



Small and Medium-Sized Manufacturing Enterprises in Latin America and the Caribbean Under the New Economic Model

WILSON PERES and GIOVANNI STUMPO

Economic Commission for Latin America and the Caribbean, Santiago, Chile

Summary. — This paper describes the performance of small and medium-sized manufacturing enterprises (SMEs) in 10 Latin American countries under the New Economic Model (NEM). Based on an original databank, the authors analyze SME performance in relation to production, employment and productivity, and in comparison to larger enterprises. The paper shows that SMEs have not been marginal players under the NEM; they did not experience a generalized drop in production and employment, and, in some countries, even increased their productivity relative to that of larger firms. Macroeconomic conditions have been the main determinants of SME performance; trade liberalization had a strong impact on sectoral restructuring within SME production, but did not affect negatively SMEs as a whole. © 2000 Elsevier Science Ltd. All rights reserved.

Key words — Latin America, small enterprise, industrial structure, economic reforms, new economic model, productivity

1. INTRODUCTION

Small and medium-sized manufacturing enterprises (SMEs) are in the forefront of Latin America's economic policy debate. Proposals emphasizing their importance for economic development are common in academic circles. Governments of the region unflinchingly consider them to be one of the engines of growth, and each country has some type of policy instrument to assist those enterprises. Yet support for SMEs is more nominal than real, and a large part of the official discourse is not followed up by actions backed by sufficient funds and human resources to affect on the performance of SMEs.

This is particularly serious in the context of the challenges and opportunities opened to the SMEs since the second half of the 1980s under the new economic model (NEM).¹ The reforms that implemented the NEM aimed at introducing a free-market economy and consisted fundamentally of the elimination of protectionism in foreign trade, liberalization of the domestic financial system and capital account, simplification of the tax structure, privatization of state enterprises and increased flexibility of the labor market (IADB, 1997).

The analytical framework for the reforms was constructed around a long-term view based on a market-friendly approach to economic development (World Bank, 1991), in which the private sector would play the role of leader of the process.

In the context of the economic reforms, the size (micro, small, medium or large) and ownership (domestic or foreign) of the enterprises were not considered as relevant variables—in sharp contrast to the view that all public ownership of production assets led to inefficiency and mismanagement. Public policy documents that promoted or implemented the reforms did not mention the type of private agents that would lead the economy. They did not consider the dynamics of the share of each type of firm in economic activity in general, and in manufacturing industry in particular.

Even so, it was implicitly expected that SMEs would play a significant role in the NEM because the previous state-led, protectionist model had favored the large national and foreign companies, which now had to operate under competitive conditions that reduced their advantages with respect to small enterprises. Moreover, it was expected that the substitution of an inward-oriented model by an outward-

looking export-led approach would favor the comparative advantages the region had in labor (Balassa, Bueno, Kuczynski & Simonsen, 1986; ² Krueger, 1983; Weller, 1998), which would increase the relative weight of smaller enterprises that make more intensive use of this production factor.

Against this optimistic view of the future of SMEs under the NEM, other approaches highlight the problems the sector would encounter due to their weakness in resisting competition from imported products and the scant support they receive from public policy. The pressure of trade liberalization would be particularly damaging under conditions of exchange rate overvaluation, as in fact happened in most of the countries of the region in the 1990s (Ffrench-Davis, 1999; Katz, 1999).

A large part of the debate on the situation and the performance of SMEs under the NEM is based only on theoretical arguments of their relative ability to withstand competition from imports and on casual evidence, both of individual enterprises and specific countries. Empirical evidence at a comparative regional level is scant. Further, in the review of the literature on the subject, the authors of this paper have been able to find only one recent work that presents an overall view of what has happened to SMEs in a wide range of countries of the region after the reforms (Lloréns, van der Host & Isusi, 1999) and, even in this case, efforts to organize information to allow comparative analysis is just beginning. ³

In this framework, the objective of this paper is to describe and suggest elements to explain the recent performance of SMEs in 10 countries of the region ⁴ in relation to production, employment and productivity. Although ideally the analysis of the development of these enterprises should be made in periods with similar characteristics in the different countries, information on the industrial organization of SMEs is extremely poor, except for a few countries. This requires that we work with information at points in time predetermined by the availability of data. Despite this, it has generally been possible to compare a point in the mid-1980s ("before the reforms") with a point in the mid-1990s ("after the reforms"). ⁵ Accepting these limitations, this paper is based on a databank developed from the results of the regional project "Small and medium-sized industrial enterprises and international competitiveness" conducted by the United Nations Economic Commission for Latin America and the

Caribbean (ECLAC) in 14 countries of the region beginning in mid-1998. ⁶

This paper is divided into five parts. After the introduction, the second part presents the situation of SMEs in Latin American manufacturing industry in the 1990s. The information is organized into a typology of countries based on the sectoral structure of SME production, which is closely related to the size of the different economies. The third section studies the performance of these enterprises in relation to production, employment and productivity and in comparison with the large enterprises. The fourth part identifies the factors that have determined this performance and a fifth presents the conclusions of the work.

2. SMES IN LATIN AMERICAN MANUFACTURING INDUSTRY

As mentioned earlier, the information available on SMEs in the countries of the region hinders precise comparative studies. Not only are the periods different but the definition of SME and the disaggregation of the data varies from country to country, including or excluding different size ranges. All these problems are present in the information in Table 1, which includes, besides the 10 countries studied in this paper, five other countries for comparative purposes. ⁷

Despite these limitations, the Table 1 shows three important points. First, SMEs are not a marginal actor in the industrial structure but have a high profile, particularly in employment. The relatively small values of this variable in three countries (Bolivia, Nicaragua, and Costa Rica) are explained by the noninclusion of the medium-sized enterprises in the first two and the small firms in the third. Second, against expectations, SMEs do not always have a relatively greater presence in the industrial structure of the smaller countries, especially with respect to their share of production or sales. Indivisibilities and large minimum-efficient-plant sizes explain that, even in small countries, production of specific consumer goods have to be undertaken by large firms (e.g. beer, cement, flat glass), which would thus account for a relatively important share of total production. Third, in this case as expected, their share of employment is greater than their share of production, indicating lower levels of productivity, which will be studied later.

Table 1. *Share of SMEs in the manufacturing sector*^a

Country, year and firm size ^b	Employment	Production
Argentina 1993 ^{c,d} 6-100	44.6	35.9
Bolivia 1994 ^d 5-15 15-49	26.1	17.6
Brazil 1997 ^c 20-99 100-499	66.8 ^c	60.8 ^c
Chile 1996 10-49 50-199	52.7	37.1
Colombia 1996 1-49 50-199	52.5	33.3
Costa Rica 1997 ^{c,d} 31-100	13.2	12.6
Ecuador 1996 10-49 50-99	37.7	19.4
El Salvador 1993 ^d 21-50 51-100	17.6	14.8
Mexico 1993 16-100 101-250	44.6 ^f	31.1
Nicaragua 1994 ^d 4-30	11.7	11.2
Paraguay 1997 ^d 6-20 21-100	41.0	31.0
Peru 1994 ^d 11-20 21-200	52.5	36.1
Trinidad and Tobago 1996 ^d 6-100	57.0	22.6
Uruguay 1995 5-99	57.9	39.7
Venezuela 1995 5-20 21-100	39.5	13.8

^a *Source:* Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

^b Firm sizes are defined according to employment. When one size range is presented, it corresponds to small and medium-sized firms. When two ranges are presented, the first one corresponds to small enterprises and the second one to medium-sized firms.

^c The information on production refers to total sales.

^d Total manufacturing employment and value-added include microenterprises.

^e Small firms (i.e., those with between 20 and 99 workers) account for 29.5% of employment and 20.9% of production.

^f According to preliminary census data for 1998, the share of SMEs in employment was 39.9%.

Table 2 presents information on SME production by type of industrial activity. From these data, it is possible to identify three groups of countries that are well correlated with the sizes of their economies. The first group

consists of the largest countries with more developed industrial structures (Argentina, Brazil and Mexico⁸). In these, the production structure of SMEs has a strong weight in foodstuffs, garment and textiles, chemical and plastic products, and machinery and equipment.⁹ The distinctive element of the larger countries is the relative high weight of machinery and equipment in total SME production.

In the medium-sized countries (Chile,¹⁰ Colombia, Ecuador, Peru and Venezuela), Table 3 shows the predominant weight of the food and chemical industries, and unlike the preceding group, a very low presence of machinery and equipment. Continuing the trend of the reduction in the weight of the latter as the size of the country decreases, Table 4 shows the overwhelming presence of the food industry in the industrial production of the SMEs in the smaller countries (Costa Rica,¹¹ Nicaragua and Uruguay).

Apart from the difference between country groups, some new elements emerge from those tables. The food and chemical industries are important in the production of SMEs in all countries, while some of the industrial sectors usually associated with this size of enterprise (garment and shoe production) are not as important in their production structure. Thus, leather products and footwear are irrelevant in the production structure of SMEs in all the countries except Nicaragua. Garment production has a lower weight than textile production, not even reaching 10% of the production of SMEs in any country, although no information is available on whether this situation has been constant in the long term.

The concentration of SME production in foodstuffs suggests a specialization in labor-intensive sectors, based on natural comparative advantages and with low economies of scale. These activities of SMEs are strongly oriented toward the domestic market, as is evident from their very small exports presented in national studies conducted in the framework of the regional project mentioned earlier. This is also the case for machinery and equipment produced by SMEs in the largest countries.¹²

Some of the results presented later in this paper are largely dependent on this specialization pattern of SMEs. If they are not specialized in the garment and footwear sectors, conclusions drawn from the perception of harsh competition from imports of these products after trade liberalization do not

Table 2. *Structure of SME industrial production in Argentina, Brazil and Mexico*^a

	Argentina 1993	Brazil 1994	Mexico 1993
Food	16.1	17.0	16.4
Beverages	5.8	1.7	4.7
Tobacco	0.2	0.3	0.0
Textiles	6.6	7.2	6.4
Garments	3.7	2.7	4.6
Leather	1.2	1.8	0.8
Footwear	1.6	1.8	2.0
Wood and wood products	2.0	1.5	1.5
Furniture	2.2	2.6	2.7
Paper	3.5	4.3	3.1
Printing	4.7	2.5	5.3
Chemical products	13.9	18.9	16.2
Plastic products	5.3	4.7	5.3
Building materials	3.7	4.2	6.6
Iron and steel	2.5		2.3
Metal products	7.1	9.4 ^b	8.0
Nonelectrical machinery	6.7	7.0	4.3
Electrical machinery and equipment	6.0	5.8	4.8
Autos and parts	4.5	3.5	2.9
Other transport equipment	0.9		0.3
Scientific equipment	1.1	1.3	0.5
Others	1.0	1.7	1.2
Total	100.0	100.0	100.0

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

^b Includes iron and steel.

Table 3. *Structure of SME industrial production in Chile, Colombia, Ecuador, Peru and Venezuela*^a

	Chile 1996	Colombia 1996	Ecuador 1996	Peru 1994	Venezuela 1995
Food	22.1	19.9	30.6 ^b	20.0	19.1
Beverages	2.1	4.0		4.2	2.1
Tobacco	0.0	0.0		0.1	0.1
Textiles	5.6	4.5	7.4	8.0	2.6
Garments	4.4	5.5	2.9	2.0	5.5
Leather	0.6	1.1	1.9 ^c	0.8	0.9
Footwear	1.4	1.2		0.6	3.4
Wood and wood products	11.2	1.5	2.2	1.3	1.7
Furniture	1.7	1.2		0.9	3.1
Paper	1.3	6.4	4.8	2.3	1.9
Printing	4.5	2.6	3.0	5.3	5.8
Chemical products	12.5	16.9	18.1	21.6	12.9
Plastic products	5.1	7.4	6.8	5.8	6.8
Building materials	5.3	5.8	4.4	3.9	6.5
Iron and steel	4.1	2.2	1.7	4.2	6.3
Metal products	8.3	7.5	4.4	5.9	8.0
Nonelectrical machinery	4.2	3.5	0.9	3.3	4.9
Electrical machinery and equipment	1.4	2.7	5.3	3.3	3.2
Transport equipment	1.6	3.6	1.0	2.9	3.0
Scientific equipment	0.4	0.6	0.1	1.4	0.8
Other	2.1	1.8	4.4 ^d	2.2	1.4

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

^b Includes beverages.

^c Includes footwear.

^d Includes wood and metal furniture.

Table 4. *Structure of SME industrial production in Costa Rica, Nicaragua and Uruguay*^a

	Costa Rica 1997	Nicaragua 1994	Uruguay 1995
Food	32.2	25.9	30.6
Beverages	16.5	2.3	6.1
Tobacco	0.0	0.0	0.0
Textiles	0.0	0.3	5.8
Garments	1.2	7.1	5.7
Leather	0.0	1.5	0.5
Footwear	1.3	7.2	1.0
Wood and wood products	0.3	4.0	1.0
Furniture	2.5	8.2	1.3
Paper	4.1	1.3	1.1
Printing	0.8	5.5	4.8
Chemical products	24.7	9.1	17.1
Plastic products	0.0	1.3	4.6
Building materials	2.5	8.7	3.6
Iron and steel	0.0	0.7	2.4
Metal products	0.4	13.2	5.9
Nonelectrical machinery	0.2	0.4	2.0
Electrical machinery and equipment	8.3	0.7	2.8
Transport equipment	0.3	0.0	1.3
Scientific equipment	0.2	0.0	1.0
Others	4.3	2.7	1.4

^a *Source:* Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

adequately reflect the dynamics of a type of enterprise that concentrates its production in other sectors. Indeed, given that they specialize in foodstuff and chemicals, the dynamics of domestic demand would be a much more important determinant of SME performance.

3. THE PERFORMANCE OF SMES

(a) *Production, employment and productivity*

This section uses four tables to evaluate the impact of the economic reforms on SMEs. Table 5 presents information on the rate of change in production, employment and the average productivity of labor in SMEs at the country level in periods between a date before and a date after the reforms, with the exception of Chile, for which two special periods are considered as mentioned earlier.

Table 6 presents the changes in the production of SMEs by country, distinguishing four situations: countries where their production increases along with their share in total industrial production (northwest cell); countries where their production increases but their share of the total falls or is constant (northeast cell); countries where production falls and the share increases (southwest cell); and countries where

production falls and the share falls or is constant (southeast cell). Table 7 presents a similar arrangement of information, with respect to trends in the average productivity of labor and employment of SMEs.

Finally, Table 8 identifies the industrial activities that increase or decrease their share in the aggregate production of SMEs by country, which is an indicator of the direction in which their pattern of specialization is moving. Relatively infrequent or exceptional changes are indicated in italics.

Based on these tables, we can draw the following conclusions:

(i) SMEs do not constitute a stagnant economic agent in the period after the economic reforms (see Table 6). They increased their share in total industrial production in five countries (Argentina, Chile 1990–96, Mexico, Uruguay and Venezuela), while in other five (Brazil, Costa Rica, Colombia, Ecuador and Peru), despite losing share, they increased their total production. Although this is not a picture of a *winner* economic agent in the process, neither is it a *loser*.

(ii) The growth rates of SME production varies considerably from country to country (see Table 5), ranging from countries where those firms were very dynamic (Argentina, Mexico and Chile 1990–96) to countries

Table 5. Rates of change in SME production, employment and labor productivity (accumulated rates in percentages)^a

Countries	Production	Employment	Labor productivity
Argentina 1984–94	47.7	-24.4	95.3
Brazil 1985–97	11.4	-14.2	29.8
Chile 1981–90	-14.7	-7.4	-7.9
Chile 1990–96	55.6	34.2	16.0
Colombia 1991–96	16.2	11.2	4.5
Costa Rica 1990–96	22.6	-20.7	54.6
Ecuador 1991–96	8.7	-6.8	16.7
Mexico 1988–93	48.6	17.1	26.9
Peru 1992–94	16.8	8.2	7.9
Uruguay 1988–95	2.5	-24.9	36.5
Venezuela 1990–95	-5.2	-1.8	-4.1

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

Table 6. Changes in SME production and in SME share of total industrial production, by country^a

	Increased share of SMEs in industrial production	Decreased or constant share of SMEs in industrial production
Increase in production of SMEs	Argentina Chile (1990–96) Mexico	Brazil Costa Rica Colombia Ecuador Peru
Decreased or constant production of SMEs	Uruguay Venezuela	Chile (1981–90)

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

Table 7. Changes in SME labor productivity and employment, by country^a

	Increase in employment	Decrease in employment
Increased average labor productivity	Chile (1990–96) Colombia Mexico Peru	Argentina Brazil Costa Rica Ecuador Uruguay
Decreased average labor productivity		Chile (1981–90) Venezuela

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

where their growth rate was very low and even negative, as was the case of Venezuela.

(iii) Regarding employment, Table 5 also shows different performance across countries; however, the number of countries that show a sharp reduction of SME employment is much larger than the number of those where SME production stagnated or fell.

(iv) Combining the changes in production and employment into the dynamics of aver-

age labor productivity reveals that SMEs did not perform badly regarding the incorporation of technical change. The index of labor productivity fell only in Venezuela (see Table 7), although something similar happened in Chile in 1981–90. In many of the countries where SME productivity grew, however, the increase took place with a reduction in employment (Argentina, Brazil, Costa Rica, Ecuador and Uruguay).

Table 8. *Winner and loser sectors in the production of SMEs^a*

Countries	Winner sectors	Loser sectors
Argentina	Non-alcoholic beverages, medicines, paints, iron and steel, <i>machinery of general use</i>	Textiles, garments, sawmills, pottery
Brazil	Footwear, furniture, printing, plastic products	Food, garments, chemical products
Chile (1981–90)	Chemical products	Food, sawmills, medicines, metal products
Chile (1990–96)	Sawmills, medicines, building materials, metal products	Textiles, chemical products, refining of copper, iron and steel
Colombia	Food, plastic products, metal products	Beverages, medicines, electrical machinery
Costa Rica	Food, beverages, medicines, building materials	Sawmills, chemical products, metal products
Ecuador	Paper, chemical products, medicines, electrical machinery and apparatus	Food, garments, iron and steel, metal products
Mexico	Beverages, <i>garments</i> , furniture, printing, building materials	Food, textiles, chemical products, non-electrical machinery
Peru	Printing, medicines, plastic products, iron and steel	Food, textiles
Uruguay	Food, beverages, printing, iron and steel	Textiles, footwear, leather, <i>auto parts</i>
Venezuela	Foods, printing, building materials, iron and steel	Beverages, medicines, metal products

^a *Source:* Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC. Winner (loser) sectors are sectors that increase (decrease) their share in total production of SMEs.

(v) There was a change in specialization of the SMEs at the sector level in the period, as is evident from the fact that most of the manufacturing sectors changed their share in total SME industrial production (Table 8). There are cases in which SME production moved into products that are technologically more advanced than the average of the country (machinery in Argentina, paper and basic electric equipment in Ecuador). Activities such as textiles and garments show a generally poor performance.

(b) *Performance relative to large enterprises*

Table 6 shows the countries where SMEs gained or lost share in the industrial total, which in turn indirectly shows how they performed relative to the larger firms.¹³ In this section we study the relative performance of SMEs for a wider set of variables: level and structure of production, employment, and productivity according to enterprise size. The corresponding data for years before and after the economic reforms are presented in Table 9.

The large enterprises performed better than the SMEs in terms of production and productivity in Brazil, Costa Rica, Ecuador and Peru, although in these countries SMEs did not have a bad performance since they showed gains in both variables. Conversely,

large firms had a worse performance than the SMEs in Argentina, Mexico,¹⁴ Uruguay and Venezuela. Here, we have two different situations. While in the first two countries SMEs show important progress in the period under study, in the last two countries they performed relatively better in the framework of a general decrease in industrial sector output and employment.

Defining the productivity gap between large enterprises and SMEs as one minus the productivity of the SMEs as a share of the productivity of the large firms, Table 10 shows 10 countries arranged according to whether that gap widened or narrowed in the period, crossing the information with the relative productivity level in the final year for which that information is available.

The analysis of Tables 9 and 10 produces the following results:

(i) The productivity gap between different sizes of enterprise is large. With the exception of Brazil (where medium-sized enterprises are quite large for the regional averages) and Costa Rica (where the information does not include small enterprises), the gap is never less than 40% and in some cases exceeds 75%. This is especially serious since the information does not include microenterprises, which probably present an even larger gap.

Table 9. *Relative performance of SMEs and large enterprises (%)*^a

	Large enterprises		SMEs	
<i>Argentina</i>	1984	1993	1984	1993
Production (index)	100.0	104.1	100.0	147.7
Production (structure)	67.4	59.0	28.9	35.9
Employment (index)	100.0	68.4	100.0	75.6
Employment (structure)	44.2	41.5	43.0	44.6
Productivity (index)	100.0	152.2	100.0	195.3
Relative productivity			43.9	56.6
<i>Brazil</i>	1985	1997	1985	1997
Production (index)	100.0	138.0	100.0	111.4
Production (structure)	34.2	39.2	65.8	60.8
Employment (index)	100.0	118.0	100.0	85.8
Employment (structure)	26.6	33.2	73.4	66.8
Productivity (index)	100.0	116.9	100.0	129.8
Relative productivity			61.1	77.2
<i>Chile</i>	1990	1996	1990	1996
Production (index)	100.0	139.9	100.0	155.6
Production (structure)	91.2	90.3	8.8	9.7
Employment (index)	100.0	112.3	100.0	134.2
Employment (structure)	80.9	77.9	19.1	22.1
Productivity (index)	100.0	124.5	100.0	116.0
Relative productivity			40.9	37.6
<i>Colombia</i>	1991	1996	1991	1996
Production (index)	100.0	115.2	100.0	116.2
Production (structure)	66.9	66.7	33.1	33.3
Employment (index)	100.0	102.9	100.0	111.2
Employment (structure)	49.4	47.5	50.6	52.5
Productivity (index)	100.0	111.9	100.0	104.5
Relative productivity			48.2	45.2
<i>Costa Rica</i>	1990	1996	1990	1996
Production (index)	100.0	124.8	100.0	122.6
Production (structure)	87.2	87.4	12.8	12.6
Employment (index)	100.0	115.6	100.0	79.3
Employment (structure)	81.9	86.8	18.1	13.2
Productivity (index)	100.0	107.9	100.0	154.6
Relative productivity			62.8	73.0
<i>Ecuador</i>	1991	1996	1991	1996
Production (index)	100.0	119.3	100.0	108.7
Production (structure)	79.1	80.6	20.9	19.4
Employment (index)	100.0	93.0	100.0	93.2
Employment (structure)	62.4	62.3	37.6	37.7
Productivity (index)	100.0	128.3	100.0	116.7
Relative productivity			43.8	39.8
<i>Mexico</i>	1988	1993	1988	1993
Production (index)	100.0	114.5	100.0	148.6
Production (structure)	74.2	68.9	25.8	31.1
Employment (index)	100.0	105.1	100.0	117.1
Employment (structure)	58.0	55.4	42.0	44.6
Productivity (index)	100.0	108.9	100.0	126.9
Relative productivity			48.2	56.1
<i>Peru</i>	1992	1994	1992	1994
Production (index)	100.0	128.3	100.0	116.8
Production (structure)	52.0	55.0	37.5	36.1
Employment (index)	100.0	88.1	100.0	108.2
Employment (structure)	26.0	22.0	50.2	52.5
Productivity (index)	100.0	145.6	100.0	107.9
Relative productivity			32.7	25.4

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Table 9—continued

	Large enterprises		SMEs	
<i>Uruguay</i>	1988	1995	1988	1995
Production (index)	100.0	85.2	100.0	102.5
Production (structure)	64.6	60.3	35.4	39.7
Employment (index)	100.0	57.0	100.0	75.1
Employment (structure)	48.9	42.1	51.1	57.9
Productivity (index)	100.0	149.7	100.0	136.5
Relative productivity			52.6	47.8
<i>Venezuela</i>	1990	1995	1990	1995
Production (index)	100.0	77.4	100.0	94.8
Production (structure)	88.4	86.2	11.6	13.8
Employment (index)	100.0	92.2	100.0	98.2
Employment (structure)	62.1	60.5	37.9	39.5
Productivity (index)	100.0	84.0	100.0	95.9
Relative productivity			21.5	24.5

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

(ii) Yet, it cannot be said that SMEs are always *losers* in the changes in productivity relative to large enterprises. In four countries and in Chile (1981–90), the gap narrows, although it did so significantly only in Argentina and Mexico.

(iii) To highlight the previous conclusion, it should be noted that the share of large enterprises does not increase in all countries (Table 9), and the productivity gap does not always move in their favor, as frequently stated in considerations on the subject.

4. DETERMINANTS OF THE RESULTS

In principle, the trends in SMEs described in the previous sections result from the interaction of different factors, including the effects of the economic reforms under the NEM, macroeconomic conditions, the depth and complexity of the industrial structure and the impact of

policies aimed at supporting and fostering the development of these enterprises. As the quality of available data does not allow us to undertake a quantitative analysis that separates the effects of the different determinants, this section contains only suggestions about their order of importance.

The effects of public policies aimed at supporting and fostering SME development can be eliminated as an important determinant. The evidence of the national studies carried out by the regional project mentioned earlier indicate that they had little weight, with perhaps the exception of rather isolated measures in almost all countries and the activities of institutions such as the *Brazilian Service for Enterprise Assistance* (SEBRAE) and the Mexican industrial development bank *Nacional Financiera* (NAFIN), which are the exception rather than the rule.¹⁵ In most countries, public policies had little impact because of lack of financial and human resources for implemen-

Table 10. Changes in the productivity gap between SMEs and large enterprises^a

	Relative productivity over 45% in final year ^b	Relative productivity under 45% in final year ^b
Productivity gap narrows	Argentina Brazil Costa Rica Mexico	Chile (1981–90) Venezuela
Productivity gap does not narrow	Ecuador Colombia Uruguay	Chile (1990–96) Peru

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

^b Final year defined according to Table 9.

tation and fragmented decision-making among government agencies (Peres, 1997). For these reasons, although almost all the countries have developed new efficient instruments, their impact is still weak and is concentrated on a limited number of enterprises.¹⁶

After eliminating public support policies as a determinant factor of SME dynamics, Table 11 shows a classification of the countries according to the performance of SMEs with respect to production and productivity, and qualifies the effects of the other factors mentioned: (a) macroeconomic conditions (indicated by the rates of inflation and GDP growth); (b) the importance of the economic reforms (indicated by the increase in an index of trade liberalization¹⁷ calculated in Morley, Machado & Pettinato, 1999); and (c) the depth and development of the industrial structure (indicated by the weight of machinery and equipment production in SMEs). Both performance and macroeconomic conditions are classified qualitatively as very positive (++), positive (+), negative (-) and very negative (---). Despite the limitations of this method, the following results may be suggested.

The main determinants of the dynamics of SMEs seem to be macroeconomic conditions (GDP growth and price stability), with Chile

(1990-96), Mexico (1988-93) and Argentina (1984-94) being the main positive examples, and Venezuela and Chile (1981-90) the negative ones. Moreover, preliminary census information for Mexico shows that SMEs reduced their share in total manufacturing employment from 44.6% to 39.9% during 1993-98, a period when the country grew only at 2.6% yearly after experiencing the worst economic crisis in half a century in 1995.¹⁸ This close relationship between macroeconomic conditions and SME performance was not unexpected, given that, as seen earlier, SMEs steer their production almost entirely to the domestic market.

The complexity and degree of development of the industrial structure seems to play a positive role in large countries. More advanced industrial structures where SMEs are strongly linked among themselves in production clusters or with large firms via subcontracting, foster the modernization of their technical and managerial structures. Easier and less costly access to technical and market information is another result of a relatively more developed industrial structure. All this may have strengthened SMEs capabilities to withstand competition and made them more flexible to react to changes in the economic environment.

Table 11. *Determinants of SME performance^a*

Countries	SME production performance	SME productivity performance	Macroeconomic conditions (GDP growth and inflation)	Increase in the index of trade liberalization	Weight of machinery and equipment in SME
Argentina 1984-94	++	++	+	Large	Significant
Chile 1990-96	++	+	++	None	
Mexico 1988-93	++	++	+	Small	Significant
Colombia 1991-96	+	+	+	Large	
Costa Rica 1990-96	+	++	+	Large	
Ecuador 1991-96	+	+	+	Large	
Peru 1992-94	+	+	+	Large	
Brazil 1985-97	+	+	+	Large	Significant
Chile 1981-90	---	---	-	Small	
Uruguay 1988-95	-	+	+	Small	
Venezuela 1990-95	---	---	---	Small	

^a Source: Data base on industrial SMEs, Industrial and Technological Development Unit, Division of Production, Productivity and Management, ECLAC.

The effect of the increase in trade liberalization varies according to the country. It does not seem to have had a common effect everywhere, either negative or positive, although competition from imports may have influenced the pattern of specialization of SMEs (for example, in the low dynamism of the garment and footwear sectors, mentioned earlier).¹⁹ In two countries (Brazil and Uruguay) poor performance of SMEs in production coincides with an increased trade liberalization. In Brazil, the evidence indicates that the poor macroeconomic performance played a more important role than liberalization, which is shown, in the opposite sense, by the good performance of this size of enterprises in 1994–97 when the economy stabilized and grew (Rocha & da Silva, 1999; Saboia, 1999). In the case of Uruguay there seems to be more conclusive evidence of a negative effect of the trade opening (in this case toward the Common Market of the South, MERCOSUR) on the size of the industrial sector and the production of SMEs in particular (Romaniello, 1998).

5. CONCLUSIONS

Despite the limitations of the available information it is possible to reach some conclusions, some of them very original.

SMEs are not marginal actors in the industrial structure of the countries of the region and did not experience stagnation or a generalized drop in production, employment and productivity after the economic reforms of the NEM. Although their productivity is much lower than

that of large enterprises, the gap has closed in some countries. National trends are too dissimilar, however, to allow any generalization.

The development of SMEs depended strongly on macroeconomic conditions, as expected in a sector that exports very little and directs almost all its production to the domestic market. Trade liberalization could have had a negative effect in some countries because of increased imports, but this is far from a generalized effect that could support statements like “the SMEs are the losers under the new economic model.”

Trade liberalization seems to have had more influence on the polarization between SME sectors of production than on the performance of the entire sector. There is strong evidence suggesting processes of sectoral specialization within SMEs. In this respect, it would be more correct to say that “in the SMEs there are winning and losing sectors,” than to assume a poor performance by the sector as a whole. The incipient export dynamism of SMEs in some countries points in the same direction.

Given these effects of the economic reforms, an important space is opened for the development of public policies to support and foster the development of SMEs. Possibly the most constructive step would be to overcome the weaknesses in implementation of support policies mentioned in the previous section, in addition to creating macroeconomic conditions of price stability and sustained economic growth, which is no small thing to ask in Latin America at the end of the 1990s.

NOTES

1. The exception is Chile, where the economic reforms began in the mid-1970s. In the second half of that decade, there were also reform processes of short duration in Argentina and Uruguay, being interrupted by the foreign debt crisis of the early 1980s. For an analysis of the three countries, see Ramos (1986).

2. Balassa *et al.* (1986, p. 94) highlighted that the elimination of high protection, restrictions to buy imported inputs and price controls would be of special benefit to small and medium-sized firms, which have particularly suffered the consequences of those measures.

3. Among the few efforts of regional scope to quantify the performance of SMEs in Latin America, that by the

Inter-American Development Bank (IADB) stands out; Lloréns *et al.* (1999) being its main recent outcome. It is also difficult to find works with a regional scope for the period before the reforms; a notable exception is Castillo and Cortellese (1988) which includes information for 11 countries during 1973–84 and analyzes three of them in detail (Brazil, Colombia and Chile).

4. These countries are: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, Uruguay and Venezuela. National consultants prepared country papers for all of them. Fairlie and Baca (1998), Garrido (1999), Harris (1998), Hidalgo (1999), Moorikoenig *et al.* (1999), Parrilli (1998), Rocha and da Silva (1999), Romaniello (1998), Saboia (1999), Suzzarini (1999), Villamil and Tovar (1998), Yong (1998).

5. The case of Chile was given special treatment because, although the period prior to the reforms should conclude before 1973, no information is available for that period. As a result, this work considers two periods: (a) Chile (1981–90), a period with a sequence of growth, crisis and recovery, which presents almost nil average economic growth, and (b) Chile (1990–96) a period of strong growth. In Chile (1981–90) and in the previous decade, reforms were undertaken whose effects matured in 1990–96.
6. For four of these countries (Barbados, Nicaragua, St Lucia, and Trinidad and Tobago), information in the country papers prepared for the project was not available for more than one point in time, which prevented quantitative comparisons necessary for evaluating the performance of SMEs after the reforms.
7. Bolivia, El Salvador, Nicaragua, Paraguay, and Trinidad and Tobago. In Table 1, special attention should be paid to the years and the size ranges for which information is presented. The notes to the table are important for identifying the countries in which the data include microenterprises. Although the objective of this paper does not cover this size range, in some countries it was not possible to obtain information to exclude them from the totals.
8. Data for Mexico are based on industrial censuses that include *maquila* plants. Data for 1998 show that the average size of *maquila* plants was 330 workers; that is, on average they were large firms. But in five branches (food packing and canning, apparel, leather shoes, furniture, and chemicals) of the 11 for which disaggregated data are available, average plant sizes ranged from 145 to 242 workers; that is, on average they were medium-sized firms, according to the definition used in Mexico (see Table 1). Those branches accounted for 30% of total *maquila* employment.
9. In “machinery and equipment” we include electrical and nonelectrical machinery, electrical and electronic products, and transport and scientific equipment.
10. Due to lack of information whenever we consider the case of Chile, we only include small firms, i.e., firms that employ between 10 and 49 workers. The only exception is Table 1 for which we were able to get information on employment and production of medium-sized firms for one year (1996).
11. Data for Costa Rica and Nicaragua do not include SMEs in export promotion zones, i.e. *maquila* plants, which are mostly large firms.
12. The same papers contain evidence of incipient exports by small enterprises in Brazil (Rocha & da Silva, 1999; Saboia, 1999), Colombia (Villamil & Tovar, 1998) and Peru (Fairlie & Baca, 1998) as well as an increase in “small exports” from Argentina (Moori-Koenig, Ferraro & Yoguel, 1999).
13. A large part of the information originating in national censuses or surveys of industry is presented by size of *production plants* and not *enterprises* (which could have several plants). This is not a problem in the analysis of SMEs per se, although it is when comparing them with large *enterprises*.
14. Although this is correct for the period under consideration (1988–93), preliminary results of the 1998 Industrial Census indicate that employment in the large enterprises grew faster than that of the SMEs in 1993–98. As of late 1999, there is no information on SME production for 1998.
15. Rocha and da Silva (1999) indicate that SEBRAE provided assistance to 3.8 million SMEs in all economic sectors in 1997 using resources estimated at US\$1.2 billion. Credit by NAFIN to manufacturing SMEs reached US\$2.4 billion per year in 1992–94; however, after the 1995 crisis this figure collapsed to US\$350 million per year during 1995–98 (data from the Mexican Secretaría de Hacienda y Crédito Público).
16. Examples are the Business Development Centers (CDE) in Argentina, the Support Programs (PROFOS) in Chile, the Regional Centers of Business Competitiveness (CRECE) in Mexico, and the Technological Development Centers (CDT) in Colombia.
17. The increase in the index is considered more important than its level, since the interest is in identifying the possible impact of the increased supply of imported products on SMEs and not a state which has already assimilated that impact (e.g., Chile, 1990–96).
18. Information presented by Dussel (1999) shows a similar result for manufacturing SME registered in the Mexican social security system.
19. Indirectly trade liberalization could have played a positive role, if the results of Lora and Barrera (1998) are accepted. These show that trade reform had a significant positive impact on GDP growth, which as indicated earlier has a positive impact on the performance of SMEs.

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