



# Small Firms and Their Helpers: Lessons on Demand

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**Summary.** — Small-enterprise (SE) programs are currently the rage because of their potential to create employment. They are typically supply-driven — providing standardized training, technical assistance, credit. But most cases of SE-based growth have involved demand-driven support provided by large customers — firms, traders, government agencies, state enterprises. This article argues that such inherently customized support constitutes a better way to deliver services to SEs, and is more likely to stimulate sustained SE growth. With respect to SE-favoring procurement by government in particular, we show that this can be done without running up against the problems of similar attempts in the past, and in a way that also reduces the costs of running government. We draw for illustration from a successful case of SE-favoring procurement in the Brazilian state of Ceará. Copyright © 1996 Elsevier Science Ltd

## 1. INTRODUCTION

Most of the currently popular programs of assistance to small enterprises (SEs) are “supply-driven.” They specialize in providing one or more ongoing services — credit, courses in business management, or technical assistance. They try to serve as many firms and as many sectors as possible. The striking stories of SE growth, however, have tended to be driven by demand. They started in a certain sector and radiated out from it. Typically, large customers of small-firm suppliers — corporations, traders, government agencies, state enterprises — provided the small firms with a market, technical help, and often finance. These customers fashioned their assistance around their particular needs, and around problems that arose as their suppliers worked to fill an order.

Given these histories, why have SE assistance programs paid so little attention to demand-driven approaches? Why have the prevailing supply-driven approaches continued to be the instrument of choice despite the mixed evidence, at best, of their effectiveness and impact?

Two bodies of evidence bear on the theme of demand-assisted SE growth. First, in attempting to explain high performance in certain national, regional, or sectoral economies, students of industrial organization and development have pointed to the key role played by supportive and trusting relations between firms. Some of these researchers have focused on the

relationships between SE suppliers and larger-firm customers; the most celebrated of such cases is the Japanese automobile industry.<sup>1</sup> Others have focused on small-firm clusters or “industrial districts,” and their networks of interfirm cooperation and competition; the classic case is the north-central region of Italy, the so-called Third Italy.<sup>2</sup>

The second body of evidence on demand-driven assistance and SE growth is more fragmentary and

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less consciously argued. It comprises a number of case studies that reveal SE development to have been strongly influenced by government agencies or state enterprises through assistance tied to their procurement. In many of these cases, the government customer was both demanding and supportive with respect to quality. This contributed to sustained increases in the performance of the supplier firms. For developing countries, some of the products and sectors represented are school furniture, vehicle parts, milk, and specialized footwear and uniforms for public workers (police, hospital personnel, and electric-system repairmen).<sup>3</sup> For developed countries, one of the most famous cases of procurement-driven SE growth is "Silicon Valley" in the United States — the network of originally small semiconductor firms in the San Francisco Bay region of California and their supplier-customer relation with the US Defense Department.<sup>4</sup> There are other US cases in which "sophisticated demand" from government played an important role in driving growth and international competitiveness — computers, chemicals, pharmaceuticals, and medical instruments — but they do not involve small firms exclusively or at all.<sup>5</sup>

The cumulative impression from reading these case studies is that the right kind of procurement-linked assistance could have significant impacts on SE productivity and employment. This is not a new idea. More than 20 years ago, the International Labor Organization argued forcefully about the employment-creating potential of directing procurement toward small firms in the informal sector.<sup>6</sup> The impact of these arguments on most governments, however, was minimal. More recently, and for somewhat different reasons, international donors have supported "social investment funds" (SIFs) in various countries with the purpose of counteracting the increased unemployment accompanying structural adjustment programs. Among other things, the SIFs have focused attention on the need to modify procurement regulations so as to make it easier for small firms to bid for public contracts to be executed by municipal governments, private firms, and nongovernment organizations.<sup>7</sup> These efforts, however, are being watched more for the light they throw on matters of temporary unemployment reduction, decentralization, and community participation than on matters relating to achieving sustained local growth.

Our perspective is different from these initiatives. We draw attention to the large share of manufacturing and services output in most countries that is accounted for by government purchases at all levels — almost one-third of non-agricultural gross domestic product, for example, in India.<sup>8</sup> In addition, we stress the potential for local economic development that lies in the interaction between government customers and SE suppliers. As our case will show, as well as those cited above, this involves more than modifying procurement regulations so that small firms can bid.

In what follows, we explore the questions posed above about demand- vs. supply-driven approaches. We focus on large public customers for SE products, as distinct from the large private customers treated by the first body of literature cited above. The mechanisms underlying the public and the private cases are, however, similar. Indeed, it was the well-developed argumentation and case material on the private sector side that drew our attention to the less noticed public sector cases. Our grounding in the private sector evidence also helped us to discern the working of similar processes when we looked into a successful attempt of the state government of Ceará in Brazil to redirect one-third of its purchases of goods and services to small enterprises. This article uses the Ceará case to illustrate our argument.<sup>9</sup>

Like several of the other cases cited above, the Ceará program led to sustained growth among the assisted small firms, sometimes with strong linkage effects throughout the area where the firms were located. In contrast to some other attempts by governments to assist small firms by buying from them, the program lowered the costs and increased the quality of goods and services purchased by government. It reduced the inherent riskiness to government of procuring from small firms, partly through contractual arrangements that forced the support agency to both help and monitor the supplier firms, and also forced the firms to monitor each other. Interestingly, the support agencies that led this successful demand-driven initiative continued to operate their older and less effective supply-driven programs. This gave us an unusual opportunity to compare supply-driven and demand-driven approaches within the same agency.

Many development experts, if asked, would not like the idea of promoting public procurement as a form of demand-driven assistance to SEs. If we are to make a valid case for this form of demand-driven assistance, then, it is best to set it against this reluctance. Section 2 does this, and then lays out the main arguments for SE-favoring procurement, as they emerged from our case. Section 3 describes the Ceará program's achievements, and contrasts the program's demand-driven work style with the supply-driven nature of the same agency's regular activities. The next two sections show how the demand-driven style worked through two sets of contracts: Section 4 discusses school furniture, and Section 5 discusses the repair, maintenance, and reconstruction of public buildings, particularly schools. Section 6 explains the political side of the program's success, which at the same time contributed to the difficulty in replicating its most striking story of micro-regional development. Section 7 concludes.

Before starting, a few guidelines for readers. First, several of the important lessons of our case arose from the way relations were structured between four sets of actors, which therefore should be identified from the

start: (a) the purchasing departments — the government agencies that purchased the goods and services; (b) the support agencies — the two agencies that provided technical, organizing, and other assistance to the small firms, and brokered the contract between them and the purchasing agencies; (c) the associations of firms or individual tradesmen with which all contracts were made; and (d) the individual firms themselves. In the case of school reconstruction, a fifth actor was also important, though not formally a part of the contract — the neighborhood or parent-teacher associations. In contrast to the Ceará program, many SE procurement programs do not separate the support and purchasing functions into different agencies, and many SE-support programs work with individual firms rather than associations.

Second, we dedicate a good part of this article to the interesting dynamics of our case as a way of arguing and illustrating our brief for the strengths of demand-driven approaches to SE support in general. Elements of the story told below have been repeated frequently enough in other places to cause us to believe that it is not a freak case, and that opportunities exist to repeat it elsewhere. The current experience with social investment funds and with decentralization reforms, moreover, should provide a new set of relevant cases to study. Finally, although we build our argument around a case of public procurement, we are making a general case for demand-driven approaches to organizing SE assistance — whether or not in the context of public procurement, and whether in the public or non-government sectors. Public procurement is not the only opportunity for structuring SE support in a demand-driven way, though it is clearly a significant one.

## 2. SE-FAVORING PROCUREMENT: THE NON-EXISTENT DEBATE

This section first constructs what would be the argument against SE-favoring public procurement if there were a debate on the subject (2a). It then makes a case in favor of demand-driven approaches to SE assistance, contrasting them with supply-driven approaches, and drawing on and previewing the findings of our case (2b). It concludes by raising questions about the presumed efficiency of the processes by which governments in developing countries normally procure goods and services, and against which SE-favoring procurement is considered inferior (2c). We abbreviate demand-driven assistance as DDA, and supply-driven assistance as SDA.

### (a) *The case against*

SE-favoring public procurement involves three types of problems:

First, public agencies themselves do not like to buy from the kinds of small firms that normally do not qualify to bid for public contracts. As any conversation with a procurement officer will reveal, buying from small firms untutored in the ways of public tendering is viewed as a major headache — involving many contracts for small amounts and more paperwork, and the expectation that product costs will be higher, quality lower, and delivery unreliable.

Second, the unreliability of the public sector itself as a customer exacerbates the problems of small firms. Governments frequently pay erratically and late, and purchase only in large quantities that are difficult for many SEs to produce, at least within the stipulated time periods. Governments also cannot be relied upon to come back soon for more orders. Because small suppliers typically overexpand to fill these contracts, they then languish or simply disappear in the long periods between contracts. They “gorge” themselves, in effect, on the government’s large contracts and temporarily secure market, which render them unable to face the vicissitudes of the “real” market of private customers when their government purchaser disappears.<sup>10</sup>

Third, SE-favoring procurement programs are often too “soft” and overprotective with small firms. Among the programs criticized for this failing are those as different as India’s policy of reserving certain markets for small firms and the US government’s favorable treatment of SE bidders, including minority-owned firms, with respect to certain products or services.<sup>11</sup> In these cases, the supplier knows he is entitled to a protected niche regardless of his performance, and the public sector customer knows he must buy from these firms for “social” reasons. This does not bode well for either cost or quality. Advocates and providers of SE assistance themselves contribute unwittingly to these negative judgments about SE-favoring procurement and other assistance programs. They normally argue their case on the grounds of reducing poverty and portray the small firms they want to help as “the walking wounded.”<sup>12</sup> Support to them, correspondingly, is presented as “only” a social strategy, and not related to economic growth or the more efficient acquisition of goods and services by government.

These problems are, indeed, quite serious in many SE-favoring programs. But the Ceará case, along with some of the others noted above, shows that they are clearly not inevitable. Briefly, the procurement process did not take place in a protected environment devoid of concerns about cost and quality, and the SE suppliers produced a lower cost and better quality product than the established suppliers. The government contracts launched these small firms permanently into new private markets, with good-quality and competitively priced products. Their success, in some cases initiating a self-sustained process of local

growth, did not require that subsequent public contracts or other assistance continue indefinitely. Much of this happened because the purchasing agency was not required to buy from the small firms. Two other agencies that assisted SEs helped the firms to meet their contract specifications and deadlines *vis-à-vis* the purchasing agency. Most important, these two support agencies had to prove to the purchasing agency that the SE product or service was at least as good and competitive as that procured previously from larger firms.

Why did our case and the others noted above produce better results than the programs for which SE-favoring procurement has gained its bad reputation? We outline an answer to this question below, and suggest how the better results might be made to happen.

### (b) *The case for*

The strengths of the demand-driven approach to SE assistance fall into four categories, listed in the order in which production occurs.

First, DDA directly tackles one of the major problems facing most struggling small firms — that of finding a reliable customer and thereby having sufficient assurance about the future so as to be able to focus on improving productivity. The supply-driven approach, of course, does not simply ignore the problem of marketing, but the approach to it is open-ended: a final sale or subsequent contracts are not guaranteed at the end of the assistance, and the service provider is not judged to be at fault if the firms it assists cannot produce something that sells.

Second, DDA structures the work of the support agency quite differently from that of SDA. Instead of providing standardized assistance on a variety of subjects to the largest number of firms possible, DDA must devote its assistance at any moment in time to one set of firms producing the same product. It focuses on problems that come up in the course of trying to meet a contract's specifications and deadlines, starting with the acquisition and storage of raw materials, through matters of production, to delivery of the final product. All this often requires that a support agency concentrate its efforts on one or a few geographical areas where SEs producing a particular type of product are clustered, as occurred in our case.

Another way of stating these DDA traits is to say that the approach is more problem-driven, iterative, and results-oriented than is SDA.<sup>13</sup> It is also more "client-driven" — in the sense that the "client" to which the support agency provides services is the small firm. Our brief for this style of operating, in other words, is nothing new. It has been advocated for almost 10 years in the literature on "best-practice" corporations that have successfully faced the challenges of global competition and industrial restructuring.<sup>14</sup>

More recently, the "reinventors" of government have urged governments to move in this same direction.<sup>15</sup> The supply-driven approach dominates, nevertheless, in most SE programs.

A third strength of DDA will be forthcoming only if it is structured properly. This, as the above critiques show, is often not the case. DDA works best when it subjects both the firms and the support agency to a tough test of performance: if the final product of the assisted firms does not meet competitive standards of cost, quality, and timely delivery, the customer — the government purchasing agency — will simply not accept the goods, or will not renew the order. This impels the support agency to strive together with the supplier firms to improve quality and reliability. Our program, along with the other cases noted above, had to face this kind of test. Supply-driven programs do not.

Fourth, SE-favoring procurement has some clear advantages over other approaches even as an employment-creating strategy. The quality and durability of the jobs left in the wake of successful SE-favoring employment-creating programs such as Ceará's are far superior to other such programs, including the above-mentioned social investment funds. These latter programs rely heavily on construction for their job-creating impact entailing unskilled, temporary, and low-wage jobs.<sup>16</sup> This contrasts with the clear upskilling of labor and other sustained impacts that were central to our case.

It should be clear by now that DDA's advantages over SDA play themselves out in two distinct realms. One is the world of the small firms themselves; the other is that of the support agencies. SE practitioners and researchers, however, have tended to pay more attention to the constraints facing small firms than those affecting the performance of the support agencies. The argument for DDA, in contrast, identifies the structure of incentives faced by SE support agencies as constituting an equally serious determinant of performance. Hence the argument rests strongly on the pressures that DDA brings to bear on the support agencies themselves.

### (c) *Real-world procurement*

When small firms are "entitled" to special consideration, as noted above, both the customer and the supplier tend to suspend concerns about cost and quality. A surprisingly similar set of lapses exists, however, among the firms from which government normally purchases its goods and services. The resulting inefficiencies are at least as serious as those caused by giving small firms an edge in procurement, although their origin is quite different. We set them forth briefly here. They show that the healthy workings of the market mechanism — the implicitly assumed background of

existing procurement against which the critique of SE-favoring procurement is projected — may be more of an ideal than a reality.

As is well known, the costs of complying with government procurement regulations often keep small firms from bidding. Or, SEs simply do not have the connections in government that make for successful bidding. In addition, government usually pays contractors only upon delivery and inspection, and without advances. This also keeps many efficient small firms from bidding for public contracts, because they do not have sufficient reserves or outside finance for working capital. Finally, governments in developing countries frequently pay their suppliers with considerable delay, which eliminates yet another tier of potential small-firm bidders. Some of the firms excluded by these various circumstances may well produce a cheaper and/or better product. This means that the competition faced by the firms that are capable of bidding successfully for public contracts is more restricted than it is assumed to be. The price and quality of goods and services procured by government is therefore far from the competitive ideal.<sup>17</sup>

Other less obvious characteristics of “the playing field” on which firms compete for government contracts emerged from our examination of the Ceará case. Established suppliers, for example, often sell their lower quality output to government because they perceive government to be a less demanding customer than the private firms to which they also sell. An interesting example comes from Section 5’s discussion of the contracts for school reconstruction. The supplier, in this instance, treats government as a kind of “captive” customer or “customer of last resort.” This is facilitated by the fact that side payments made to government officials by bidding firms contributes to government becoming a less demanding customer. Government’s delays in paying its suppliers, moreover, cause the suppliers to search for additional contracts from private customers to compensate. The additional contracts make it difficult for these suppliers to execute their public contract efficiently — as illustrated below in the case of school reconstruction. All these factors add up, inadvertently, to a set of disincentives to efficiency and a process of “adverse selection” among the firms that typically bid for and win government contracts. The problem would vary, presumably, as between sectors, contracts, and moments in time.

One of the main arguments against SE procurement is that centralized purchases in large volumes from single large suppliers bring economies of scale in purchasing. That’s why governments and international donors prefer “packaging” many small contracts into a single large contract.<sup>18</sup> Centralized purchasing and bundling of contracts, however, also can involve distinct diseconomies in that it often imposes greater transport and storage costs. This is particularly true in public services like education and rural health, which

buy goods and materials for numerous dispersed locations. When the state of São Paulo’s Education Department decentralized to municipalities its purchases of furniture, school lunches, and curriculum materials, costs decreased by almost 30% as a result of savings on transport and storage.<sup>19</sup>

The problem of quality and cost in public procurement, then, is far from being peculiar to buying from small firms. But the nature of the problem involving larger established suppliers is quite different. Established suppliers may not start with the quality problem and the high transaction costs that small firms present to government. But various factors conspire to cause the government suppliers to sell their lower quality and/or higher cost goods and services to government. The end result is the same disincentive to quality that occurs, for different reasons, in the SE-favoring procurement that “entitles” small firms to a fixed share of the government market. Smaller firms, in turn, may not produce exactly what government needs and require more guidance, but they may also value government more as a customer because they lack the market alternatives that large firms have. Aided by demand-driven support such as that provided in Ceará, the quality of their product can be improved. This is what happened in the stories of the wheelbarrows, silos, and school desks told in the following sections.

These observations contain two implications for policy. First, the playing field on which firms bid for government contracts is less level than is implicitly assumed in the arguments against SE-favoring procurement. This is not to say that one imbalance should be corrected by another. Rather, there may be a serious case for subsidizing the transaction costs of contracting with small firms through programs such as that described below. The case for special treatment, however, should not involve mere SE entitlement to government contracts; as will be seen below, the demands for performance inherent in properly structured SE-favoring procurement are quite substantial. Second, contracting out for goods and services previously produced “in-house” by government is now a popular item on the agenda of public sector reform. But given the above-noted disincentives to quality and efficiency in the existing environment of public procurement in developing countries, contracting out public services to private providers will not necessarily produce better results.

### 3. CEARÁ’S PROCUREMENT FROM SMALL FIRMS

The attempt by the state of Ceará to redirect procurement to small firms enjoyed a limelight that most SE programs never experience. It was launched by a new reformist governor at the beginning of his term, and as part of an emergency program to face the cata-

strophic effects of a major drought in that same year, which left 600,000 rural workers unemployed. To create employment rapidly, the state government had traditionally responded to these periodic droughts with major programs of public works construction, employing thousands of workers. Because of severe revenue shortfalls in the 1980s, however, the program of construction had to be smaller, and the state therefore decided to experiment with a novel approach that would require no additional expenditures. First, it directed that materials and tools for building the works projects be purchased from small producers in the drought-stricken interior — bricks, tiles, gravel, hoes and backhoes, buckets, shovels, wheelbarrows. This gave rise to the expansion or opening of dozens of small brick-making operations, wood workshops, stone quarries, and lime-burners. Second, the state redirected some of its customary purchases — school furniture, repair and reconstruction services for public buildings, small metal grain silos — from large firms outside the state or their distributors to small firms located in the drought-stricken area.

These initial efforts were successful enough that they became permanent when the drought ended. In the subsequent three-year period from 1989 to 1991, the state spent US\$15 million on such contracts, accounting for 30% of its total purchases of goods and services. The most important items were school furniture such as desks (400,000 pieces), and tables, chairs, and bookcases (20,000), accounting for 55% of total expenditures; 550 service contracts with 200 informal firms for the repair, maintenance, and reconstruction of public buildings, particularly schools (23% of total expenditures); service contracts with 100 firms for the repair of 5,000 pieces of equipment, particularly television and videos in schools; and other miscellaneous items such as small metal silos (20,000) for on-farm storage of grains during subsequent good harvests, and electricity poles (500).<sup>20</sup>

Despite its generally positive results, the procurement program had only one conspicuous success story in terms of broader and sustained developmental effects — that of school furniture in the district of São João do Aruaru (SJA), as told in section 4. Only in SJA did the program concentrate so much of its procurement and assistance in one small district — 40% of the total purchases of school furniture under the program. Three years after starting, the program had dispersed the rest of its purchases for school furniture among 43 additional *municípios*; and it distributed its contracts for other products across 90 of the state's 178 *municípios*.<sup>21</sup> To explain this seeming failure of the state to understand the lesson embedded in the SJA success, we must wait until Section 6.

#### (a) *The two faces of SIC and SEBRAE*

Two agencies, which had already worked closely together in SE-support programs, were responsible for

the procurement program — the State Department of Industry and Commerce (SIC), and the Brazilian Small Enterprise Assistance Service (SEBRAE), a semi-public technical assistance agency found in most Brazilian states. Financed originally by federal and regional institutions whose contributions subsequently declined, SEBRAE had been receiving an increasing share of its income from the state government through SIC — income that covered 70% of SEBRAE's expenditures in 1992. SEBRAE earned the remaining 30% of its income from charges to final users and commissions on government contracts. The agency's headquarters in Fortaleza operated with approximately 35 professionals (engineers, economists, business administration specialists, accountants). It also had five branches with one or two professionals each throughout the state.

For anyone familiar with the innovative demand-driven style of the procurement program, it would have been surprising to discover that SIC and SEBRAE continued to operate a set of older and uninspiredly supply-driven programs. Like many such programs elsewhere in Brazil and other countries, these two agencies provided fairly standardized assistance and messages to firms across many sectors. They normally organized their work along functional lines, with three or four professionals assigned to separate divisions — credit, training, and marketing assistance. Consistent with this supply-driven approach, the technicians of SIC and SEBRAE tended to characterize the problems afflicting their clients as generic to small firms — lack of access to credit, limited technical and managerial capacity, and difficulties in marketing. All this is typical of SE programs in many countries, despite a growing literature showing how the needs of firms differ markedly from one sector or subsector to another.<sup>22</sup> Likewise, the two agencies' evaluations of their programs and of staff rarely looked into the workings of particular sectors and instead charted generic indicators like the number of SE associations formed in a particular year, the number of firms participating in a program, and the number of courses given and of participants in them.

SEBRAE offered managerial training programs to firm owners from different sectors — the standard fare of so many such programs — how to write checks, use a bank, keep books, and so on. The state government, in addition, made special subsidized lines of credit available to SEs, to which SEBRAE helped firms gain access.<sup>23</sup> SEBRAE did provide some sector-specific services, including 200 different courses on assorted subjects ranging from repairing computers to bakery techniques. But the curriculum remained the same for every round of participants, rarely allowing instructors to meet requests from individual groups, or to adapt to their particular circumstances. Taking place in a classroom rather than at the firm site, the courses demonstrated equipment in settings that were quite different

from the conditions under which most firms operated — where the equipment was less sophisticated, the space more crowded, and the supply of public power frequently interrupted or non-existent.

Appreciating the problems of their SE clients in finding customers, SIC built trading centers and “microenterprise palaces” in selected cities to provide small firms with a place to sell their wares locally. As frequently occurs with such initiatives, however, the results were disappointing. Although the agency blamed the low occupancy in one such center on the firms’ “inability to run the shops,” firm owners reported that they were not really that interested in a local trading center because opportunities for sales expansion were actually much greater outside the home market.<sup>24</sup> More successfully, and less ambitiously, SIC and SEBRAE encouraged and backed the participation of small firms in local and national fairs — the only other clearly demand-related initiative in these two agencies’ programs.<sup>25</sup> The two agencies also encouraged small firms to form associations, partly to lobby for legislation and regulation favorable to small enterprises, and partly with the purpose of reaping economies of scale in group purchasing and selling. All this, with the exception of the sponsoring of trade fairs, added up to a supply-driven program that had little impact on local economies or employment.

#### (b) *The contracting procedure and its effects*

The contracting procedure of Ceará’s procurement program differed in one crucial way from many other such programs: if the agencies purchasing the products did not like their price or quality, they simply would not buy. This meant that SIC and SEBRAE had to convince the state departments of education, agriculture, and other such purchasers that the SE products were worth buying. The procedures surrounding this arrangement, though seemingly cumbersome, were key to the program’s successful dynamic.

The purchasing agencies first contracted with SIC for the goods or services. Then SIC made a second contract with SEBRAE to provide the technical assistance to the small firms, paying SEBRAE a 5% commission on the value of the contract. SEBRAE, in turn, made yet a third contract to purchase the goods or services from an association of small firms, artisans, or building tradesmen located near each other. Key to the good results of these arrangements, SEBRAE would not contract individually with small firms. It instead sought out existing small-firm associations or encouraged and helped groups of potential suppliers located in one place to organize an association. Just as significant, SEBRAE worked out a system of product warranties with the producers — one year for school desks and other furniture, for example, and three years for the grain silos and electricity poles. In the case of

school furniture, each item had a metal plate with the producer’s name and the number of the contract. If an item proved defective, it was returned to the producer for repair or replacement; if that producer had closed down in the interim, the association of producers to which he had belonged was contractually responsible. All these arrangements reinforced the pressures on the agencies, as well as on the firms, to deliver a good product.

The Ceará program involved none of the traditional subsidies on inputs or subsidized bank credit for which SE programs have been criticized.<sup>26</sup> Even the technical assistance — one of the few currently accepted ways of subsidizing SE growth — was only partially subsidized, at most, given that SEBRAE charged for it through the 5% commission on the contracts.<sup>27</sup> The 50% advance on the contract, of course, might be viewed as an implicit subsidy of interest-free credit for working capital, especially given Brazil’s high rates of inflation in the 1980s and early 1990s. Paying even partially in advance for goods and services, moreover, would seem to be risky business for government as well as imposing high monitoring costs. But the advance payment differed importantly from the typical case of subsidized small-firm credit.

First, the advance payment mimicked the way many large private customers finance those of their small-firm suppliers who cannot obtain bank finance for working-capital costs. Namely, the customer pays a significant portion of the final payment upfront — in the form of credit, cash, or raw materials — and the remaining payment is tied to the delivery of the product. The advance therefore reduced the major financial obstacle to small-firm competition for public-sector business — an outcome also found in several other countries.<sup>28</sup> The importance of SEs being able to compete for public contracts, then, lies not only in the benefit to them, but also in terms of making available to government a better choice of goods and services from which to choose.

Second, if any particular producer did not deliver to the association on time, or produced a faulty product, the other firms in the association were jointly responsible. They had to make up for any shortfall in the association’s total order before being paid for their own deliveries. In these cases, obviously, the better-performing firms had good reason to pressure the laggards to comply. Because of the visibility of the association in the community, the dissatisfaction of the better-performing firms damaged the reputation of the laggard firms. This disciplining mechanism was key to the quality and productivity improvements of the procurement program, and to reducing the transactions costs to government of buying from small firms.

The intrafirm discipline dynamic of these arrangements seems similar to the “peer pressure” used to ensure repayment in the micro-credit programs that have now become so popular. Representing a signifi-

cant advance in small lending over the last decade, these programs bring individuals together in small borrower groups with joint responsibility for repayment. The effect of grouping in our case, however, was greater than in most programs of micro-credit. Each firm belonging to the groups of our case, that is, produced the same product, and was already an established producer; micro-credit groups, in contrast, bring together individuals who are often not experienced producers and/or who are not all engaged in the same activity. The discipline of the Ceará case, in other words, involved more than peer pressure around repayment: in the course of pressuring the laggards, the better-performing firms also persuaded the weaker ones to improve the quality of their product. This was a key contributing factor to the ongoing increases in product quality among the program's suppliers.

The arrangements described above, in sum, brought four important factors into play. First, they created a healthy distance between two sets of government actors — SIC/SEBRAE and the purchasing departments. Second, they made SEBRAE's income dependent on the performance of the producers to which it provided technical assistance, through the commission SEBRAE earned on the contract. Third, SEBRAE's insistence on working only with associations of SEs helped overcome one of the major problems of procuring from small firms — the need to make many small contracts. Fourth, this combination of arrangements introduced a dynamic of discipline and technical support regarding quality and other aspects of performance among the firms themselves. This combination of pressures and incentives is rarely found in programs of SE-favoring procurement, SE bank credit, or SE extension. The following two sections illustrate how it worked.

#### 4. CUSTOMERS, SUPPLIERS, AND THEIR BROKERS: THE CASE OF SCHOOL FURNITURE

The state's orders for school furniture from the woodmakers of the sleepy district of São João do Aruaru (SJA) had a stunning impact on that area's development. With 9,000 inhabitants, and located 130 kilometers from the capital city in a zone of excellent hardwoods, SJA entered the program with only four small sawmills with three employees each — certainly not the makings of the highly publicized success story that it soon became. Indeed, because the district's carpentry skills were not even known outside that locality, they came to the attention of the technicians of SIC and SEBRAE only through their conversations with a local priest about drought relief. After visiting the sawmill operators, the head of the state's drought-relief program placed an order with them for 300 wooden wheelbarrows. (In the past, the state government had

procured iron wheelbarrows from large firms located outside the state.) Although the woodmakers of SJA had never fabricated wheelbarrows, they had regularly produced other rustic items such as truck sidings, roof frames, and wooden pans and trays for cassava and sugar-cane mills. With SEBRAE assistance, the four sawmills successfully completed the order. Their wooden wheel-barrow turned out to be more desirable than the iron one purchased previously from large suppliers, because the latter product had a tendency to rust and dent. The wood product, in addition, cost 30% less.

Two years after its first order, SJA had completed four more orders for a total of 2,000 wheelbarrows, as well as handles for hoes and backhoes, and wooden barrels for distribution of water. Even more significant, the woodmakers had completed a large order from the state Department of Education for 3,000 school desks and 100 tables — the first time they had produced these particular items. In so doing, SJA replaced two large furniture manufacturers in the southern part of Brazil, which had supplied 80% of the schooldesks bought by state government for more than ten years. As with the wheelbarrows, the schooldesks cost 30% less than previous purchases, partly because of the large reduction in transport costs on items procured from within the state. By 1992, SJA was supplying 40% of the state's needs for school furniture, amounting to 90,000 pieces annually.

The impact of the procurement program in SJA was striking. Five years after the first order for 300 wheelbarrows, the number of sawmills in the town had increased from four to 42, each mill now averaging nine permanent workers. An additional four to seven temporary workers per mill felled trees, cut them into lumber, and transported the lumber to the mills. All in all, this added up to a total of 1,000 persons employed directly or indirectly by the mills, more than 10% of the total population of the district. More than half of the mills increased their productivity by acquiring power equipment that they did not have before — electric planers, power lathes, routers, and presses. Although the procurement-induced development of SJA would certainly not have occurred without the state's contracts and accompanying technical assistance, the town and its sawmills did not become dependent on the continuation of these contracts. They used their public contracts and their new skills and contacts gained through the state's technical assistance to break into new private markets — furniture for summer homes and for hotels — where they became permanently ensconced. Indeed, five years after the program's start, these private markets had come to account for 70% of their sales. In addition, the woodmakers were starting to receive orders from other state governments, the first being for 20,000 school desks from the neighboring state of Paraíba. Many of the new private and public customers learned about the



quality of the town's furniture through the state's repeated advertising about the program's success. Because the publicity around the program had several other positive effects, it is treated separately in Section 6.

In this section, we first trace the interfirm and linkage dynamics of the SJA case (Section 4a). The following two subsections explain why SJA worked so well in contrast to the other sector-specific initiatives of SIC and SEBRAE and to supply-driven approaches in general. Section 4(b) describes the procurement-driven change in the agency's work; section 4(c) discusses the arm's-length dynamic between the purchasing departments and the SE-assisting agencies, and the effect this had on the latter's performance.

#### (a) *Industrial cluster and growth pole*

Under the guidance of the procurement program, SJA turned into the classic case of a small-firm cluster or industrial district.<sup>29</sup> The Aruaru Association of Furniture-makers (Associação dos Moveleiros de Aruaru), which was formed at the state's urging to produce the first orders, had started with only four firms and had grown, five years later, to 42. In addition to serving its members, the association had become a major civic institution in the town. Among other activities, it formed a permanent committee for group purchase of timber and other materials (with correspondingly increased bargaining power *vis-à-vis* suppliers); organized the sharing of equipment among members; shared information about opportunities to purchase second-hand equipment; and sought ways of preventing sawmill accidents, also pressuring the state to provide an expert on occupational safety. The association also constructed its own building — dubbed by the townspeople as “their church” because producers met there almost every night. The building also served as a store for raw materials, and job-seekers frequented the place for leads on possible work.

When SEBRAE first started working with the SJA producers, the agency's frequent rejections of defective products or parts translated into a self-imposed pressure to improve the quality of the labor force. As a result, the sawmill association took upon itself the cause of upgrading skills in the town. To this end, the association successfully lobbied the mayor of the *município* to arrange night-school sessions for high school-age sawmill workers who worked during the day in the sawmills; teachers arrived every evening by bus from a town 45 minutes away. Such a thing was almost unheard of in the interior towns of the Northeast. Led by the association, moreover, SJA struggled to become independent and become its own *município* — as faster growing districts throughout the state had tended to do.

In addition to the dynamic interfirm cooperation of

this new small-firm cluster, backward and forward linkages to firms in other sectors emerged in almost textbook fashion and with remarkable spontaneity. The sawmills of SJA themselves moved “backward” into repair, then assembly of sawmill equipment such as bandsaws, and then equipment for sugar-cane and cassava mills operating in the region, as well as for local manufacturers of cheese. Five storeowners bought trucks to transport the timber from the forest to the sawmills. A new supplier of Amazonian hardwood set up business in the town. A private bus company opened a new line between the town and the state's largest city and capital 130 kilometers away — a bus-ride of almost three hours. The Bank of Brazil opened a new branch — quite unusual for a town of only 9,000 inhabitants, and particularly given that the Bank was streamlining its operations and closing existing branches in several larger towns. The flurry of new manufacturing activity and employment in the town, in turn, led to a spurt of housing construction. A new brick-making operation opened up in the town and hired 20 workers. Townspeople who had lived in mud huts before, and then built adobe houses, proudly showed visitors the old mud structure, which they had left standing so all could see how their lives had improved since the 1987 drought.

The unforeseen development of linkages in SJA was striking, especially in contrast to the many programs that have tried unsuccessfully to create such linkages through a series of “integrated” and significantly more costly public investments in industrial development. The managers of SIC and SEBRAE, after all, were not even thinking about possible linkage effects when they chose to purchase wheelbarrows and school furniture from SJA. This was not for lack of interest in linkage dynamics or of appreciation for the virtues of interfirm cooperation. Indeed, these same agencies were at the same time implementing a full-blown scheme to create interfirm cooperation and linkage dynamics among small footwear producers in the state's third largest city, Sobral. They even used the language of linkage in their name for the project, “the footwear growth pole of Sobral.”<sup>30</sup>

Sobral, with 100,000 inhabitants and numerous small leather footwear firms, certainly seemed to provide more scope for fashioning an industrial district than did tiny São João do Aruaru. At the time of this research, however, the prospects for the forging of this kind of SE growth pole in Sobral seemed dim even though the two agencies, ironically, had tried much harder there than they had in SJA. They imposed a grand developmental scheme that set out to change the basic structure of production in the footwear sector — generously providing finance, training, leather inputs, and fully equipped workshops. In that the Sobral and SJA programs were products of the same agencies and persons, their contrast drives home the importance of the organization of service delivery in determining

whether SE programs work well or poorly — as distinct from the expertise of a particular agency's staff, the quality of its leadership, or the particulars of the historical moment.

The state's role in unleashing the growth of SJA's small-firm cluster, with its attendant linkage effects, poses an important challenge to the literature of small-firm industrial districts. These studies report that small-firm clustering has always *preceded* public support and cannot be created by "some government agency."<sup>31</sup> Yet in the case of São João do Aruaru, the state created a small-firm cluster or district almost "from scratch," — out of the raw material of only four small sawmills of three employees each. If for this reason alone, the state's approach in this case merits scrutiny.

#### (b) *Forced by procurement*

Unlike many SE programs, the Ceará program did three important things. First, it linked small firms to a customer that was going to purchase large quantities of school furniture, uniforms, and wheelbarrows anyway — whether from small firms or not. Second, by bringing the support agency together with the firms through a contract for procurement, the program forced the agency, in effect, to provide "training" at the firm site rather than in the classroom, and as problems were discovered. Third, this process helped the support agency to discover the critical bottlenecks and learn how to break them.

During a visit to one of the sawmills, for example, a SEBRAE engineer discovered that timber for school desks was being stored without appropriate protection from rain or humidity. This prevented proper drying and caused the wood to crack later. Prior to this, SEBRAE's standard technical advice had covered design of the furniture and wood selection, but not drying or storage. In the case of the small metal grain silos purchased by the Department of Agriculture for on-farm storage, some firms had had difficulty producing an adequate seal through their soldering process. Correcting this was imperative, given that an imperfect seal created the danger of pest infestation. SEBRAE's engineers suggested a different approach to the soldering process, and worked side by side with the producers until they achieved a perfect seal. In a final example from the school-repair case presented later, SEBRAE technicians discovered — upon observing the building tradesmen working — that they were not water-proofing ceilings or protecting the cement of the school courtyards from cracking in Ceará's intense equatorial sunlight. The technicians showed the contractors how to use a ceiling product made of oil for water-proofing, and to add a plastic-based material to the concrete to prevent cracking.

Firm owners working under the procurement pro-

gram took the impending visits of the agency technicians quite seriously. The woodworking firms of SJA, for example, told of how they would meet together before a visit by the SEBRAE technician in order to draw up a list of common problems they were facing in the course of fulfilling their order. The technicians, in turn, reported that they liked working this way much better. It made their task "easier," they said, because they could concentrate on the problems brought to them by their clients. On those occasions when they were unable to come up with immediate solutions, they could research the problems for their next visit.

The technicians' advice and their understanding of the sector, in sum, emerged from working together with the producers at the firm site. This contrasts with the pre-set agendas and packages so common in other business extension services, and with much of these two agencies' other programs. Remarkably similar findings have also been reported with respect to extension services in agriculture.<sup>32</sup>

#### (c) *Quality, price, and the reluctant buyer*

The school principals who received the new school-desks made in SJA reported that they were actually better than the desks they had received previously. They complained that the latter, produced by two large manufacturers located in the more developed southern state of Paraná, had not lasted more than three years. Whereas the Paraná desks were made of laminated wood, which swelled and warped when exposed to dampness, the SJA desks were made of the solid hardwood available locally. This section attempts to explain how rustic firms that had not even produced school-desks before, let alone in such large quantity, could have produced a product of higher quality and lower cost than a single, more sophisticated manufacturer.

In most SE-assisting procurement programs, the buying agency uses the product or service itself, or resells it, usually at a subsidized price, to final consumers. Either the buying agency is an advocate of SEs, or a higher authority has mandated that it buy from SEs. This case was different: the support and the purchasing functions were housed in different agencies (the support agencies neither used the products nor resold them), and the purchasing departments were not required to buy from SEs. This meant that the support agencies had to prove to another entity — the purchasing department — that buying from small firms was no more costly or burdensome than these departments' standard procedures. Reinforcing these pressures on the support agencies, the state's purchasing units were distinctly unenthusiastic about switching some of their purchases from a few large manufacturers or distributors to numerous unknown small producers. The Department of Education predicted that

school-desks made by rustic small producers of the interior would “fall apart within a year,” that the producers would never be able to deliver on time, that the heavier solid-wood desks would be more difficult to move around (they were), and that unit costs could not be as low as those of the large manufacturers in southern Brazil, from which the desks were normally purchased. The Department of Agriculture worried, in turn, that the seal on the 2,000 small grain silos provided to farmers for on-farm storage would be faulty. They also did not like the idea of buying wooden wheelbarrows rather than the sturdier iron ones they normally purchased. In the course of complaining about anticipated problems, the skeptical purchasers conveyed useful information about the kinds of products, materials, and parts that tended to break down or wear poorly. This information clearly helped the technicians of the support agencies and the new supplier firms themselves to learn how to produce a better product.

Even when the purchasing departments had had positive experiences with their new SE suppliers, they wanted to show their “neutrality” about small firms. As a procurement officer from the state Department of Education said, “we only purchase from small firms if they charge lower prices and offer good quality, but at the moment they stop doing that, we quit.” Likewise, the Agriculture Department warned that it decided to purchase grain silos from small firms “not just” because SIC was promoting SE procurement, but because “it was a better deal — better prices, good quality, guaranteed delivery in a short time.” The initial skepticism of the purchasing departments, finally, was reinforced by disgruntled local dealers, who had handled the previous purchases from outside the state, earning a 15% commission. Now they were being displaced by an intermediary, SEBRAE, that was earning “only 5%.” In their eyes, this was a case of “unfair competition.”

While we were impressed with the constructive pressures to perform caused by all this skepticism, SIC and SEBRAE had a much less charitable interpretation. In a litany of complaint that would be familiar to many program evaluators, the two agencies dwelled on how much time they had had to spend overcoming the resistance of the purchasing departments and outsmarting their subterfuges. They peppered their complaints with tales of alleged collusion between these agencies’ procurement departments and the displaced suppliers and distributors, and of untoward pressures by them on the governor. Regardless of the truth of these complaints, it was clear that the “lack of cooperation” by the purchasing agencies pressured the support agencies to focus their assistance on improving the quality of the SE product.

The procurement program’s conspicuous origins in the 1987 drought created similar pressures to perform. The state government had broadly advertised the pro-

curement program to its citizenry as a bold new approach to reducing the unemployment resulting from the drought emergency. Although SE-assisting programs often couch their goals in the language of employment creation, they are rarely faced with the urgency posed by an intense drought and its specter of famine, sickness and death, and widespread looting of food stores and warehouses — let alone the possible loss of votes by a newly elected governor who had promised reform.

Under the pressure of the limelight and the reluctant purchasing departments, any failing in goods and services provided by the program’s clients would have been more conspicuous than usual. If the wooden wheelbarrows were to break down, this would have clearly discredited the new experiment. If the solder on the grain silos were to prove defective, this would have endangered the supplies of the many small farmers who had stored their grain in the 2,000 silos distributed after the drought. Paying careful attention to problems such as these enabled the two agencies to avoid embarrassing failures. The urgency and the high stakes, then, gave these otherwise minor agencies a chance to prove their mettle in the face of a major crisis.

SEBRAE technicians had to maintain their vigilance around quality even after a producer association had completed its order, because of the contractual requirements for payment and the system of warranties. When an order was completed, the technicians inspected it at the site of production, rejected those items that did not meet quality standards, and required that the firm replace any defective article promptly. When the program first started, the rejection rate was 15%. Some desks were built with a poor-quality wood, for example, and some had a desk arm of the wrong length. Because SEBRAE would not authorize payment to the association until the defects were corrected, this caused the good-quality producers to pressure the laggards, threatening to exclude them from subsequent contracts and sometimes actually doing so.

Making the groups liable for any misbehaving members elicited self-monitoring mechanisms among the firms themselves. These were crucial to the improvement of quality and to the state government’s ability to pay its suppliers 50% in advance without, at the same time, creating a new set of monitoring troubles. The self-monitoring also reduced the monitoring burden of the support agencies. Because the firms valued the public contracts so highly — together with the technical assistance that accompanied them, and the 50% payment advanced by the state — they had strong incentives to comply. In addition, the small producers took pride in their new role as suppliers to government. They would often honor the warranty beyond the legal period, or help with problems not of their own responsibility. In one case, for example, the Department of Education of Fortaleza had stored 2,000 school-desks, chairs, and bookcases it had purchased from the pro-

gram for more than a year, without adequate protection from humidity and heat. Even though the producers were not responsible for the ensuing damage and the warranty period had expired, the association of wood-working firms sent some of its members to repair the furniture — asking only for reimbursement for their bus tickets to the capital city.

The final piece of reinforcement for these market-like tests was the 5% commission earned by SEBRAE on every procurement contract. Five years after the program started, these commissions added up to 15% of the agency's revenues — having become an important new source of income in an era of declining support from other sources. SEBRAE definitely had something to lose, then, if the producers they were coaching did not perform well under their contracts.

## 5. WHEN SMALL FIRMS DELIVER BETTER: SCHOOL REPAIR AND RECONSTRUCTION

Our introduction laid out the reasons why government agencies look askance at purchasing from small firms, and why governments and experts have shown little interest in the matter. Some of their reasons have to do with the seemingly reasonable assumption that it is less costly and less time-consuming to purchase from larger, more established firms or distributors, and that small firms cannot deliver promptly a product of equal quality and price. We challenged this view, explaining how established suppliers divided their work between their public and private customers in a way that led to lower quality and higher cost in the services purchased by government. The gap in quality and cost between the larger and smaller firms, then, is not always as great as is commonly assumed. This section illustrates our argument with the experience of the Ceará program with the maintenance, repair, and reconstruction of schools and other public buildings.

The contracting of small firms to provide maintenance and repair services for public schools started with 109 schools under the municipal jurisdiction of the state's capital city, Fortaleza. The mayor who introduced the innovation in Fortaleza expanded it subsequently, when he became governor, to an additional 225 state schools in that city and to some of the other larger towns in the interior. In reminiscing about the initiative, the ex-mayor liked to describe the remarkable state of disrepair in which he had found the city's school buildings when he took over in 1989. Inspired by what he had heard about the early successes of the state's procurement program in other sectors, he ordered the city's Department of Education to let out small contracts for school maintenance, repair, and reconstruction to informal tradesmen and small firms. The department contracted 26 informal contractors — small associations of electricians, plumbers, bricklayers, painters and — to repair all its school

buildings, for a sum total of US\$190,000. This first project took only 45 days to complete, very important for a new mayor wanting to start his term of office impressively.

As a result of reforms taking place in the education sector at the same time, the state and city departments of education were also experimenting with the decentralization of school repair decisions to school principals. The principals distinctly preferred the new approach. It led to greater accountability, better quality work from contractors, and significant savings by the education departments. This section explains why. For purposes of brevity, we refer to this program as "school repair" — which also includes the repair of school equipment, such as videos and projectors.

### (a) *From equity to efficiency*

Prior to the new procurement program in education, decisions about school repair had been taken by the headquarters of the respective departments of education. For major repairs and reconstruction, another department dedicated exclusively to building construction had carried out these tasks itself or contracted them out to private firms. When a school or its equipment needed repair, the school principal had requisitioned education headquarters or the other state or municipal department responsible for such works. The response often took many weeks or even months, and sometimes never came at all.

Compared to contracts for school construction and reconstruction, contracts for school and equipment repair are typically small, averaging US\$5,000. The work involves discrete tasks such as building outside walls, laying down sidewalks, fixing roofs, and installing water connections, electricity, and gates. Given the distances between schools, the work is dispersed. Medium and large building contractors lose valuable time and capital moving their costly fleets of heavy equipment from one small work site to the next. They therefore find the repair and reconstruction contracts less attractive than construction, and the school construction contracts less attractive than larger construction jobs. They nevertheless bid on these less desirable jobs when times are bad, or as "fill" in between large contracts — a common practice in other places.<sup>33</sup> Because contractors view this work as "second-best," they are frequently hurried and do shoddy work; poor supervision by fiscally strapped city and state administration does not help. In addition, larger contractors frequently leave these jobs before they are completed — promising to return later — as soon as a larger and otherwise more desirable contract appears.

In our story of school repair, issues of decentralization were intertwined with those related to procuring from small firms. The inefficiencies of existing procurement practices, as described above, had two

related causes. One lay in the previously centralized approach to the procurement of school services, and the other in diseconomies involved in using larger contractors, together with a procurement environment that allowed contractors to do shoddy work. We turn our attention now to how these inefficiencies were reduced, through a combination of SE procurement and decentralization of decision making about repair to school principals.

(b) *Decentralization, community associations, and monitoring*

In the beginning of the school-repair program, and as in the case of SJA, SEBRAE encouraged individual building tradesmen to form associations, and then brokered the contracting process between these associations and the education departments of the *município* and the state. Soon after, SEBRAE gradually resorted to another mechanism that was considerably less time-consuming than seeking out and evaluating the work of each individual tradesman or small contractor. It turned to another party — neighborhood and parent-teacher associations in the vicinity of each school. These groups already existed, having formed to pressure city government about the supply of water, sewerage, and other services, including the quality of their children's schooling and school buildings. Some of the tradesmen themselves belonged to these associations.

In a further lessening of the burden on SEBRAE, the school principals took over the task of consulting with the neighborhood association about the choice of a contractor and the supervision of his work; in some cases, the members of the neighborhood associations themselves took turns supervising the work. SEBRAE staff had previously explained to the neighborhood associations what they should watch for if they wanted to "monitor" the contractors' work. When work on a school commenced, members of the better organized associations passed by the school site regularly to see how work was progressing, and whether the contractors were using acceptable materials and carrying out other required practices. It was not unusual that association members would report back to the principal on the quality of work, good as well as bad.

The involvement of the neighborhood associations in the selection of the contractor, and their subsequent monitoring presence while work was being done, clearly contributed to better results — an outcome reported in similar programs elsewhere.<sup>34</sup> The local contractors understood that they could not afford to get a reputation in the neighborhood for doing shoddy work, and they felt grateful for work they never had. As a result, the better organized the neighborhood association in the area of a particular school, the better the repair and reconstruction work tended to be. In addition, the stealing of materials stored at the site, a

major problem at construction sites and with significant cost implications, was much less frequent because of informal monitoring by parent associations.

By providing each school principal with a budget for maintenance and repair and leaving the expenditure of those funds up to her or him, the Education Department had freed itself of the burden of dealing with many small contracts for repair and maintenance. The principals, in turn, liked having control over maintenance and repair — in brief, over the physical quality of life in their schools. They also liked getting help from the neighborhood association in identifying local contractors and in supervision, since that reduced the new burdens placed on them by decentralization. In contrast to the previous situation, then, contracting for and monitoring of school repair were now in the hands of two new and more watchful "stakeholders" — the school principals and the neighborhood associations — with considerable self-interest in making sure good quality work was done. Contracting centrally with one large firm did not bring such self-interested monitors to the numerous work sites.

It is remarkable, actually, that governments do not take more advantage of these opportunities for cost-free monitoring in order to ensure better quality work and less pilfering, particularly in contract work involving many widely dispersed work sites. A program that started out with the purpose of creating jobs, then, ended up being a more efficient way for government agencies to acquire services and organize the delivery of its own services. This may be the most significant result of the experiment.

As in the case of the SJA woodworkers, finally, the public contracts helped launch these small producers into new, private markets. Some gained work as sub-contractors to two large construction firms building dams under contract to the state; for jobs like this, which required the contracting of so much labor, these firms found it less costly and time-consuming to contract a group of workers and their "master craftsman," all of whom already had proven experience working together. Other small contractors subsequently bid successfully, for the first time, for contracts to repair or reconstruct other public buildings throughout the interior of the state. The contracting agencies had come to know of the small contractors' work through the praise of the school principals, as well as through the intense publicity surrounding the program, to which we now turn.

## 6. PUBLICITY, OPPOSITION, AND THE UNREPLICATED SUCCESS

From our description of the procurement program so far, one would have no inkling of the political maelstrom stirred up by the effort to buy from small firms, nor of the incessant publicity surrounding it. The state

government played an important role in contributing to the maelstrom, and then contended with it quite cleverly. We end the story here because it brings out three issues of significance for public procurement as an instrument of SE development, and for SE programs in general. First is the opposition to SE procurement from large supplier firms that are displaced or fear they will be. Second is the high commitment to the job found among the technicians who work in more customized programs like this one. Third is the fact that the most successful case of local development resulting from this program emerged out of the concentration of assistance on a cluster of four firms producing the same product in one town. Though these three lessons do not seem related, they were all intertwined in the story of intense publicity.

Starting with the procurement program's beginnings in the 1987 drought, the state government went out of its way to publicize its achievements in newspapers and on television, radio, and posters. At first, the national as well as local news media picked up the stories because the Northeast's chronic sufferings from drought, together with clientelism and graft, always made for good copy. In contrast to the usual tale of inadequate public preparedness and malfeasance in the distribution of relief supplies and jobs, these reports gave wide coverage to the "speed" with which the state government had mobilized small firms to produce the wheelbarrows in 1987 and, later, the grain silos.

The publicity did not stop with the ending of the drought, and was still going strong four years after the program's start. It portrayed the procurement initiative in quite noble terms: the state had "turned public procurement democratic," had economized during hard times, and had shifted its purchases from outside the state to within — creating a program that was an outstanding example of "austerity and morality." The state government organized a public seminar on the program, inviting other governors and high-level public managers from throughout the country. The occasion culminated in a visit to São João do Aruaru and its makers of school furniture. This was one of an endless number of occasions on which SIC or SEBRAE took visiting dignitaries by bus on the almost three-hour trip to SJA.

There were obvious political reasons for the state's exuberant proclamations about the procurement program. The two reformist governors who presided over its founding and growth had serious national political ambitions. They busily touted their achievements outside the state, including that of the procurement program. The publicity helped protect the program from demise by way of the fierce opposition it provoked from the manufacturers or dealers that it displaced. Although the state did not attack the protesting suppliers directly in publicizing the program — the out-of-state products having been sold by local distributors —

it went out of its way to advertise that it was "coming to the rescue of local industry," reducing problems of unemployment, and mending its bad habits of purchasing from outside the region.

The state government also fended off large-supplier opposition to the program by appealing directly to the new and less powerful constituency of small firms and self-employed tradesmen who were, at the least, numerically larger. As reported above, SIC and SEBRAE encouraged these firms to organize into associations that could then bid for state contracts. But this was not the only intention: they also encouraged the associations to become a counter-lobby to the hitherto more powerful displaced firms, as well as to lobby in favor of tax exemptions for small firms. For every round of opposition from the previous suppliers, SIC and SEBRAE mobilized a wave of presidents of local small-firm associations to pressure the governor to preserve the program or extend it to their towns. When the governor or SIC officials visited interior towns, they were regaled with pleas to give orders to firms in their towns. Mayors and other local leaders joined in the clamor, wanting to take credit for bringing the new "democratic procurement" to their town. With the backing of this newborn constituency, SIC and SEBRAE successfully lobbied the state's Industrial Council to formally include small-firm representation — for the first time in the state's history.

The public attention swirling around the procurement program had a second positive effect, which was in no way deliberate. Those staff members who worked in the program saw the constant "showing off" of the program, and their frequent escorting of visiting dignitaries to production sites, as amounting to an unusual recognition of their work — as if they had received prizes for outstanding achievement. One SEBRAE technician told of what it meant to him to accompany such important personages to visit "his" producers, and to hear them speak publicly about how they valued his assistance. It is not surprising, then, that SEBRAE technicians said they did not mind the increase in their workload resulting from the new program, because the results brought them "prestige" — not only locally, but throughout the country.<sup>35</sup> The publicity had similar effects on the morale of the new small-firm suppliers themselves: the whole town of São João do Aruaru, for example, felt immense pride at having provided the wheelbarrows for such a major emergency as the 1987 drought.

The publicity around the procurement program, in sum, had transparent political purposes as well as significant positive effects. It contributed to substantial popular support for the program, helped the state to overcome serious opposition from the displaced suppliers, enabled other towns to learn about the program and enlist in it and, by making those who worked in the program feel recognized, elicited high dedication from them. Not all the effects of the publicity, however,

were felicitous. In the concentrated assistance provided to the woodworkers of SJA, i.e. SIC and SEBRAE had clearly developed a quite successful demand-driven model of assistance to small firms. Why did it subsequently disperse the contracts across the state's *municípios*, seeming to fail to learn the lesson of this success?

Governments frequently fail to notice certain successes, especially when they take place in such remote corners of their territory. But not only did the state government notice what was happening in SJA, it clearly capitalized on the case making it into an ongoing public relations event. This, in turn, contributed to spoiling the possibility for replication, making it politically difficult to grant assistance to only a few *municípios* at a time, while denying it to the rest. "We had to help the largest number of firms and districts possible," a SIC official explained. In ceding to the pressures to expand to various *municípios*, then, the state had to violate the lesson underlying its first success. That it ceded in this particular case, however, does not violate the validity of the lesson.

## 7. CONCLUSION

Governments and nongovernment organizations (NGOs) have become more and more interested in small firms, and programs to assist them, because of their alleged potential to create employment and reduce poverty. But the resulting rapidly proliferating programs of support to SEs, whether government or NGO, are largely supply-driven (SDA) — despite the fact that demand-driven models (DDA) are significantly more effective. This article raised questions about the persistence of the prevailing supply-driven model, and showed why the demand-driven approach is better.

DDA outperforms SDA on four fronts. First, it produces better results in terms of sustained SE-based growth and, hence, provides a stronger argument for assisting SEs than the current "social" arguments that portray small firms as pathetic. Second, it elicits better performance from support agencies — whether in the public or NGO sectors — and technicians show greater dedication to their work. These institutional actors tend to be neglected in the SE literature, which focuses largely on the weaknesses and needs of SEs themselves. Third, it does more than SDA to reduce the problematic transaction and monitoring costs of purchasing from small firms, and at the same time helps them to improve the quality of their product. Fourth, and with respect to SE-favoring public procurement in particular, it can lead to government's procuring goods and services of better quality and lower cost. This will happen if SE-favoring procurement is structured along the lines suggested below, and also because the existing market in which developing country governments procure goods and services is less efficient than it is

normally assumed to be.

One part of our argument related to the strengths of DDA as a way of organizing SE assistance — whether in the government, NGO, or private sectors. The second part related to the particular form of DDA we examined in our case — the procurement of goods and services by government. We focused on procurement because government customers have been significant actors in many stories of SE-based growth, although less studied than similar cases in the private sector. In addition, government purchases — including all levels of government — account for a large share of total expenditures in developing countries. They represent a major untapped opportunity for promoting SE-based local growth, which dwarfs the resources devoted to date to supply-driven SE programs. SE-favoring procurement programs, nevertheless, have been plagued by certain problems. Through our case and others like it, we discovered the conditions under which DDA around procurement could work well. We first sum up the case for DDA vs. SDA, and then the conditions under which we found procurement-focused DDA in particular to be effective.

Demand-driven support to SEs mimics history. Assistance to small firms from large purchasers, whether private or public, has tended to play an important role in the stories of significant SE-based growth. DDA works better because it forces support agencies to fashion customized assistance — to firms that produce the same product and are located near each other — around production for a particular contract. If the product is not up to standard, it is rejected and/or the contract is not renewed. Under SDA, neither the firm nor the support agency is subjected to this market test. SDA delivers standardized service — business advice, training, production assistance, and/or credit — to as large a number of firms, often quite diverse, as possible. This assumes, implicitly, that there are problems that are generic to all SEs, which can be reduced by offering standardized services — an assumption proven wrong by almost two decades of evaluation research on SEs and SE-support programs. In recent years, moreover, customized assistance has become increasingly recognized as a better model of service delivery in general — in the public, as well as the private, sectors — because it is more problem-oriented and results-oriented.

In organizing its services to SEs around a particular contract for goods or services, DDA necessarily tends to work with groups of small firms rather than individual firms. This contributes to the development of certain growth-promoting externalities among the firms themselves — the possibility of sharing orders, specialization among firms, joint purchase of inputs, and joint action toward solving other problems. Students of SE clusters or industrial districts have shown that these externalities are key elements in the dynamic growth of successful clusters. Although SDA may also

encourage firms to organize in some cases, the effect is not the same: the support agency does not link the organizing, and the service that goes with it, to a contract and the problems that arise in meeting it.

SE-favoring procurement in particular must observe the following four criteria if it is to work its magic. These criteria emerged from the study of our case and others like it.

First, and in contrast to many SE-favoring procurement programs, purchasing units should not be *required* to buy from small firms. Otherwise, these units will not be demanding with respect to price and quality. This criterion also suggests that the SE-support functions be kept separate from the purchasing function, so that the support agency — together with the firms — will have to prove to the purchasing unit that SE products can be delivered at the same price and quality as that of government's existing suppliers. Although the support and purchase functions in our case were actually housed in different public agencies, this need not be the case. The support unit can be a nongovernment agency; or, as in some cases of SE-favoring private customers, it can be housed in a unit within the purchasing department itself.

Second, SE-favoring procurement should contract only with groups of firms, and pay each producer only upon delivery and satisfactory inspection of the product of the whole group. This is crucial to reducing the transaction and monitoring burdens of government purchase from SEs, as well as to reducing the risks of adverse selection. Working this way automatically shifts a significant part of the responsibility for monitoring from the support (or purchasing) agency to the firms themselves. This creates a dynamic of joint responsibility that resembles the peer pressure of today's popular microlending programs. The better firms sanction the laggards and, in the process, assist the laggards to improve their quality.

Third, to work properly, SE-favoring procurement must make a substantial part of the payment to suppli-

ers up front — in our case, 50%. This is how many successful SEs actually acquire working-capital finance — namely, from large private customers — and is already being done in some of the social investment funds, albeit at a lower percentage. The advance also solves one of the major problems bedeviling SE-favoring procurement — the failure of SEs to deliver resulting from their insufficient working capital. Although advance payment would seem to increase monitoring costs and the risks of nondelivery, the contractual arrangements suggested above virtually eliminate these problems: they elicit self-monitoring and self-imposed sanctions among the firms themselves. Advance payment, finally, is a more effective method of providing short-term financing to small firms than the special lines of subsidized credit that are typical of SE programs.

Fourth, the support agency must earn a small commission on the contract. This makes the agency at least partly dependent on the performance of the firms it serves for its income, which elicits more concern about improving the effectiveness of service. SDA, in contrast, not only frequently operates with full subsidy, but suffers from the absence of this built-in incentive to critically evaluate its work.

In closing, we emphasize that SE-favoring procurement requires little additional expenditure of resources and, as our story shows, may actually reduce the costs of running government. Most of its employment-creating and growth-inducing effects derive from government purchases that would have been made in any case, with or without the SE-favoring program. The need for subsidy is less than in existing supply-driven programs, since the contract presents an opportunity for the support agency to charge a commission, and no subsidized credit is offered to firms. The only additional expenditure is for technical support — minuscule in relation to the procurement itself. This support could be easily mobilized, in fact, by commandeering the organizational resources of the myriad SE programs now operating in the supply-driven mold.

## NOTES

1. See, e.g., Best (1990), Dertouzos *et al.* (1989), Helper (1990, 1991), Sabel (1994b), Watanabe (1983) and, for a recent review of this literature, Montoliu (1995). For the Japanese case, see Nishiguchi (1989), Helper (1990), Dore (1987), and Cusumano (1985).

2. See, e.g., Piore and Sabel (1984), Sengenberger and Pyke (1992), Schmitz (1995a), Mody (1991), and Humphrey (1995). For the "darker," exploitative potential of large-customer/small-supplier relations, see Harrison (1994), Portes *et al.* (1989), and Piore and Berger (1980). For a recent review of these literatures, see McCormick (1996).

3. See Cartier and Castañeda (1990), Souza *et al.* (1990), Perez-Aleman (1992), Tewari (1994, 1996), Tendler (1987,

1994). For exceptions to the general lack of interest in demand-driven assistance, see Mead and Kunjiku (1993) and Gierson and Mead (1995) with respect to Zimbabwe, and Sabel (1994b, pp. 29–30) with respect to the United States.

4. Saxenian (1994).

5. The quoted phrase comes from Porter, Ghemawat and Rangan (1995) who, it should be noted, would not necessarily agree with our arguments for public procurement.

6. See ILO (1972), Watanabe (1971, 1974), and ILO and Republic of Kenya (1988).



7. See Gopal and Marc (1994), Graham (1994), Fox and Aranda (1994), Haider and Reilly (1994), Mesa Lago (1993), Schmidt and Marc (1994), and Glaessner *et al.* (1995).
8. Porter, Ghemawat and Rangan (1995, p. 8).
9. For more details on this case, see Amorim (1993, 1994).
10. Kelley and Watkins (1995) researched this same set of concerns with respect to large defense-contractor firms in the United States, and found that a large share of the business of these contractors was with private customers, even during the best years for defense contracting.
11. See Porter, Ghemawat and Rangan (1995) for India and Bates (1995) for the United States.
12. The expression comes from Bates (1995).
13. Sabel (1994a) describes a similar iterative problem-solving process — using the term “discursive” to describe the approach of some of the technology-and-business extension centers of the Manufacturing Extension Partnership Program in the United States.
14. The seminal work is Peters and Waterman (1982); see also Best (1990).
15. For developing countries, see Hood (1991), Murray (1992), and Blunt (1990). For the industrialized countries, see Behn (1988), Levine and Helper (1993), Osborne and Gaebler (1992), Altshuler and Zegans (1990), Barzelay (1992), Kettl (1994), and Kettl and Dilulio (1995).
16. In an evaluation of a social investment fund in Honduras, Watson (1994) found that although the construction contractors complied with the program’s requirement that they hire “local” labor, they hired locally only for their most unskilled jobs and brought in outside workers known to them for the skilled work, usually from urban areas.
17. For similar findings see Gopal and Marc (1994), Biddle and Milor (1994, p. 55), Souza *et al.* (1990, pp. 53, 70), Stock (1995), and Stock and de Veen (1995).
18. Gopal and Marc (1994, pp. 15–16).
19. Souza *et al.* (1990, pp. 52–53, 92).
20. Sources of these and subsequent data on the Ceará program can be found in Amorim (1993).
21. By 1996, the state of Ceará had 181 *municípios*. The Brazilian *município* is the next smallest administrative unit after the state, followed by the *distrito* (district). The *município* is somewhat similar to a county in the United States, has political and administrative autonomy and elects a mayor and a city council every four years.
22. Schmitz (1982), Mead (1982), Boomgard *et al.* (1986 and 1992), and Liedholm and Mead (1987).
23. At the time of this research, credit terms were substantially less subsidized than in the past, mainly because loan principal was indexed to inflation, albeit not fully (70%–80% of the increase in the price index), and interest rates were 3%–12% annually.
24. This particular case involved a new trading center for 60 leather footwear firms in Ceará’s second largest city, Juazeiro do Norte. See Dorado (1993).
25. Both Dorado (1993) and Schmitz (1995b) draw attention to traders in the provision of demand-driven assistance to SEs and hence to the importance of supporting trading fairs.
26. See Adams and von Pischke (1992) for a statement of this critique.
27. Available data did not make it possible to determine whether this commission fully covered the program’s costs.
28. Stock (1994), Stock and de Veen (1995) and Gopal and Marc (1994) also stress the importance of an advance payment to SE contractors. Among the cases of social investment funds reviewed by Gopal and Marc in various countries, the advance was nowhere near the 50% of our case, tending to range between 10% and 30%.
29. Piore and Sabel (1984) is the seminal work on small-firm clusters, mainly in the United States and Western Europe. For applications to developing countries, see Schmitz and Musyck (1994).
30. Information on the Sobral case is taken from Dorado (1993) and from personal communications with her, and from interviews conducted by Amorim.
31. The quotation is from Havers and Gibson (1994). For expression of this caution by cluster researchers, see Piore and Sabel (1984) and Schmitz and Musyck (1994). In their more recent works, these researchers have become more interested in the role of government in supporting “embryonic clusters” (the term is Schmitz’s from forthcoming work). See Schmitz (1995a) and Sabel (1994a).
32. See, e.g., the critiques of agricultural extension in Moore (1984), Hulme (1992), Damiani (1993), and Tendler (1996).
33. E.g., Watson (1995) found the same dynamic operating in repair and construction of water and sewerage systems in three cities in Brazil, and Tendler found it among contractors who bid for work in a large program of squatter upgrading and sites-and-services projects in South Africa, carried out by the Independent Development Trust (interviews).
34. For the education sector in the Brazilian state of São Paulo, see Souza *et al.* (1990) and Oliveira (1993); for monitoring by village construction-watchers in a CARE program to build road structures in far flung villages in Bangladesh, see Tendler (1979).
35. Tendler and Freedheim (1994) reported even more striking effects of this kind of publicity on the morale of preventive health workers in the state.

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