.

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