

Dynamics of Small and Medium Enterprises in a Slow-Growth Economy: *The Philippines in the 1990s*

Albert Berry and Edgard Rodriguez

This paper reviews the experience of small and medium enterprises in recent years in the Philippines. It notes that, while Philippines economic growth picked up in the early 1990s, the share of its small and medium enterprises (SMEs) in manufacturing employment and value added stayed roughly constant. However, the overall stability masks some dynamism across firm sizes and sectors. Thus, very small firms (with less than 10 workers) had higher than average rates of growth of total factor productivity during 1988-94 while larger firms (of between 50 and 200 workers) experienced a decline in productivity. Towards the end of the decade, the Philippines was affected by the regional financial crisis but far less seriously than some other Asian countries. Small firms do not seem to have been worse hit than larger firms.

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The International Bank for Reconstruction
and Development/The World Bank
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

First Printing June 2001

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2001. 27 pages. Stock No. 37181

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Foreword

This paper was prepared for a project on the Role of Small & Medium Enterprises in East Asia. The project was organized by the World Bank Institute under the auspices of the Program for the Study of the Japanese Development Management Experience which is financed by the Human Resources Development Trust Fund established at the World Bank by the Government of Japan.

The principal objectives of this Program are to conduct studies on Japanese and East Asian development management experience and to disseminate the lessons of this experience to developing and transition economies. Typically, the experiences of other countries are also covered in order to ensure that these lessons are placed in the proper context. This comparative method helps identify factors that influence the effectiveness of specific institutional mechanisms, governance structures, and policy reforms in different contexts. A related and equally important objective of the Program is to promote the exchange of ideas among Japanese and non-Japanese scholars, technical experts and policy makers.

The papers commissioned for this project cover a number of important issues related to SME growth and performance in the region. These issues include: the productivity of small and medium enterprises, their adaptability to shocks and crises, their contribution to innovation and technological advance, their link to such features of the business environment as subcontracting and agglomeration, their impact on employment and equity, and their responsiveness to public policy.

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*Dynamics of Small & Medium Enterprises in a Slow-Growth Economy: the Philippines in the 1990s**

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1. Introduction

Developing countries value small and medium enterprises (SMEs) for the static and dynamic gains that these firms bring. From the static point of view, SMEs, on average, are believed to generate relatively large amounts of employment while also achieving decent levels of productivity. From the dynamic point of view, the sector is viewed as being populated by firms most of which have considerable growth potential, a contrast with micro enterprises that tend not to graduate from that size category (Leidholm and Mead 1999). Many SMEs will grow significantly without exiting that size category while others will eventually become large, that is, the “seed-bed for large firms” function of SMEs. Another aspect of the dynamics of SMEs that distinguishes them from larger enterprises is their high entry and exit rates. The process of rapid turnover raises a set of issues about possible impacts on the economic efficiency of the sector and about policies that may curtail such efficiency losses as are associated with it. Finally, it is often argued that one advantage of SMEs is their flexibility, relative at least to larger firms. This is construed by some as a plus in industries and economies that, for whatever reason, face rapidly changing market conditions, including sharp macroeconomic downturns such as those that have bedeviled most of the countries of East Asia over the last few years.

In comparison with other East Asian countries, the Philippines grew less impressively in previous decades but, on the positive side, suffered a less serious shock in the last couple of years than neighboring Indonesia, Thailand, or Malaysia. How has the Philippine SME sector responded to overall economic stagnation? What does the response tell us about the sector and its potential? What policy instruments are pertinent to this situation?

The objective of the paper is to explore recent evidence on the SME manufacturing sector in the Philippines, with emphasis on firm dynamics. The evidence indicates that the SME sector was emerging from the deep economic crisis of the 1980s and experiencing the first positive effects of the economy-wide reforms implemented in the late 1980s and early 1990s. By the mid-1990s, Philippine SMEs appeared to have recovered from a long period of decline, but their performance, by itself, does not seem to have been vigorous enough to boost the Philippine economy after the 1997–98 crisis. The crisis left almost untouched the fast growing export sector of electronics linked to FDI, which has helped buffer other negative impacts on Philippine manufacturing, while creating a new breed of SMEs. Section 2 looks at the recent response to the 1997–98 economic crisis. Section 3 takes a step back and reviews the role and growth performance of the SME sector over the last couple of decades in terms of employment and

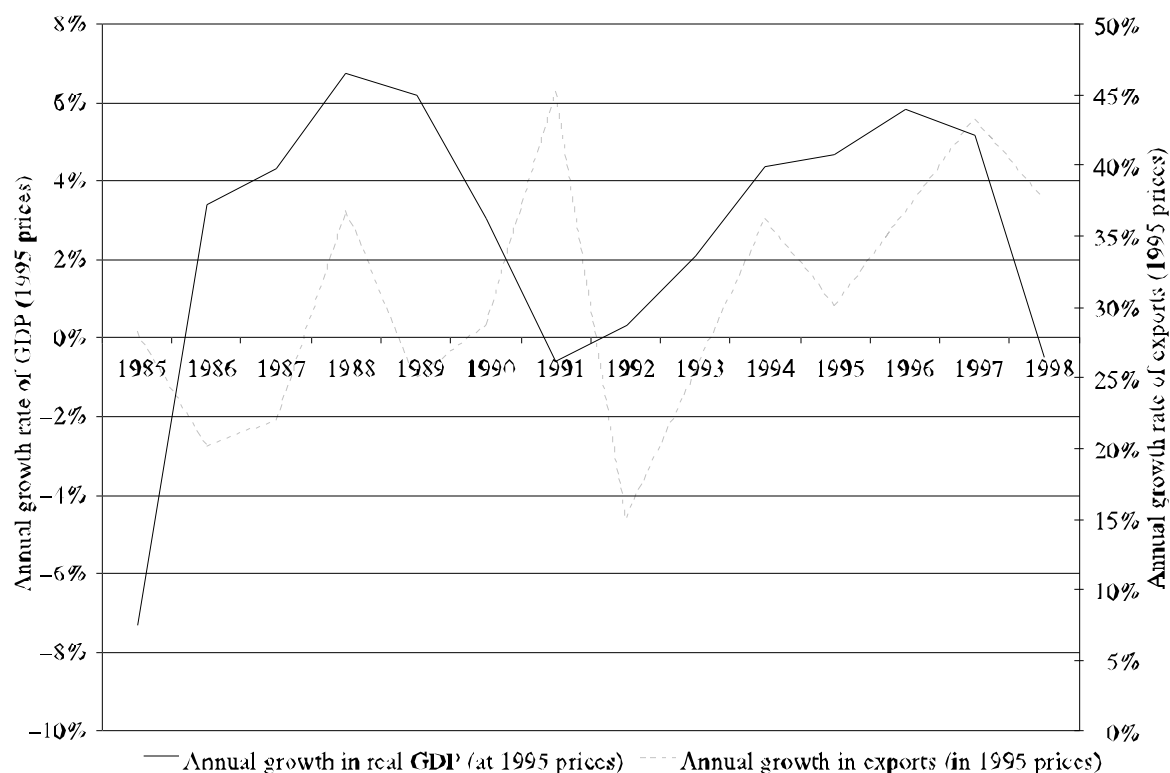
* We would like to thank the participants of the workshop, organized by the World Bank Institute, for their insightful comments.

productivity. Section 4 looks at selected dynamic factors affecting the survival of SMEs and their subcontracting activities, especially in sectors with traditional and modern exports. Section 5 concludes.

2. Response to the Crisis

Often it has been argued that an advantage of many SMEs is their flexibility, that is, their capacity to weather storms, shift from product to product, expand and contract easily. At the same time it is often argued that SMEs are the first victims of macroeconomic disturbances like the 1997–97 Asian crisis. The issue is important for several reasons: (1) A flexible SME sector, able to adjust smoothly to severe shocks is clearly a major plus as a country tries to mitigate the effects of those shocks, and to avoid large increases in poverty; (2) even if many SMEs show impressive agility in general, certain types of shocks might destroy firms with good longer run potential, raising the question of what policy instruments might help to avoid that outcome; (3) it is to be expected that any given macroeconomic crisis will affect different SMEs in different ways, and that both whether they should be allowed to fail and what policies are appropriate to support those that should, where possible, be saved will vary widely according to the industry in which they are found.

Figure 1. GDP and Export Growth, the Philippines, 1985–98



Source: International Financial Statistics (on-line IMF database.)

The regional macroeconomic crisis has touched less heavily on the Philippines than elsewhere, but the slowdown has nonetheless been marked in the economy as a whole and in manufacturing, though exports were far less affected. Figure 1 shows the Philippines' recent GDP and export growth experience, including the recoveries after the Marcos administration (1986–90) and after the early 1990s downturn. In

1996, GDP growth was at its highest (6 percent). However, it decelerated over 1997 (from 5.5 percent in the first quarter to 4.8 percent by the last quarter) and started to contract in the second quarter of 1998 and, in the last quarter of 1998, finally shrunk by 1.2 percent. Manufacturing followed a similar pattern, but with a more severe decline (-3.4 percent) in the last quarter of 1998. Most of the negative trends in manufacturing were not immediately reflected in the evolution of exports. During 1997 and the first quarter of 1998, these grew at double-digit levels. However, by the second quarter of 1998, export growth had slowed to 3.7 percent. Semiconductors and garments continue to be the two largest Philippine manufactured exports. Between 1996 and 1998, exports of semiconductors grew in every quarter, slowing down only in the third quarter of 1998 while exports of garments experienced only sporadic quarterly growth.

Table 1. Profile of Philippine Firms After the Crisis

	<i>SME</i>	<i>Large</i>
Total sample of firms	287	254
<i>Firm characteristics</i>		
Average number of employees	58	711
Share that export	35%	65%
Share that have Foreign Direct Investment (FDI)	15%	40%
<i>Response to the crisis</i>		
Short-term debt /total financing		
Before the crisis (1996)	0.31	0.31
After the crisis (1998)	0.31	0.33
Long-term debt /total financing		
Before the crisis (1996)	0.24	0.23
After the crisis (1998)	0.21	0.21
Debt-equity ratio		
Before the crisis (1996)	2.32	2.19
After the crisis (1998)	1.92	2.12
Capacity utilization		
Before the crisis (1996)	76%	79%
After the crisis (1998)	65%	72%
Share with fewer workers after the crisis (1998)	50%	50%
Optimistic for future growth after the crisis (1998)	26%	28%

Note: SME is defined as a firm with fewer than 150 workers.

Source: World Bank Survey of Philippine Industry and the Financial Crisis, cited in Lamberte and others (2000, Tables 13.1, 13.2, 13.6, 13.7 and Figure 13.1).

After the onset of the crisis, a 1998 World Bank survey of firms (Lamberte and others 2000, p.198) showed that nonexporting firms were among the hardest hit. Most firms reported that the slowdown in their production was caused by the increase in input costs because of the devaluation, by the decline in domestic and foreign demand for goods, and by the rise in interest rates. The great majority of 541 firms surveyed were in five sectors: food products, textiles, clothing, chemical and rubber products, and

electrical machinery. Most claimed to have continued access to credit, and the survey found that indeed there had been little change in the debt-equity ratio of firms after the crisis hit (see Table 1). A full description of the sample is found in Appendix Table A1). About half of the respondents were SMEs (under 150 workers in 1996) with an average of 58 workers. In this survey SMEs were less likely to have some foreign ownership than were large firms (15 percent compared with 40 percent of large firms), and they were also less likely to export than larger firms (35 percent compared with 65 percent of large firms).

The response to the crisis of exporting foreign-owned firms was better than average and that of large firms better than that of small ones. (1) The rate of capacity utilization declined more for SMEs (from 76 percent to 65 percent) between 1996 and 1998 than was the case for large firms (from 79 percent to 72 percent). (2) Just half of each group reduced their number of workers, though larger firms were a little more likely to reduce hours of work and mandate vacations. No major change in salaries occurred in either large or small firms.

3. Trends in Manufacturing SMEs in the Philippines

What about the longer run evolution of manufacturing SMEs? The Philippines has been since the 1970s the laggard among the East Asian countries. It recorded an average growth of just 3.5 percent over 1972–97, though its performance had picked up by the mid-1990s to over 5 percent per year. Population, meanwhile, was growing fast by Asian standards, at 2.4 percent per year, so that GDP per capita rose only at about 1 percent per year over this period. Employment rose somewhat faster, at 2.9 percent so that output per worker edged up at only about a 0.5 percent per year. Slow overall growth was accompanied by an even more modest performance from manufacturing; that is, 3.3 percent over that same period. With employment in the sector rising at 2.6 percent annually, the labor productivity gain was just 0.7 percent per year. As of 1996, 10 percent of total employment was found in manufacturing. In short, the record of the Philippines over the last quarter century stands in stark contrast to that of fast-growing neighbors such as Indonesia, Thailand, and Malaysia (see Table 2).

Table 2. GDP and GDP Per Capita Growth, South-East Asia, 1970–99

	1970–80		1980–90		1990–97		1997–99	
	GDP	GDP per capita	GDP	GDP per capita	GDP	GDP per capita	GDP	GDP per capita
Philippines	6.3	3.5	1.0	–1.5	3.3	1.0	2.2	–0.1
Indonesia	7.6	5.2	6.1	4.2	7.5	5.7	–3.5	–5.2
Malaysia	7.8	5.3	5.2	2.5	8.7	6.3	1.2	–1.1
Thailand	7.2	4.6	7.6	5.8	7.5	6.2	–2.3	–3.5

Note: Average GDP growth rates for 1997, 1998, and 1999 are IMF forecasts as of June 10. Average per capita GDP growth rates have been calculated on the basis of GDP growth as shown and population growth estimates for 1990 to 1997 (World Bank 1998/99, pp. 194–95).

Sources: World Bank (1998/99, pp. 210–11 and 194–95); World Bank (1982, pp. 112–13 and 142–43); Fischer (1999, Table 1).

Table 3. Size Structure of Philippine Manufacturing Employment, 1967–94

	1967	1975	1988	1994
Total employed labor in manufacturing according to the Labour Force Surveys	1388000	1651000	2238000	2582000
(a) 1–9 (residual)	871000	882000	1146578	1399131
(b) 1–9 (actual census of establishments)	125000	207000	234471	287630
(a) + (b) 1–9 (estimated total)	996000	1089000	1381049	1686761
10–99 (actual census of establishments)	86000	132000	219390	213966
100+ (actual census of establishments)	306000	430000	637561	681273

Note: The census of establishments were taken in 1967, 1975, 1988, and 1994. It is assumed that the establishments that are not captured by the census of establishments, and whose absence thus explains the shortfall between total employment recorded in those censuses and total employment reported in the labor force surveys, fall in the 1–9 size category, so the difference between the totals from the two sources is allocated to that category, and labeled here as the “residual.” In fact, some establishments of 10 workers and more are no doubt missed by the census of establishments, so the estimated total for the category 1–9 workers may be somewhat overstated and the actual figures for the other two categories (10–99 and 100+) are somewhat understated.

Source: Census of Establishment data for 1967 and 1975 are from Anderson and Khambata (1981, p. 80); those for 1988 and 1994 are unpublished data from the labor force survey; data for all years are from NSO (1995).

As in most developing countries, the Philippines moved toward more market-friendly policies in the late 1980s after the Marcos administration ended in 1986. This shift was generated at least in part by the conclusion that the import substituting industrialization (ISI) policy of the past either had never been very effective at promoting healthy growth, or was no longer so under the changing economic conditions. (For some of the effects of liberalization on Philippine SMEs, see Rodriguez and Tecson (1998)).

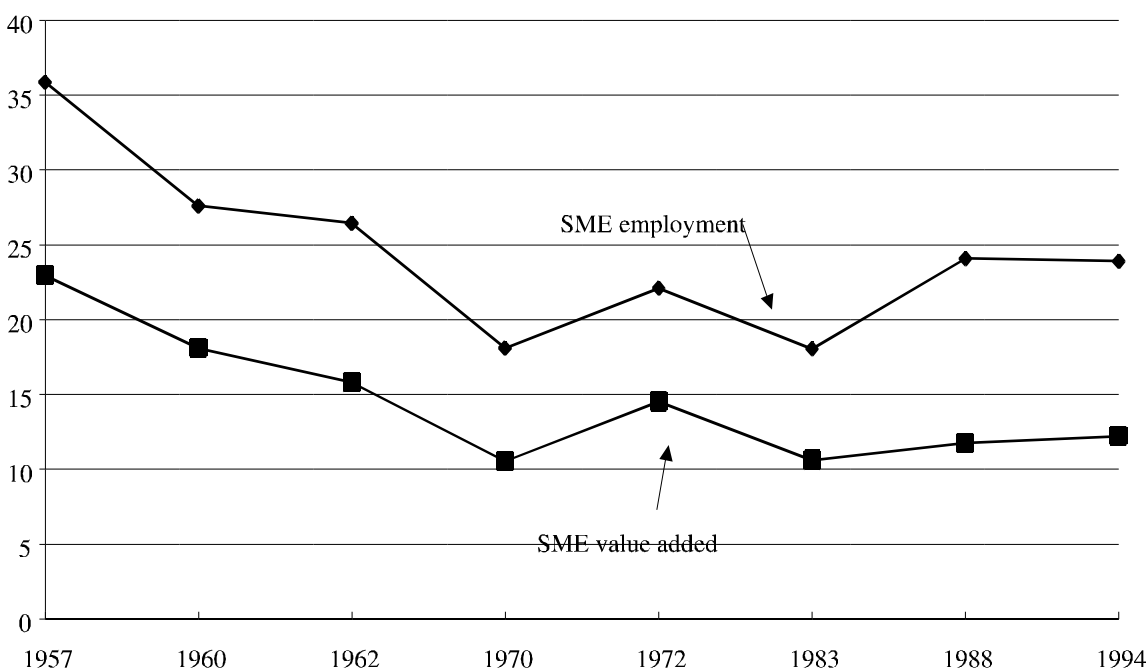
Structural Change under Stagnation

The bulk of manufacturing employment in the Philippines has always been located in the household sector, that is, establishments of fewer than 10 workers. Table 3 uses data from the censuses of establishments since 1967, together with labor force surveys to estimate actual manufacturing employment by size. Between 1967 and 1988, the employment share of establishments with more than 100 workers grew from 22 percent to over 28 percent. At the same time, the employment share of small and medium plants (10–99 workers), though it did rise, remained small when compared with other countries of the region, at just less than 10 percent in 1988.

Employment in SMEs expanded in the late 1980s and early 1990s, and so did their value added. Over the period 1957–94, Figure 2 shows the evolution of SMEs as a percentage of the reported employment in survey or census years (survey years before 1972 and census years from 1972 onward). As is evident in Table 3, such surveys capture a fairly small minority of the workers in the 1–9 worker category. Figure 2 thus describes trends in SME’s share of the mainly formal sector component of manufacturing that is picked up in these surveys. Starting at 35 percent of this recorded manufacturing employment, SME’s

share declined markedly over the first period (1957–70) to about 18 percent.¹ Over a second period, 1972–94, when the definition used was establishments with 10–99 workers, SMEs recovered in terms of employment share, reaching almost one quarter. The value-added shares showed these same patterns as relative productivity changed little.²

Figure 2. *SME Employment and Value Added in Manufacturing, The Philippines, 1957–94 (%)*



Note: From 1957 to 1970, SMEs refer to establishments with 20 to 99 workers. From 1972, SMEs refer to establishments with 10 to 99 workers. This shift of definition accounts for at least some of the increase shown over 1970–72, i.e., at least some of the increase is spurious.

Source: NSO, Annual Surveys and Census of Establishments (various years).

Over 1975–94, average labor productivity of manufacturing establishments picked up in the economic censuses (whose coverage is considerably better than that of the annual surveys) rose by 39.3 percent or 1.9 percent per year (Table 4). But the advance was far from continuous. Over 1975–88, there was a net decline of 5 percent, followed by a very sharp recovery in the next six years. All size groups showed this pattern, albeit in differing degrees. In general, size-related productivity gaps widened in the first subperiod; for example, the ratio of labor productivity in establishments of 200 workers and up to that of those with 10–49 workers rose from 2.6 to 3.3 fold. Most specifically, the 10–49 worker group whose share of employment jumped at this time lost ground productivity-wise vis-à-vis each of the other categories.³ Over the next six years, during which major reforms began to be implemented, these gaps changed much less, and the smallest category gained on the rest. Taking the whole 1975–94 period there

1. Over this period, SMEs were defined as those establishments with 20–99 workers.
2. After 1972, the reported percent of employment (and value added) for SMEs are slightly inflated because they include the additional group of firms with 10–19 workers. However, one does not observe a major splicing problem between pre- and post-1972 figures because of the relatively small significance of firms with 10–19 employees in terms of employment (and value added).
3. As far as we have been able to ascertain, this was not due to changing composition by sector or some similar phenomenon.

was a tendency for labor productivity gaps of the larger establishments vis-à-vis the 10–49 worker category to rise but the smallest one also gained on this group.

Table 4. Labor Productivity in Philippine Manufacturing, Censuses of Establishments Data, 1975–94 (Value Added per Worker)

Size of establishment	1975	1988	1994	1975	1988	1994
	In 1990 thousands of pesos			As percent of firms with 10–49 workers		
1–9 workers	28.91	21.20	28.06	28.9	29.8	27.2
10–49 workers	100.00	71.19	103.25	100.0	100.0	100.0
50–99 workers	169.53	132.21	195.10	169.5	185.7	189.0
100–199 workers	203.91	172.90	294.87	203.9	242.9	285.6
200+ workers	254.69	234.06	340.96	254.7	328.8	330.2
TOTAL	162.50	154.08	226.48	162.5	216.5	219.4

Note: Absolute values for labor productivity are expressed in constant 1990 pesos based on deflation in the wholesale price index whose values in these three years were 12.8 (1975), 82.0 (1988), and 126.9 (1994). In 1990, 1US\$ = 24 pesos.

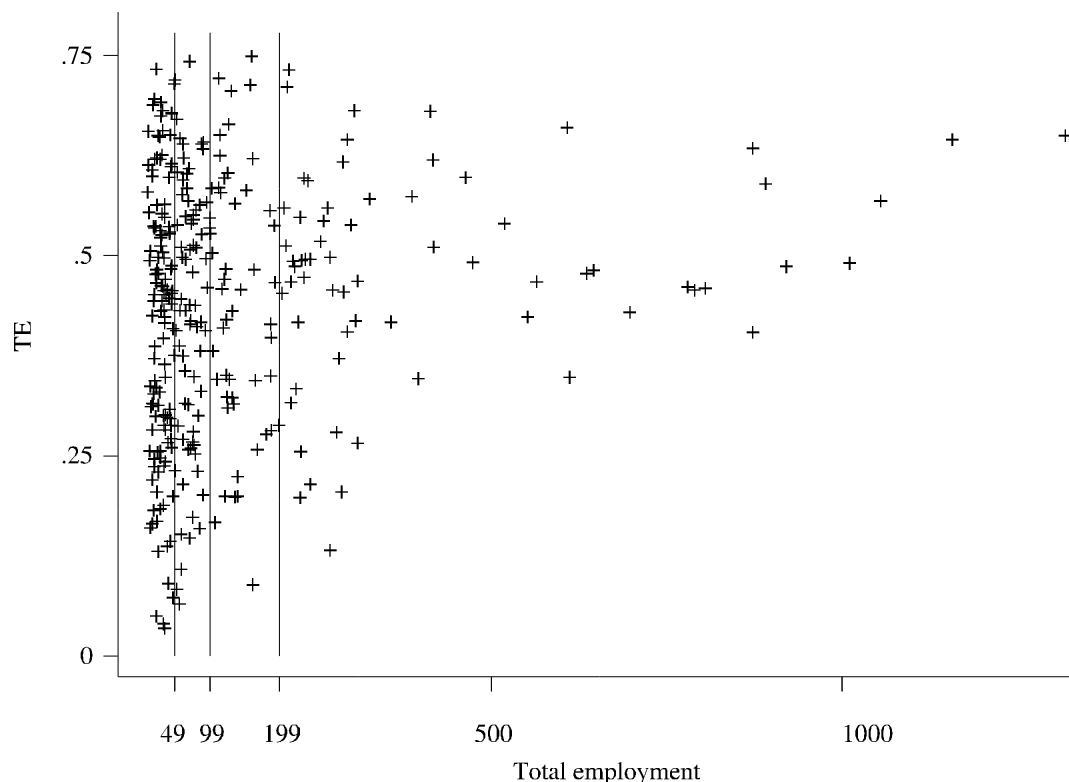
Sources: 1975 census tabulations from Bruch and Hiemenz (1983, Table 3-3); 1988 and 1994, special unpublished tabulations from the National Statistics Office.

Given the very choppy record of productivity change it may be hazardous to draw much from this two-decade experience (1975–94), and it will be important to see how productivity has fared since 1994 in the SME category. For instance, the slow labor productivity growth in the 10–49 category (only 3.3 percent in total over 19 years) and the 50–99 category (15.1 percent) needs to be probed. Establishments of 100 workers and up had good productivity growth of 1.9 percent per year (for those 100–199) and 1.6 percent (those of 200 and up). In contrast, the recorded growth for the group 1–9 workers was nil over the period, though this figure is the least reliable.

Labor productivity at the firm level rises over time owing to investment and to technological change. At the level of the industry or of manufacturing as a whole it also usually rises through reallocation of resources toward firms with higher labor productivity. On the other hand, total factor productivity (TFP) rises primarily as a result of technological change in the industry. The last two censuses of establishments provide a glimpse of these two measures of productivity (labor productivity and TFP) by 2-digit manufacturing sector and size (for detailed descriptive statistics by size category, see Appendix Table A2.). Over the intercensal period (1988–94), one tends to observe more the effects of rising capital-labor ratios—which increased on average at 10 percent per annum in real terms—and perhaps of resource reallocation than that of technological change *per se*.

Note first the solid growth in labor productivity among all size categories (over 6 percent per year), though with large variance across sectors (see Table 5a). However, TFP between 1988 and 1994 showed very slow growth at an annual average rate of just 0.1 percent. Very small firms (those with fewer than 10 workers) show large increases in TFP, but lower quality data for this group again leaves this figure suspect. Across the other size categories, TFP grew the most among SMEs, that is, by 1.2 percent among those with 10–49 workers. However, the overall growth in TFP industry-wide was dominated by growth in larger firms (those with 200 or more workers), which produce almost two-thirds of all the manufacturing output recorded in these sources. Across sectors, estimated TFP growth varied significantly, probably owing in part to difficulties of measurement (see Table 5b).

Figure 3. *Estimated Establishment-Specific Technical Efficiency Indicators, Textiles (Philippines SIC 321), The Philippines, 1994*



Source: Mini and Rodriguez (1999, Figure 3).

Mini and Rodriguez (2000) use the 1994 census of manufacturing establishments to investigate the relationship between size and technical efficiency in the textile sector. They find that efficiency, measured by using the stochastic production frontier approach, is on average a little higher in large (100–199 workers) and very large (200 workers and up) establishments than in small and medium ones. The average gap was 4 percent and 9 percent, respectively. As always, these relatives could hide fairly serious biases of measurement.⁴ In an attempt to understand the source of the efficiency differences, the authors regressed

4. There are to our knowledge no good estimates of TFP by size for Philippine manufacturing as a whole. Often average labor quality is higher in larger establishments because a higher share of workers are more skilled and because larger firms tend to pay better and can therefore induce better workers to join them. These two factors bias the measurements against smaller firms, when no adjustment for labor quality is made. The same direction of bias exists when larger firms tend to have greater monopoly power—this being reflected in the product prices they can charge (and sometimes in the input prices they pay)—while smaller firms tend to operate in more competitive markets. Of less predictable direction is the bias related to failure to adjust capital stock for inflation. This study measures average (between beginning and end of year) book value unadjusted for inflation; inflation averaged 15 percent in the 1980s and about 9 percent over 1990–97). Only with sensitivity analysis can it be ascertained whether these sorts of biases are likely to affect the results greatly or not. The estimates reported by the authors include an adjustment to capital for capacity utilization. Since utilization was higher for larger firms, the adjustment means a greater proportional scaling down of the estimate of capital for smaller firms that could have biased the results in their favor. However, the authors also undertook technical efficiency calculations with capital unadjusted for capacity utilization, and the results were not significantly sensitive to this methodological difference. One problem with the capacity utilization indicator is that the question is not totally precise and may have invited different interpretations across respondents. This study did not address the related and interesting issue of relative economic efficiency (it was assumed that firms were all allocatively efficient). One of the frequent arguments is that smaller firms face input prices that are closer to the social opportunity costs of those factors, and may thus be more efficient (when both outputs and inputs are measured at social prices) than larger firms even if their technical efficiency is less.

technical efficiency on a series of variables, of which direct and indirect (via subcontracting) exporting activity are most strongly (positively) correlated with technical efficiency. These variables account for about half of the 9 percent efficiency gap between the very large establishments and the SMEs, leaving just 5 percent unexplained.

Table 5a. *Average Annual Percentage Growth of Labor Productivity in Philippine Manufacturing, by Branch, 1988–94*

	<i>Total</i>	<i>1–9</i>	<i>10–49</i>	<i>50–99</i>	<i>100–199</i>	<i>200+</i>
31 Food	4.6	6.1	7.8	1.8	15.9	4.5
32 Textiles and apparel	6.8	2.6	10.1	17.7	4.6	6.4
33 Wood and furniture	2.1	1.1	8.7	4.5	4.0	5.3
34 Paper	3.0	–4.1	7.0	9.0	3.8	1.7
35 Chemicals	6.8	14.8	–5.4	3.4	4.0	8.7
36 Nonmetallic mineral products	6.2	16.3	12.4	2.4	10.7	5.4
37 Iron and steel	0.9	21.7	2.6	10.4	–1.7	1.9
38 Machinery and transport	8.1	1.3	8.5	4.6	11.2	6.4
39 Other	6.9	0.9	11.1	4.9	–1.6	8.6
Total	6.4	4.8	6.4	6.7	9.3	6.5

Table 5b. *Average Annual Percentage Growth of Total Factor Productivity in Philippine Manufacturing, by Branch, 1988–94*

	<i>Total</i>	<i>1–9</i>	<i>10–49</i>	<i>50–99</i>	<i>100–199</i>	<i>200+</i>
31 Food	–0.8	3.9	1.2	–1.9	–1.5	–1.0
32 Textiles and apparel	1.4	2.4	1.1	0.7	–1.1	1.6
33 Wood and furniture	–0.2	2.9	2.3	0.9	–1.1	–0.8
34 Paper	–0.2	4.2	1.9	–0.5	–0.7	–1.2
35 Chemicals	0.2	–2.4	0.4	–0.4	–0.2	0.4
36 Nonmetallic mineral products	–1.7	6.1	3.1	2.0	1.0	–2.6
37 Iron and steel	2.1	7.4	–1.4	–1.4	–1.4	2.2
38 Machinery and transport	0.4	2.2	1.3	–0.2	–0.2	0.2
39 Other	–0.3	0.6	1.8	–1.1	0.9	–1.7
Total	0.1	3.9	1.2	–0.4	–1.1	0.1

Note: Output (i.e., value added) figures used for the calculations of Table 5a are in 1990 pesos. The TFP calculations of Table 5b are based on nominal value added, total employment, and 10 percent of the nominal book value of assets. This implies that estimated changes between 1988 and 1994 could reflect relative price changes between product and capital. When both of these variables were expressed in 1990 pesos, the TFP trends were less positive (more negative). We suspect that the deflators for assets involved considerable noise.

Sources: Our own calculations based on data from the 1988 and 1994 Censuses of Establishments.

As revealed in Figure 3, the variance of technical efficiency is considerably greater for the smaller than for the larger establishments. This standard (or at the least frequent) result⁵ no doubt reflects in part the fact that the technical efficiency of larger establishments is a sort of average of that of the various divisions of which they are composed. It also reflects the fact that smaller firms are on average younger and more of them are in the “trial phase,” which will determine whether they survive or not. Assuming

5. See, for example, Cortes, Berry, and Ishaq (1987).

that survival does bear some relationship to technical (and economic) efficiency,⁶ part of the lower tail of the distribution of smaller establishments consists of those that will not and in some (perhaps most) cases should not survive. If this group were removed from the distribution, the relationship between size and average efficiency would be impossible to predict, because many smaller firms achieve as high levels of efficiency as do the larger ones on average.

Firm Dynamics in the Philippines

Data on the life-cycle of firms in the Philippines are scarce. An early study by Fajardo (1979, cited in Tecson, Valcarcel, and Nuñez 1990, p. 372–375) gives a glimpse of the dynamics of SMEs in the 1970s. This early study defined SMEs as firms with 5 to 199 workers. In the decade leading to 1977, the number of SMEs grew faster than that of large firms (64 percent compared to 59 percent). In contrast, growth in the number of large firms (91 percent) had outpaced that of SMEs (91 percent compared to 34 percent) in the previous decade (1957–67). To get a richer understanding of the life pattern of SMEs, Fajardo took a sample of 501 establishments in the National Statistics Office listings for 1972, 1975, and 1977. The exercise revealed that (1) 2 percent of the firms operating in 1972 disappeared in the 1975 listing and reappeared in 1977 because of temporary closures; (2) the median age of her sample of SMEs was seven years, but the most common age was just two years, which shows the relatively short life of most SMEs⁷; and (3) part of the study monitored a subset of 101 firms from 1972 to 1977 and found that 85 percent of firms “survived,” that is, were still operating in 1977.

Table 6a. *1990–95 Survival Rates of Establishments That Started Operations in 1990, By Establishment Size (Percentages)*

	Number of establishments	1990	1991	1992	1993	1994	1995
1–9	4892	100	85	67	61	51	48
10–99	385	100	80	51	38	28	19
100–199	30	100	65	60	43	33	23
200+	23	100	83	74	65	57	35
TOTAL	5330	100	85	65	60	49	46

Source: Listings of Establishments, Industry and Trade Statistics, National Statistics Office, unpublished.

On the basis of the NSO survey listings, we have obtained what seems to be the only recent evidence on survival rates of Philippine manufacturing establishments. For establishments that were founded in 1990, the unadjusted data show that less than half had survived until 1995 (Table 6). More surprisingly, the reported survival rate is higher for establishments that were small when founded (one to nine workers) than for larger ones. This rate is probably overestimated as a result of incomplete coverage of these small establishments in each year, with the result that some which have in fact disappeared remain on the books for a period after that event. We are not aware of any reason to presume that the data misstate survival of the larger firms, which makes their high mortality rate surprising. Less than a fifth of those starting with 50–99 workers (41 establishments) or with 100 or more workers (40 establishments) reached the fifth year. Given the difficult economic conditions and

6. Among the few studies reporting on this point is Liu and Tybout (1996).

7. 48 percent of all firms were one to five years old; 26 percent were 6–10 years old; while the rest were in operation for over 10 years (Fajardo, as cited by Tecson, Valcarcel, and Nuñez 1990).

the rapidly changing policies around the time of their founding (1990), we would expect that the mortality rates would be higher than for other periods. These results may also indicate, however, that early-year death rates are higher than commonly believed for medium and large firms. The nature of the data on their survival may often tend to mask these rates because the data tend to lump together new and existing medium and large firms, with the latter being the great majority.

Table 6b. 1990–95 Survival Rates of Establishments That Started Operations in 1990, By 2-Digit Industry (Percentages)

	1990	1991	1992	1993	1994	1995
All manufacturing establishments	100	85	65	59	49	46
31 Food	100	87	73	69	59	58
32 Textiles and apparel	100	83	57	49	39	35
33 Wood and furniture	100	81	59	54	41	36
34 Paper	100	84	62	49	38	29
35 Chemicals	100	73	43	41	32	17
36 Nonmetallic	100	84	65	60	49	45
37 Iron and steel	100	100	67	44	22	22
38 Machinery and transport	100	88	65	59	50	45
39 Other	100	77	44	35	23	21

Source: Listings of Establishments, Industry and Trade Statistics, National Statistics Office, unpublished.

Survival by manufacturing sector (or 2-digit 1977 Philippine Standard Industrial Classification (PSIC)) shows that overall the survival profile was broadly similar across industries. However, chemicals (PSIC 35) and iron and steel (PSIC 37) had very few observations and, hence, very unreliable survival profiles. Moreover, these sectors experienced large drops in the protection rate previously enjoyed during the ISI regime during the 1990s. On average, 85 percent of firms in all sectors survived their first year, but only 65 percent survived the second year. Survival rates of around 80 percent are not uncommon in the first years after foundation of the firm. Liu and Tybout (1996) report survival rates of 79 and 73 percent for large Colombian and Chilean firms after the first year, respectively, while Audretsch (1991) reports survival rates of 77 for new German firms after the first two years in operation. According to Table 6a, half of the newly founded firms survived (i.e., half of them had failed) after six years in business.

4. Subcontracting, Foreign Direct Investment, and Exporting Among Philippine SMEs

Large enterprises in developing countries achieve productivity increases to a considerable extent simply by borrowing from the shelf of technologies available in the world. For SMEs as a group it is not so evident that processes such as foreign direct investment, technology licensing, joint ventures, and access to engineering and other advances will provide the gains needed. Yet SMEs need fairly continuous productivity increase if they are to maintain or increase their contribution to overall development as capital becomes less scarce and the range of technologies available expands in the world.

Raising productivity by technological upgrading (in the broadest sense, to include not just better machinery but also improvements in workplace organization, inventory handling, product design, etc.) is achieved through a variety of mechanisms. It is accepted that most SMEs will be less able to handle this process successfully on their own than will larger ones. Accordingly, much attention has been given to the

possible roles of subcontracting and clustering as arrangements that make such advances more easily accessible to SMEs, and to collective support systems, including those of the public sector and of private associations. The Japanese experience is viewed as the paradigm for the importance of subcontracting in creating the conditions for a major SME role in a strong and internationally competitive manufacturing sector. Italy's export-oriented clusters have become a model for the role of clusters in competitive export activities. These two phenomena (subcontracting and clustering) are of course not limited to export settings, though they may have their most impressive manifestations there. As was noted, Mini and Rodriguez (1999) found technical efficiency in the Philippine textile industry to be positively related to exporting and to subcontracting. One wonders whether this link is more general.

Subcontracting appears to be low in the Philippines in comparison with other Asian economies. Closer observation does make it clear that there is a considerable amount of it, including that engaged in by household units. Still, it has been less prevalent than in countries like Taiwan and (recently) Korea. According to one common view, this is to be expected where high levels of protection reduce incentives for cost reduction and have negative impacts on the demand for the output of smaller firms and on their learning opportunities (Hill 1985). Measured as the percentage of work carried out for others, the 1994 census indicated that only 1.7 percent of manufacturing output was subcontracted (Table 7). Across firm size, the percentage is the highest for small firms with 10–49 workers (8.5 percent). Moreover, small firms in textiles and apparel as well as in machinery and transport undertake a large percentage of their output for other firms (31 percent and 11 percent, respectively).

Table 7. *Subcontracting by Establishment Size, the Philippines, 1994*
(output produced for other firms as a percentage of total gross output)

	<i>Total</i>	<i>1–9</i>	<i>10–49</i>	<i>50–99</i>	<i>100–199</i>	<i>200+</i>
31 Food	0.3	0.3	2.0	1.6	0.3	0.1
32 Textiles and apparel	8.5	2.5	31.0	3.8	8.4	5.7
33 Wood and furniture	0.5	0.4	2.0	0.4	0.0	0.1
34 Paper	6.5	0.1	6.6	1.3	3.5	8.3
35 Chemicals	0.5	4.6	1.6	0.7	0.4	0.4
36 Nonmetallic	0.2	1.3	1.2	4.1	0.0	0.0
37 Iron and steel	4.5	0.1	1.1	0.1	0.4	6.3
38 Machinery and transport	1.2	2.6	11.3	5.1	3.0	0.4
39 Other	2.6	2.3	2.9	1.7	5.5	2.2
Total	1.7	1.0	8.5	2.1	1.4	1.2

Source: 1994 Census of Establishments, special tabulation.

Sector-wise, a number of export-oriented industries exhibit a higher than average share of subcontracting. Industries with a high reliance on components allow more room for subcontracting activity. Where such orientation is present, exporting tends to enhance the possibility for subcontracting, which brings cost advantages and flexibility that are often crucial to success in highly competitive export markets. A good example is electrical and nonelectrical machinery (PSIC 38 Machinery and Transport) with high export orientation and a higher-than-average degree of subcontracting activity for SMEs (small firms produced 11 percent of output for other firms, see Table 7). Apparel also fits this mold. In general, subcontracting can be a promising route for SMEs to obtain access to export markets, provided the sector has high export orientation and can use components.⁸ They are assured of (derived) demand from the assembly firms who undertake the

8. Regardless of their export potential, some industries—such as textiles or nonferrous metals—will simply have low subcontracting because there are few possibilities for components and subassembly operations in these industries.

exporting of the final products. Hence, they do not have to worry about the information bottleneck they would face in trying to export directly. It also offers the possibility for technology transfer and quality control, as well as the discipline associated with exporting (e.g., compliance with delivery dates). Above all, subcontracting favors the creation of backward linkages that lead to the deepening of the industrial structure by fostering domestic production of capital goods and intermediate inputs.

Exports are concentrated among the largest firms, but as of 1994 all size categories registered an export to value of output ratio of 18–19 percent except those with 10–49 workers at 11.6 percent⁹ (Table 8). Across sectors there are major variations in this pattern. In many industries, medium establishments export a higher share than larger or smaller ones (e.g., food, textiles, apparel, wood and furniture, and nonmetallic mineral products). On the other hand, large firms in machinery and transport export much more of their output (almost half) than do smaller ones. In all industries larger firms do most of the exporting because of their weight in total output. This is especially true for “machinery and transport,” of which the major exporting subsector is electronic equipment (large firms with more than 200 workers exported almost 96 percent of the total from this sector). But it is less so for wood and furniture manufacturers (one-fifth of all exports in this sector are done by firms with 10–49 workers).

Table 8. Exports by Establishment Size and by Branch of Manufacturing, 1994

	<i>As percent of total gross output in size category</i>					<i>As percent of exports from the branch</i>				
	<i>Total</i>	<i>10–4</i>	<i>50–9</i>	<i>100–1</i>	<i>200+</i>	<i>Total</i>	<i>10–4</i>	<i>50–9</i>	<i>100–1</i>	<i>200+</i>
		<i>9</i>	<i>9</i>	<i>99</i>			<i>9</i>	<i>9</i>	<i>99</i>	
31 Food	10.3	6.7	17.6	22.3	7.8	100.0	3.5	8.1	36.5	51.9
32 Textiles and apparel	39.1	17.9	44.9	38.9	44.7	100.0	5.2	12.8	10.4	71.5
33 Wood and furniture	28.7	36.6	54.8	45.2	42.7	100.0	20.5	13.9	16.2	49.4
34 Paper	5.5	1.4	11.1	12.6	4.2	100.0	3.3	21.8	28.7	46.2
35 Chemicals	5.3	7.6	5.8	9.9	4.6	100.0	5.2	4.8	18.5	71.5
36 Nonmetallic	8.2	11.2	18.3	21.8	6.6	100.0	5.9	7.6	22.2	64.3
37 Iron and steel	4.4	5.4	5.2	5.0	4.0	100.0	3.8	10.9	21.7	63.7
38 Machinery and transport	37.8	8.6	10.9	12.5	42.7	100.0	0.9	1.1	2.0	96.0
39 Other	52.4	44.8	33.9	68.6	57.2	100.0	9.5	6.3	16.8	67.4
Total	17.4	11.6	18.6	18.7	18.2	100.0	3.7	5.9	12.7	77.8

Source: 1994 Census of Establishments, special tabulation.

The considerable subcontracting reported for small firms of, say, 5–50 workers in certain industries extends also to the household level. As of the early 1980s international subcontracting was practiced in car parts, textiles, leather and leather parts, toys, handicrafts, food processing, musical instruments, paper/packing products, plastic and rubber products, and metal fabrication (Ofreneo 1983, p. 37). In many of these industries, but especially in wooden furniture/wooden products and in apparel, household subcontractors have also been active (Csorgo 1994, p. 23). Csorgo’s analysis of why contractors opt to work with these very small units—the average number of workers per unit was 2.4, of whom 0.7 were

9. In 1994 a census of establishments for the first time asked a question on exports. However, the same question was not posed to micro-enterprises.

hired nonhousehold members, and 86 percent carried out their production activities in the house—highlights cost advantages on wages and production space. On the former her estimated 10–15 percent differential is rather smaller than the Filipino literature on this issue would have suggested and constitutes an overall cost reduction of just 7 percent. Cost savings on production space could reach as much as 11 percent of total costs, and these two together with other sources of cost reduction could provide an up to 25 percent advantage vis-à-vis in-house production by the contractor. In addition, contractors use this system to deal with demand fluctuations. For their part, these family subcontractors' reasons for engaging in such arrangements include most prominently easier marketing: 42.2 percent list this as the main advantage vis-à-vis other selling arrangements, while 28.2 percent cite a better price and 13.3 percent the predictability of demand. Immobility related to child care, other household duties, or savings on transportation and time was another factor; and 56.6 percent said they would find it difficult or impossible to work away from home, and, surprisingly this was more true of men than women, probably because a higher share of mobile men than women already work outside. Presence of children contributes to such immobility mainly in situations where there is no unemployed adult household member. Apart from higher current income, the main motivating factor for involvement, subcontractors do benefit from some training, a modest amount of financial help and other benefits.

Philippine Export Clusters: Traditional- Versus Foreign-Dominated Clusters

Philippine manufacturing can be characterized as having two very different types of exporting clusters. On the one hand, one observes producers who export traditional manufactured goods such as footwear and furniture (PSIC 324 and 332, respectively). On the other, much of the recent FDI in the Philippines has created a group of active exporters in less traditional, more high-end products such as semiconductors and other computer-related equipment (all contained in PSIC 38). Many of the more traditional exports are produced by SMEs, while most of the more technologically advanced exports are produced by larger firms, with SMEs playing a very secondary role.

“TRADITIONAL” SMEs: FOOTWEAR AND FURNITURE MAKERS. The largest foreign exchange earners among the more traditional industries are footwear and furniture, but their exports are quite small when compared with those of such high-technology categories as machinery and electronic manufactures, that amounted to \$8.1 billion, more than half of all manufactured exports in 1994. Although both industries (footwear and furniture) have a long presence in the Philippines and in international markets, they remain Filipino owned and quite fragmented into many small firms in or around Metro Manila.

Furniture is the largest single traditional manufacturing sector with more than \$300 million in exports in 1997. About 15,000 firms employ half a million direct workers (that is, firms have on average 33 workers). The same firms also employ 300,000 indirect workers. The Philippines has carved a niche in the international market for furniture; some consider it the “Milan of Asia” in allusion to the fine wood work in this Italian city (UPISSI, 1998). According to the same study, a wide variety of available materials and the presence of native artisans with craftsmanship have combined to give the industry a foothold in international markets of rattan, wood, bamboo, and metal furniture.

Footwear is the second largest traditional manufactured export from the Philippines. According to the study by UPISSI (1998), most of the 3,000 firms in the business have been handed down from generation to generation. They employ about 60,000 workers (that is, an average of 20 workers per firm). In 1996, they exported leather and nonleather shoes, slippers, and sandals worth \$170 million. The study also finds that these entrepreneurs realize that they have to modernize their equipment to face competition in the international markets. Despite the sector's relatively good export record, the industry depends heavily on imported raw materials, especially leather and other accessories. At the same time it is hopeful that the government will lower tariffs on imported inputs and give new incentives to export. Moreover, footwear

entrepreneurs hope that the lower tariffs on shoes (the final products) in other World Trade Organization (WTO) countries will boost their future exports.

“MODERN” SMEs: ELECTRONICS AND CAR PARTS. The recent re-emergence of FDI in the Philippines has created a new generation of SMEs in modern industries such as automobile parts and electronics. These sectors had been chosen in the 1970s for the encouragement of supporting industries through a local content requirement policy (see Tecson (1999a) for a detailed discussion of the success of the policy). Their growth has generated the simultaneous development of supplier industries. The economic downturn of 1998 was less sharp in this modern manufacturing sector than elsewhere, mainly due to the role of exports.

SMEs IN ELECTRONICS. Electronics consists of four subsectors: consumer electronics, telecommunications equipment, computers, and computer components (including semiconductors). Each subsector is linked to a particular period in Philippine manufacturing’s recent history. The electronics industry was born in the 1950s out of the service and repair of imported electronic products. In the 1960s production of consumer electronics equipment came with the entry of investment by multinationals, attracted by the size of the potential domestic market. In the 1970s the industry received a boost from the entry of producers from the United States, Japan, and Europe in search of low-cost labor for the assembly stage to maintain competitive advantage in export markets. This wave included the largest semiconductor manufacturing firms such as Intel, Motorola, Texas Instruments, Philip, Sanyo, and Fuji. FDI in the late 1980s and 1990s flowed into telecommunications equipment and the computer peripheral sector. The major Japanese multinationals such as Hitachi, Fujitsu, Toshiba, and NEC have recently entered the Philippines to assemble hard disk drives (Tecson 1999b).

According to census data, SMEs dominate the assembly industry in electronics while large firms dominate the production of parts; this is the inverse of what one finds in the automotive industry where parts, not assembly, is dominated by SMEs. The number of firms in electronics assembly increased from 119 in 1983 to 163 in 1988 and 198 by the last manufacturing census of 1994. On average, an electronic assembly firm employed 177 in 1983, 132 in 1988, and 274 in 1994. Note that firms producing electronic parts were fewer than 75 over this period, and employed on average more than 600 workers each (Tecson 1999b, Tables 12a and 12b).

The production of hard disk drives in the Philippines is essentially explained by Japanese FDI, and it is a very recent example of how FDI supports the development of a foreign-owned transplant of SMEs. In the late 1980s the political environment for FDI in the Philippines was far from being auspicious with the People Revolution in full swing, and Japanese firms stayed away. In the 1990s the largest hard disk drive producers in Japan moved into the Philippines, together with their network of Japanese suppliers. Moreover, they made the Philippines the only center for hard disk drive assembly. The motivations of assemblers to relocate include the strategic location of the country and the relative abundance of labor and worker trainability. The motivations of the suppliers to relocate were “to be near the majors” (Tecson 1999b). Tecson’s study of the motivations to move to the Philippines include imitative behavior, industry-specific supply infrastructure, agglomeration, and supportive public policy.

1. Imitative behavior involves a demonstration effect. Hitachi was the first assembler to open a plant, after having tested the waters in the Philippines with a subcontracting arrangement with Philippine firms. Other large assemblers such as Toshiba followed. The move of the major assemblers also incited the move of component suppliers.
2. The presence of industry-specific supply infrastructure influenced the decision to move to the Philippines. There is a considerable history (dating back to the late 1980s) of hard disk drive assembly subcontracting by Japanese assemblers. These examples include NEC Hong Kong’s subcontracting of their own-designed and IBM-licensed hard disk drives with Tsukiden (Philippines) and more recently with Laguna Electronics. Also, Hitachi previously had subcontracting arrangements with two Filipino-owned firms (IMI and ICI). The existing, though limited, local supply base attracted more investment

into the industry. The development of an indigenous supplier base has been slow and may be hampered by the growing concentration of Japanese supplier firms in the country.

3. Agglomeration economies appear limited although the clustering of assemblers and suppliers in the Laguna–Cavite economic zones south of Manila offers future opportunities. Current interaction takes place mainly between assemblers and supplier firms as well as among supplier firms and is limited to ensuring that product specifications are met. Signs of cooperation among Japanese assembly firms are still weak.
4. Despite the absence of specific incentives, electronics in general is the export star in the Philippines and has benefited from the more open trade regime of the 1990s. The industry (mainly export oriented) must have benefited from the local content policy in the 1980s that helped to encourage growth in industries of tool and die-cast or metal and plastic injection. Trade reforms in the 1990s have reduced the bias against exports by liberalizing foreign equity ownership, introduced changes to the Investment Incentives Law to provide incentives similar to those in other ASEAN countries, and created privately owned economic zones that have eliminated previous infrastructure or bureaucratic bottlenecks.

SMES IN CAR PARTS PRODUCTION. Production of car parts in the Philippines, an outgrowth of legislation on local content and of foreign investment in the car industry, has over time gained importance. The protective system once in place has been shrunk, leaving behind a large SME sector with Filipino and foreign capital, able to produce locally and to export.

Although the local content policy in the Philippines has become more open over time, it appears to have left enough opportunity for local car parts production to be profitable. Before 1970, parts-producing industries were quite limited by the fact that components were almost entirely imported in CKD form. Under very high protection, the car industry shifted from importing completely built-up vehicles in the 1950s to the assembly of imported completely knocked-down parts. In the early 1970s, severe pressure on the balance of payments prompted the government to foster horizontal integration by using policy to gradually raise domestic content. The Progressive Car Manufacturing Program had five major foreign participants (Toyota, Chrysler Philippines, Mitsubishi, GM-Isuzu, Volkswagen, and Ford Philippines), which created a population of domestic car parts manufacturers. Car assemblers put up their own parts manufacturing plants to ensure fulfillment of requirements, and some technology transfer is said to have been realized as a result in areas such as gear cutting, forging, die-casting (aluminum), and heat treatment (Tecson 1999a). The economic downturn of 1983–85 depressed the domestic demand for cars in the country, and led to a near-collapse of the industry. With the advent of the Aquino administration in 1986, the car and parts industries began to recover. The local-content program was slightly modified into the Car Development Program (CDP) with three Filipino–Japanese joint ventures as participants (Pamcor-Mitsubishi, Pilipinas Nissan, and Toyota Motors). Imports of domestically produced cars (those with engines below 2800 cu) were banned, and minimum local-content rules were increased annually. Moreover, the program had a built-in incentive to export because participants gained their foreign exchange for their CKD imports through their own export revenues.

In the 1990s, further modifications to the CDP came into effect with emphasis on the production of parts and exports. In 1990, a People’s car program was announced to assemble small cars, and seven companies joined this program to produce Fiat, Honda, Daihatsu, Nissan, Colt, Kia, and Norkis Gurkel. Volvo and Mercedes Benz came on board in 1992. In 1994, Proton (Malaysia) and Autocorp (Philippines) started to produce the Proton-Wira, Alfa Romeo, and Audi cars when CDP changed under the ASEAN industrial joint venture. In 1996, new legislation allowed the entry of new participants and lifted the restrictions on the number of models and variants in any of the existing categories. In most categories the CDP participants were no longer compelled to meet a local content requirement that exceeded 40 percent to remain in the program. By the year 2000, to comply with the WTO commitments, all foreign exchange and local content requirements under the program were to disappear (Tecson 1999a).

The evolution of the car parts industry is evident from the census data. Data show that these firms were mainly SMEs. At the start of the program in the early 1970s there were about 40–60 firms. In 1988, 72 car parts manufacturers had survived the changes of the early 1980s, and they employed an average of 41 workers per establishment. In 1994, the number of firms increased to 79 with an increased average work force of 99 workers per establishment (Tecson 1999a, Tables 8a and 8b).

Car parts and accessories exports appeared in trade statistics after 1980, and they show a much faster growth in the 1990s than the exports of final cars (Tecson 1999a). Between 1990 and 1996 exports of vehicles increased three-fold, while exports of parts and accessories rose more than ten-fold during the same period. Only after 1996 did exports of parts and accessories exceed imports while exports of vehicles were still far outstripped by imports in the same category.

Exports of Electronics and Car Parts: Resilient to the Crisis

The crisis may have reduced domestic sales, but the domestic market in electronics and car parts remains tiny when compared with export markets, reflecting both the weak deepening of the high-technology industries in terms of backward linkages within the Philippine manufacturing sector and the small domestic consumer market. Such a weak deepening characterizes economies with the sort of slow-growth record achieved by the Philippines.

But the export market has remained buoyant. After 1995, electronics (included under machinery and transport equipment) have continued to dominate the export recovery experienced in the Philippines. The sector exported almost double its 1995 levels by the end of 1998 while all other sectors reported export values similar to those of 1995. Only a small part of this growth can be attributed to SMEs owned by foreign investors in joint ventures such as those described earlier. The crisis appears to have had little effect on domestic market-oriented production of electronics (and to a less extent car parts) because of the lack of linkages with the rest of the economy. Domestic production for the electronics industry is limited to indirect inputs such as carton packaging and some minor chemicals. Probably the same is true of parts headed for the country's third top export from the industry, that is, input-output-peripheral units. The bulk of the domestic parts production in the sector is destined to the electronic appliance industry that did show a sluggish trend during the crisis. Production of car parts for the domestic market cannot be singled out in the figures. It is likely that the economic downturn affected the domestic car market negatively (for a discussion, see Tecson (1999a)). However, two other markets fared better. On the export side, the United States in particular was not affected by the Asian crisis. The domestic and export markets for replacement parts were probably also buoyant. Postponing purchases of new cars increases the demand for replacement parts domestically as well as overseas.

The figures of Table 5b, discussed earlier, indicate that even during 1988–94, a period of declining growth followed by recovery and a modest average GDP growth of 2.5 percent per year, the average TFP advance in manufacturing was almost nil, though it may have been better for the smaller establishments of under 50 workers. It is hoped that the TFP record was better during the next three years of good growth before the downturn brought on by the Asian crisis, but no estimates are yet available for this period.

The evidence presented in this section does suggest some grounds for optimism, both on overall performance and with respect to SME involvement. As of 1994 the SME sector (censused establishments with 10–199 workers) accounted for about 23 percent of manufacturing output and 22 percent of direct exports (Table 8) plus a few additional percent of exports indirectly through subcontracting. Over 1988–94 the most dynamic export activity was electronic equipment where as we have seen only a small share of exports came directly from the SME sector. Apparel, where SMEs are important as exporters was the second most dynamic, and the second largest exporter. The period 1994–97 provides an interesting test of future possibilities since growth was solid each year. Exports were again led by electronic equipment, while apparel grew more modestly. It is hoped that when regional growth returns Philippine exports will

continue to expand rapidly with an increasing participation by SMEs. Whether this becomes an established pattern will no doubt depend on some of the policies in place.

5. Concluding Remarks

The Philippines has shown slow growth for decades, despite some recent recovery efforts. The evidence indicates that the SME sector was emerging from the deep economic crisis of the 1980s and experiencing the first positive effects of the economy-wide reforms implemented in the late 1980s and early 1990s. By the mid-1990s Philippine SMEs appeared to have recovered from a long period of decline, but their performance, by itself, does not seem to have been vigorous enough to boost the Philippine economy after the 1997–98 crisis.

Large firms and large foreign ownership have traditionally characterized the Philippine manufacturing sector. During a period of deep market reforms in the 1990s, the country opened up to more FDI. Trade and financial reforms helped to improve the growth scenario without providing a period of high growth. During the current crisis the modern sector manufacturing dominated the recovery by exporting high-end items and helped to buffer other negative impacts on Philippine manufacturing while creating a new, but small, breed of SMEs: small or medium foreign-owned enterprises in electronics and car parts.

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Appendix**Table A1.** *Characteristics of Firms Surveyed by the World Bank to Analyze the Impact of the Financial Crisis, 1998*

<i>Sector</i>	<i>Number of workers</i>	<i>Number of firms</i>	<i>Size</i>		<i>Exports</i>	<i>Ownership</i>	
			<i>SME</i>	<i>Large</i>	<i>Exporter</i>	<i>High export volume</i>	<i>No foreign control</i>
Food products	384	137	78	59	51	19	113
Textiles	242	77	49	28	39	21	58
Wearing apparel and leather	331	123	62	61	78	44	78
Chemicals, rubber, and plastic	250	87	40	47	38	12	62
Electronics	643	117	58	59	70	50	62

Note: An SME is defined as a firm with fewer than 150 workers.

Source: Lamberte and others (2000), Table 13.1.

Table A2. Descriptive Statistics on Philippine Plants, by Size Category: 1988 and 1994

	Total	1-9	10-49	50-99	100-199	200+
<i>1988</i>						
Number of Plants	78,635	67,147	8,960	1,005	698	825
Total employment (L)	1,091,422	234,471	148,476	70,914	97,644	539,917
Paid employment	968,407	123,338	146,047	70,517	97,563	530,942
Gross output	396,274,749	11,293,767	25,257,399	25,155,885	44,707,473	289,889,237
Industrial services to others	14,277,203	1,909,759	1,449,060	673,829	1,211,122	9,033,433
Value added	137,899,658	4,075,974	8,666,837	7,687,727	13,844,017	103,625,103
Wages	31,764,288	1,388,934	2,693,159	1,883,140	3,289,643	22,509,412
Total fixed assets (K)	103,869,399	5,128,524	5,902,868	3,942,863	6,892,120	82,003,024
Equipment	52,609,495	2,057,557	2,420,598	2,135,302	3,670,583	42,325,455
K/L	95.17	21.87	39.76	55.60	70.58	151.88
K/VA	0.75	1.26	0.68	0.51	0.50	0.79
VA/L	126	17	58	108	142	192
<i>1994</i>						
Number of plants	92,269	81,544	8,018	1,042	752	913
Total employment (L)	1,182,869	287,630	141,535	72,431	105,464	575,809
Paid employment	1,044,115	157,338	133,676	72,214	105,368	575,519
Gross output	880,924,651	28,363,378	48,106,277	48,238,885	103,658,304	652,557,807
Industrial services to others	14,951,897	286,399	4,102,207	1,029,821	1,417,432	8,116,038
Exports	152,945,595	n.a.	5,589,223	8,963,022	19,357,554	119,035,795
Value added	339,962,876	14,881,230	18,544,527	17,932,478	39,463,310	249,141,331
Wages	69,946,808	3,205,352	5,402,014	4,023,597	6,880,915	50,434,930
Total fixed assets (K)	273,246,141	9,244,605	11,047,784	11,777,466	25,529,846	215,646,440
Equipment	179,180,656	n.a.	4,999,959	6,356,342	14,310,900	153,513,455
K/L	261.70	58.76	82.65	163.09	242.29	374.70
K/VA	0.80	0.62	0.60	0.66	0.65	0.87
VA/L	326	95	139	248	375	433

Note: Nominal figures.

Source: National Statistics Office, Industrial and Trade Statistics, unpublished data, special tabulations.