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**INDUSTRIAL POLICY AND COMPETITIVENESS
IN OPEN ECONOMIES**

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ABSTRACT

This study argues that the cause of the "de-industrialization" or sluggish growth of Latin America's manufacturing sector during the 1980s was not the liberalization of customs regimes undertaken during that period but rather the sharp recession produced by the severe macroeconomic disequilibria seen during those years, especially in 1982 and 1983. Moreover, the slowdown in industrial productivity began long before the debt crisis erupted, inasmuch as the import-substituting industrialization (ISI) strategy had been yielding sharply diminishing returns since as far back as 1973.

Although major gains in industrial productivity have been achieved during the 1990s thanks to the region's efforts to open up and restructure its economies, the average productivity gap between the manufacturing sectors of developed countries and of the region is still huge —on the order of 2.5:1— and is evident in the vast majority of its subsectors and business enterprises. This fact is manifested in the use of outdated production equipment and processes, inefficient organizational methods, confrontational labour relations, and failure to devote sufficient attention to quality standards and to the needs of an ever-changing market.

This productivity gap is a reflection of Latin America's underdevelopment, but it is also an opportunity for the region to switch over to a fast-growth track —provided that it manages to adopt the most appropriate of the best practices and technologies to be found in the international economy— and thus leapfrog over a number of developmental stages, as have other successful "latecomers" to development. This is the great potential advantage open to "late starter" countries.

A well-conceived macroeconomic strategy is not enough to achieve strong productivity growth, however. For competitiveness is an outcome of efficiency both at the firm level and in the business environment as a whole. Hence the need to couple a sound overall macroeconomic policy with a microeconomic policy that will facilitate the identification and adoption of those international best practices that are most suited to conditions in the region as well as with a mesoeconomic policy —particularly in relation to factor markets— that will ensure the rapid and widespread dissemination of those practices.

RESUMEN

En este trabajo se sostiene que la "desindustrialización" o lento crecimiento del sector industrial latinoamericano en los años ochenta no se debió a la liberalización arancelaria de la época, sino al impacto negativo que ejercieron en la producción los fuertes desequilibrios macroeconómicos ocurridos entonces, sobre todo en los años 1982 y 1983. Se hace notar igualmente que el avance de la productividad industrial se había detenido mucho antes de la crisis de la deuda, ya que desde 1973 en adelante los rendimientos de la estrategia de industrialización por medio de la sustitución de importaciones se habían vuelto marcadamente decrecientes.

Pese a que en los años noventa la productividad industrial ha registrado importantes mejorías gracias a los procesos de apertura y reestructuración, la diferencia de productividad media entre el sector industrial de los países desarrollados y el de la región es aún enorme, del orden de 2.5 a 1, y afecta al grueso de los subsectores y empresas. Se manifiesta en el uso de equipos y procesos de producción anticuados, así como en una ineficiente organización del trabajo, relaciones laborales confrontacionales y una inadecuada atención a la calidad y a las necesidades de un mercado en continua evolución.

Esta brecha de productividad es un reflejo del subdesarrollo de América Latina, pero también es la condición que permitiría pasar a una trayectoria de rápido crecimiento, si se lograra adoptar esas mejores prácticas y tecnologías disponibles internacionalmente más idóneas para la región, y así saltar etapas, tal como lo han hecho los países exitosos de desarrollo tardío. Ésta es la gran ventaja potencial con que cuentan los países actualmente en desarrollo.

Mas no basta con un buen diseño de las grandes líneas de política económica para entrar a una vía de acelerado crecimiento en la productividad. En efecto, la competitividad es determinada por la eficiencia a nivel tanto de empresa como de su entorno. De ahí la necesidad de complementar una sana política global y macroeconómica con una política microeconómica que facilite la identificación y adopción de las prácticas internacionales mejores y más idóneas para nuestra realidad, así como con una política mesoeconómica —sobre todo a nivel de los mercados de factores— que asegure su rápida y masiva difusión.

I. INTRODUCTION

As the economies of the region stabilize —a process that has yet to be completed in many countries and has scarcely begun in others— there has been renewed interest in the formulation of long-term development strategies to help the region make the switch from a slow-growth track to a much faster one, as has been done by the successful "latecomers" to development of East Asia.

However, the change in the region's strategy —from inward-looking to outward-looking growth— raises the question as to whether there is any room in an open economy for "industrial policy", or, at least, for a policy beyond the influence of easing restructuring efforts during the transition to an open, deregulated economy. And if such a policy does have a place in an open economy, then how will it differ from those implemented in the past?

This study seeks to answer these questions based on an examination of two major features of the region's economies: first, the process of liberalization and restructuring, which has been moving forward since the mid-1980s and, second, the huge productivity gap between the region's firms and those enterprises operating in accordance with international standards of best practice in the developed world. The implications of both the liberalization and restructuring process and of the productivity gap between the region and the developed countries can serve as guidelines for the design of such an "industrial policy" for open economies.

II. LIBERALIZATION AND RESTRUCTURING: FACTS AND HYPOTHESES

Any analysis of production trends in the region in the 1980s and of the outlook for the 1990s will need to take into account the following key facts and hypotheses:

i) During the 1970s, industrial output in Latin America rose by 75%, i.e., at a rate of almost 6% per annum, whereas between 1980 and 1994 (the last year for which systematized data are available), output showed an increase of just over 1% per year (see table 1). Many analysts interpret this marked loss of momentum as a kind of "de-industrialization" brought on by the strategic about-face represented by Latin America's move to open up its economies and to abandon its model of import-substituting industrialization. A more in-depth analysis of the situation does not confirm this hypothesis, however.

Table 1

LATIN AMERICA: TRENDS IN MANUFACTURING OUTPUT, BY SECTOR, 1970-1994

(Indexes of value added, 1980 = 100)

	1970	1980	1983	1990	1994 ^a
Total manufacturing output	56.9	100	90.1	105.2	119.9
Foodstuffs	71.5	100	...	109.0	121.9
Non-durable consumer goods	65.8	100	...	89.9	87.6
Intermediate goods	53.2	100	...	118.3	125.5
Capital goods	49.5	100	...	92.9	122.5

Source: ECLAC, on the basis of official figures.

^a The figures for manufacturing subgroups for 1994 are estimates.

Note: Three dots (...) indicate that data are not available or are not separately reported.

ii) On the contrary, the available information shows that the region's poor economic performance during the 1980s, and, above all, the "de-industrialization" which took place, were not the result of trade liberalization and the ensuing loss of competitiveness *vis-à-vis* imports that was supposedly experienced by import substituting domestic industries,¹ but

were instead due to the severe macroeconomic disequilibria that buffeted the region in the 1980s. These macroeconomic disequilibria generated a steep drop in aggregate demand owing to the effects of inappropriate adjustment policies (implemented belatedly and, then, too hastily)² between 1981 and 1983, and, thereafter, of runaway inflation or poorly designed or incorrectly implemented anti-inflationary policies.³ This is the first *basic hypothesis* put forward by this study with regard to economic openness and restructuring.

iii) This hypothesis is supported by the fact that the bulk of the decline in the region's industrial output was concentrated between 1980 and 1983, the most severe period of the adjustment to the external debt crisis, and a time when the value added by manufacturing fell by 10% (see table 2). In fact, in 1983-1990 industrial output actually rebounded at a rate of 2% per annum, despite the persistence of serious macroeconomic disequilibria arising from high inflation or of the attempts made to control it.

Table 2

**LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES):
GROWTH IN VALUE ADDED BY MANUFACTURING SECTOR**

(Average annual growth rates)

	1970-1980	1980-1983	1983-1990	1990-1994
Argentina	1.6	-2.8	-0.8	6.9
Brazil	9.0	-5.6	2.2	2.8
Chile	1.1	-5.8	6.3	6.3
Mexico	6.3	-1.7	3.6	2.3
Other countries ^a	5.5	-0.9	2.9	2.7
Latin America	5.9	-3.4	2.2	3.3

Source: ECLAC, on the basis of official figures.

^a Includes Barbados, Bolivia, Colombia, Costa Rica, Ecuador, Guatemala, Jamaica, Panama, Uruguay and Venezuela.

iv) Indeed, the role played by liberalization in explaining the slow growth of manufactures in the 1980s is so negligible (it is important to note that during this period, the liberalization drive was accompanied by a generally high real effective exchange rate), that in 1989 the value of manufactured inputs was actually *below* what it had been in 1980, even when expressed in dollars at current prices (see table 3), whereas domestic manufacturing output was up by 6%. In fact, during that period the *region's exports of manufactures soared by 80%*, with the result that the US\$ 23 billion trade deficit in manufactures posted by the region in 1980 had turned into a US\$ 9 billion surplus by 1989. In short, there was no general trend towards the substitution of imports for domestic manufactures during the 1980s.

Table 3

**LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES):
INTERNATIONAL TRADE IN MANUFACTURES, 1980-1994**

MANUFACTURES (TOTAL) <i>(In millions of dollars at current prices)</i>						
EXPORTS	1980	1985	1989	1990	1992	1994
Argentina	3 964	3 474	7 139	7 974	7 459	10 634
Brazil	14 755	16 856	26 980	23 565	28 441	35 364
Chile	3 630	2 565	5 660	6 007	6 507	7 630
Mexico	3 007	5 676	12 684	13 909	16 430	n.d.
Other countries ^a	11 220	11 836	13 239	14 497	14 295	17 120
Latin America	36 577	40 407	65 703	65 952	73 131	
IMPORTS	1980	1985	1989	1990	1992	1994
Argentina	8 151	3 042	3 484	3 639	13 855	20 730
Brazil	11 816	6 851	13 224	15 711	16 593	29 384
Chile	3 566	1 977	5 340	5 761	7 894	9 614
Mexico	16 473	10 789	18 636	26 027	43 004	n.d.
Other countries ^a	19 447	12 318	15 879	16 454	25 991	29 216
Latin America	59 454	34 976	56 564	67 592	107 337	
TRADE BALANCE	1980	1985	1989	1990	1992	1994
Argentina	-4 187	432	3 654	4 335	-6 396	-10 095
Brazil	2 939	10 006	13 756	7 854	11 848	5 970
Chile	64	588	320	246	-1 387	-1 983
Mexico	-13 466	-5 113	-5 951	-12 118	-26 574	-23 670
Other countries ^a	-8 228	-481	-2 640	-1 957	-11 696	-12 095
Latin America	-22 877	5 431	9 139	-1 640	-34 206	-41 874

Source: ECLAC, on the basis of official figures.

^a Includes Barbados, Bolivia, Colombia, Costa Rica, Ecuador, Guatemala, Jamaica, Panama, Uruguay and Venezuela.

v) The impact of trade opening was in fact felt most keenly from 1990 onward, when the effects of trade liberalization were compounded by a sizeable inflow of capital to the region; this occasioned a significant loss of competitiveness in most of the countries due to the resulting appreciation of their currencies (on the order of 10%, on average, between 1990 and 1994). As a consequence, imports of manufactures almost doubled, and the trade balance in manufactures went from a surplus of US\$ 9 billion in 1989 to a deficit of US\$ 42 billion in 1993. Nonetheless, there was no marked substitution of imports for domestic manufactures in this period either, since 65% of the increase in imports of manufactures in 1989-1992 was accounted for by capital goods —which do not usually compete with domestic products (see table 4). In fact, domestic output of capital goods also increased from 1990 on due to a rise in the investment rate, while total manufacturing output climbed slightly, rising from 2.2% per annum in the 1980s to 3.3% per year in 1990-1994.

What is significant, however, is that, with few exceptions and in spite of the increasing growth rate of manufacturing output, employment in manufacturing dropped so much between 1990 and 1993, that the productivity (value-added per worker) of Latin American industry over the same period rose at a rate of 7% per year (see table 5). Both the sharp drop in employment and the marked gain in productivity are clearly attributable to the restructuring undertaken by firms in an effort to cope with the mounting external competition fueled by trade liberalization and the appreciating exchange rate.⁴ This leads to the *second basic hypothesis* of this study, which is that liberalization and restructuring affected productivity (positively) and employment (negatively) much more than production. The fact that —unlike what occurred in other periods— productivity gains in 1990-1992 were similar (about 7% per year) in the four major industrial subsectors —processed foodstuffs, non-durable consumer goods, intermediate goods and capital goods— is consistent with this interpretation (see table 6).

In view of the importance of productivity as a determinant of competitiveness, and bearing in mind the fact that liberalization has triggered a major restructuring process and, in consequence, significant improvements in productivity, the following section will be devoted to a more in-depth analysis of productivity trends and their implications for the formulation of a productive development policy aimed at boosting competitiveness in the region's economies.

To sum up, the de-industrialization which occurred after 1980 was not due primarily to trade liberalization, but rather to flaws in macroeconomic adjustment and stabilization policies. Three conclusions can thus be drawn:

- i) The costs of trade liberalization were not as great as is often alleged;
- ii) If the costs of liberalization were not so great, then import substitution cannot have been as inefficient as is sometimes asserted; and
- iii) Lastly, if the net costs of the de-industrialization caused by liberalization were not as high as had been thought, then there is less need to give the hardest-hit sectors special treatment, since the "healthy" part of the economy will be able to absorb them in a productive manner.

Table 4

**LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES):
INTERNATIONAL TRADE IN MANUFACTURES, 1980-1992**

LATIN AMERICA (TOTAL)						
EXPORTS	1980	1985	1989	1990	1991	1992
Foodstuffs	11 010	8 041	14 132	12 636	12 119	13 450
Consumer goods	3 602	4 038	6 636	6 995	7 603	8 261
Intermediate goods	16 538	20 137	30 027	31 273	30 393	31 862
Capital goods	5 426	8 191	14 907	15 048	17 139	19 558
TOTAL MANUFACTURES	36 577	40 407	65 703	65 952	67 254	73 131
IMPORTS	1980	1985	1989	1990	1991	1992
Foodstuffs	4 202	1 942	4 695	5 505	5 970	7 348
Consumer goods	2 946	2 195	3 394	4 513	6 287	8 154
Intermediate goods	21 245	12 715	20 833	22 492	28 252	31 790
Capital goods	31 060	18 123	27 642	35 082	45 004	60 046
TOTAL MANUFACTURES	59 454	34 976	56 564	67 592	85 514	107 377
TRADE BALANCE	1980	1985	1989	1990	1991	1992
Foodstuffs	6 808	6 099	9 437	7 131	6 149	6 102
Consumer goods	656	1 843	3 242	2 481	1 317	108
Intermediate goods	-4 707	7 421	9 195	8 782	2 141	72
Capital goods	-25 634	-9 932	-12 735	-20 034	-27 865	-40 488
TOTAL MANUFACTURES	-22 877	5 431	9 139	-1 640	-18 260	-34 206

Source: ECLAC, on the basis of official figures.

Table 5

**LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES):
PRODUCTIVITY GAINS IN MANUFACTURING**
(Average annual growth rates)

	1970-1980	1980-1983	1983-1990	1990-1993
Argentina	3.1	2.7	2.0	10.3
Brazil	2.4	2.3	-0.3	9.9
Chile	2.8	4.5	-3.5	3.8
Mexico	2.8	0.7	4.3	3.1
Other countries ^a	0.8	1.7	0.8	3.0
Latin America	2.0	2.0	1.0	7.1

Source: ECLAC, on the basis of official figures.

^a Includes Barbados, Bolivia, Colombia, Costa Rica, Ecuador, Guatemala, Jamaica, Panama, Uruguay and Venezuela.

Table 6

**LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES): VALUE ADDED
PER WORKER IN MANUFACTURING SECTOR**
(Average annual growth rates)

	TOTAL			Foodstuffs			Non-durable consumer goods			Intermediate goods			Capital goods		
	1970-1980	1980-1990	1990-1992	1970-1980	1980-1990	1990-1992	1970-1980	1980-1990	1990-1992	1970-1980	1980-1990	1990-1992	1970-1980	1980-1990	1990-1992
Argentina	3.1	2.2	12.0	2.0	1.2	18.0	3.3	0.0	13.5	2.2	3.1	5.6	4.1	1.4	21.7
Brazil	2.4	0.4	7.5	1.8	0.4	5.6	2.7	-0.9	7.1	2.2	1.3	9.8	2.0	0.4	4.0
Chile	2.8	-1.2	3.5	4.2	-3.4	-0.9	3.2	-2.8	9.8	0.6	0.3	5.3	2.5	-0.9	7.2
Mexico	2.8	3.2	4.5	2.5	2.4	5.1	3.0	1.1	4.8	1.9	4.9	3.9	4.0	2.4	4.6
Other countries ^a	0.8	1.1	2.3	-1.3	0.2	3.0	-0.4	-0.4	5.8	2.5	1.7	-0.6	-0.1	0.6	7.0
Latin America	2.0	1.3	6.9	1.2	0.9	6.7	1.7	-0.6	7.8	1.5	2.4	6.0	2.7	0.9	7.5

Source: ECLAC, on the basis of official figures.

^a Includes Barbados, Bolivia, Colombia, Costa Rica, Ecuador, Guatemala, Jamaica, Panama, Uruguay and Venezuela.

III. THE PRODUCTIVITY GAP: FOUR FACTS AND FIVE IMPLICATIONS

First, the *total* factor productivity gap (TFP)⁵ existing between Latin America and the developed countries is on the order of 2.5:1. *This vast disparity is the central fact that needs to be understood when devising a development strategy for the region.* The productivity gap is manifest not only in the use of technologically obsolete equipment and outdated production processes ("hard technologies") but also in a poor organization of work procedures, hierarchical and confrontational industrial relations, inattention to quality, excessive inventories, the lack of systematic or highly sophisticated marketing techniques, and inefficient after-sales service ("soft technologies"). Thus, the existence of such a wide gap points to a serious underutilization of the organizational, quality-control and marketing methods and technologies available at the international level.

Second, the productivity gap widened substantially during the postwar period (see figure 1). Between 1950 and 1989, the pace of TFP growth in Latin America was only one-seventh as fast as it was in the newly industrialized economies and less than one-fifth the rate observed in the industrialized ones. What is more, even during the period when TFP growth was strongest (1950-1973), the rate was still little more than half of that recorded in the newly industrialized Asian economies. TFP growth stalled between 1973 and 1980 and then fell precipitously as a result of the macroeconomic disequilibria generated by the 1980s debt crisis. As a consequence of the slow pace of its TFP growth, the region's share in total imports of the countries of the Organization for Economic Cooperation and Development (OECD) —the largest and most demanding market in the world— from 8.3% in the early 1960s to 4.8% in 1992.

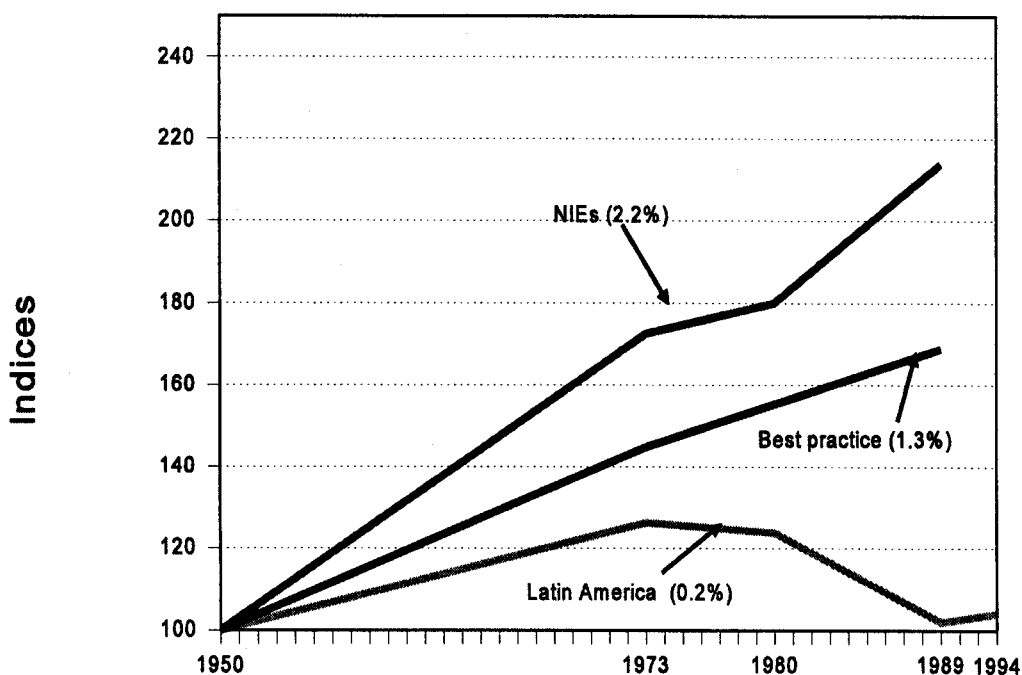
Third, these differences in productivity between the region and developed countries as a group hold true in each and every one of the countries and individual sectors. The evidence available suggests that TFP gaps between countries occur not so much because production is concentrated in low-productivity sectors, but rather because nearly all subsectors of industry, including producers of intermediate and capital goods, fall far short of best practice (see table 7).⁶ For example, in a number of industries, such as oil refineries and associated products, the region's productivity⁷ comes close to United States levels; productivity is 64% of the United States level in the non-ferrous minerals sector and 50% in rubber and in iron and steel products; but in the remaining 24 manufacturing subsectors (which account for nearly 75% of the value added in the manufacturing sector), the region's sectoral productivity levels are less than 35% of the levels posted by their United States counterparts and are only around 30% on average.

Fourth, these sectoral averages undoubtedly mask vast differences in productivity within each sector, which are a reflection of the *heterogeneity that characterizes the region*. On the one hand, productivity varies markedly with company size. For example, while productivity in large firms in Colombia's clothing and footwear sectors (those with more than 50 workers) is around 25% of that of a similar company in the United States,⁸ productivity in small and medium-size firms (less than 50 workers) is barely 10% of that of like firms in the same sectors in the United States. On the other hand, just as the

diffusion of technology is an as yet incomplete process at the international level, it is also a slow process at the national level, and this leads to great unevenness in productivity levels among companies of the same size and within the same sector. This problem has been exacerbated by the very restructuring process arising out of the region's change in strategy in the mid-1980s. Only a fraction of Latin American companies — accounting for perhaps 40% of the tradables sector's GDP— have implemented some form of "offensive

Figure 1

TOTAL FACTOR PRODUCTIVITY, 1950-1994: LATIN AMERICA, BEST PRACTICE AND NEWLY INDUSTRIALIZED ECONOMIES (NIEs) OF ASIA
(Indices 1950 = 100)



Best practice: 1950-1973, USA; 1973-1992, OECD.

Source: A. Hofman, "Capital accumulation in Latin America: A six country comparison for 1950-1989", *Review of Income and Wealth*, December 1992 (updated).

implemented some form of "offensive" restructuring that has brought them closer to international standards of best practice.⁹ The majority of companies have merely adopted "survival" strategies, whereby they are able to improve upon their own productivity levels but nonetheless continue to fall far short of international best practice; so that average productivity has remained very low.

Table 7

**LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES): PRODUCTIVITY
(VALUE ADDED/LABOUR) COMPARED WITH UNITED STATES, 1990**
(Percentages)

ISIC	SECTOR	Latin America ^a	Argentina	Brazil	Mexico	Rest ^b
300	TOTAL MANUFACTURING	26%	27%	22%	34%	26%
311	Food	18%	16%	17%	23%	16%
321	Textiles	37%	44%	37%	38%	32%
322	Wearing apparel	28%	30%	25%	69%	17%
324	Footwear	19%	18%	18%	19%	19%
331	Wood and wood products	19%	15%	16%	29%	19%
341	Paper and pulp	25%	19%	21%	36%	28%
342	Printing and publishing	21%	23%	16%	35%	18%
351	Industrial chemicals	22%	27%	21%	22%	20%
353	Petroleum refineries	76%	117%	70%	75%	69%
354	Products of petroleum and coal	57%	39%	58%	77%	27%
356	Plastic products	26%	18%	25%	36%	23%
362	Glass and glass products	30%	26%	29%	37%	25%
369	Other non-metallic mineral products	18%	17%	15%	18%	25%
371	Iron and steel	41%	36%	37%	69%	31%
372	Non-ferrous metals	56%	43%	40%	39%	102%
381	Metal products	25%	24%	22%	36%	21%
382	Non-electrical machinery	21%	17%	22%	24%	15%
383	Electrical machinery	29%	30%	30%	25%	24%
384	Transport equipment	25%	18%	22%	39%	22%
385	Professional and scientific equipment	37%	13%	32%	91%	21%
	Total factor productivity	40-50%				

Source: ECLAC, Division of Production, Productivity and Management.

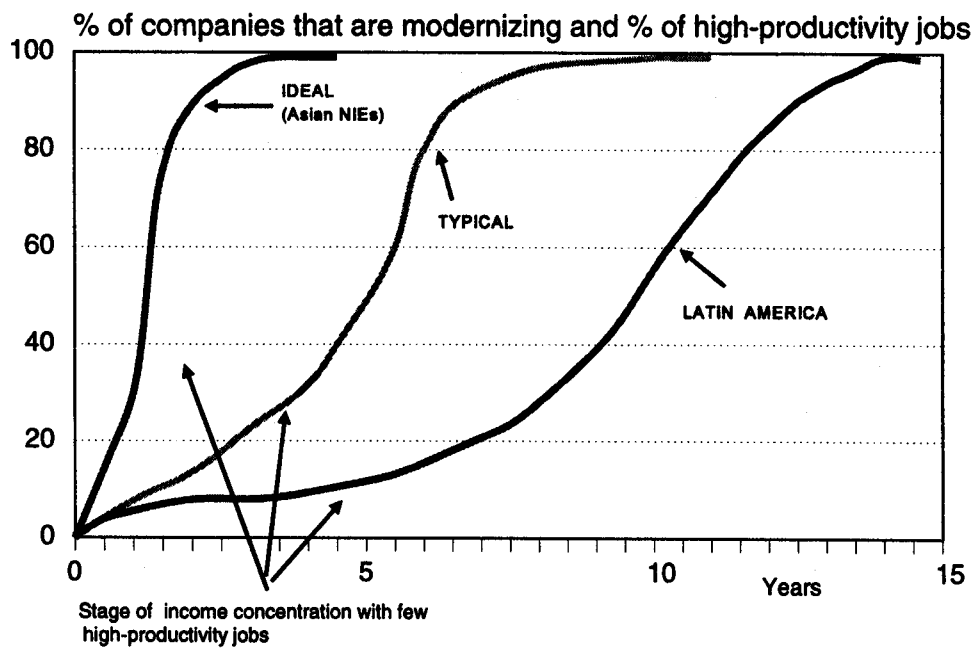
^a Includes Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Ecuador, Jamaica, Mexico, Uruguay and Venezuela.

^b Includes Barbados, Bolivia, Chile, Colombia, Ecuador, Jamaica, Uruguay and Venezuela.

Thus the slower the diffusion of best practices —i.e., the flatter the S-curve characteristic of the domestic diffusion process (see figure 2)— the greater the number of companies operating at low levels of productivity and the smaller the number of high-productivity, well-paid jobs. Moreover, since wages are determined by labour productivity, not within the firm itself but in the economy as a whole, wage levels will reflect the low productivity of the majority of jobs. Thus, the smaller the percentage of companies that modernize, the more concentrated the distribution of income will be. This concentration will not be reversed until most jobs have moved to the high-productivity end of the scale, which in turn depends on the speed of technological diffusion.

Figure 2

RELATIONSHIP BETWEEN THE SPEED OF TECHNOLOGICAL DIFFUSION, ECONOMIC GROWTH AND INCOME DISTRIBUTION



Source: ECLAC, Division of Production, Productivity and Management.

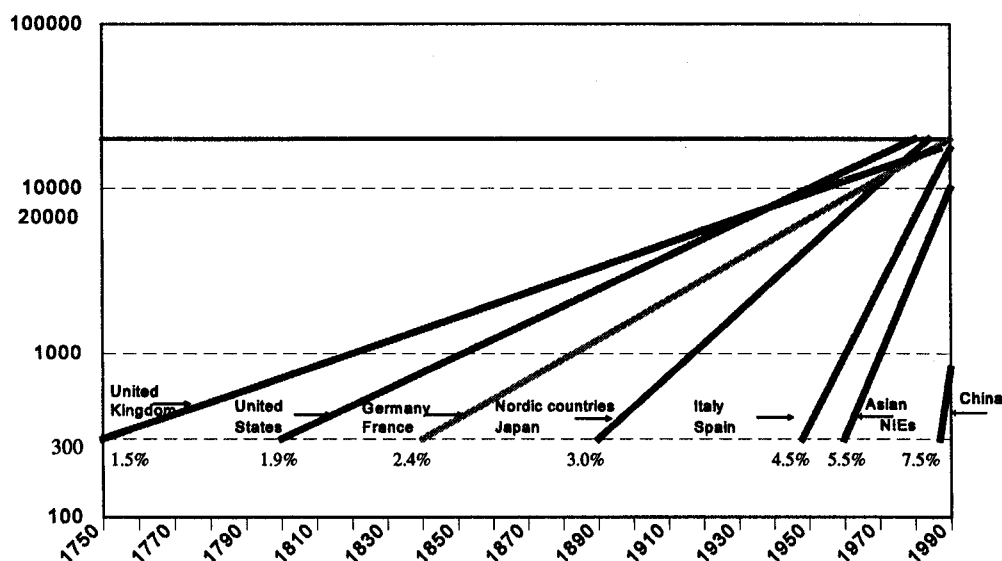
These facts have five important implications for the design of a productive development policy.

The *first*, and by far the most important, is that, although the productivity gap is a sign of underdevelopment, thanks to it countries can accelerate growth if they can harness internationally available technologies and thus leapfrog stages of development. This is the great potential advantage of *latecomers to development*. Hence, the further a country is from the knowledge frontier, *once it takes off and its growth rate accelerates*, the faster that growth rate tends to be.¹⁰

This is why China is currently growing faster than the newly industrialized economies (annual per capita rates of 8%-10% versus 6% for the NIEs) (see figure 3), just as the newly industrialized economies expanded faster than Japan, Russia and the Nordic countries (which embarked upon their development process in the late nineteenth century), and these, in their turn, grew more rapidly than Germany and France, whose development dates from around 1840, and so on. Latin America's relatively slow rate of growth — even in the postwar period, when it was at its best— makes it one of the notable exceptions to latecomer development; this is therefore the phenomenon that needs to be explained and overcome when formulating a productive development policy.

Figure 3

GROWTH AND "LATE STARTER" DEVELOPMENT: A SCHEMATIC HISTORICAL OVERVIEW
(Per capita income, logarithmic scale)



Source: ECLAC, Division of Production, Productivity and Management.

Second, in the past this wide productivity gap was attributed to the fact that production was concentrated in low-productivity sectors, notably agriculture. This was then put forward as an argument in favour of industrialization. Later it also served as a basis for advocating the promotion of certain *types of industries*. This is why industrial development policy tended to be equated with the establishment of new sectors that were not yet part of the input-output matrix and whose (actual or potential) productivity was assumed to be higher than that of the majority of "traditional" finished-goods sectors. Hence the emphasis, during the second phase of the import-substitution strategy, on industries producing intermediate inputs, and later on metalworking and capital goods sectors.

Nevertheless, the great differences in sectoral productivity between the countries of the region and those in the developed world in nearly all areas of manufacturing suggests that this sectoral or "vertical" policy approach, which was once so prevalent, is basically mistaken. It is not so much a question of creating new sectors to fill in the gaps in the input-output matrix —as though (total) productivity could automatically be provided by new sectors (which holds true only exceptionally)— but rather of improving total factor productivity in the economy as a whole.

Third, the vast differences in productivity to be found among firms within the same sector suggests that, *at the current stage of development*, the main challenge for a development policy in microeconomic terms is to identify the technologies most suited to the region, from among the extensive range of internationally available technologies, and then to promote their speedy adoption, adaptation and diffusion among the great mass of firms that are working with obsolete equipment and methods. This does not, of course, deny the importance of having at least a certain basic minimum of scientific and, more specifically, technological, infrastructure. On the contrary, such infrastructure is a *sine qua non*, since *without such a base, it would be impossible to identify the most suitable technologies, or to acquire, transfer or adapt them quickly and effectively* (we will return to this point later). In short the basic thrust of an industrial development policy —at least at this stage of development, well behind the international technological frontier is *to speed up the diffusion of best practices, or, in other words, to shift the S-curve further to the left, making it as steep as possible* (see figure 2).

Fourth, the fact that the vast majority of sectors operate with a TFP far removed from the international technological frontier makes the concept of comparative advantage relatively hard to pre-define (except in such obvious cases as the rents obtained from natural resources). Those sectors that manage to close the gap faster than the others will be the ones that will gain a comparative advantage. Comparative advantage is thus not simply a given; it can be acquired by closing the productivity gap between it and developed countries more quickly than other sectors in the same economy. Thus, in a sense, *a sector's competitiveness is not something that is defined exclusively in terms of its productivity relative to analogous sectors in the rest of the world; instead, it is also a function of the degree to which it can raise its productivity relative to the other sectors of its own economy. A sector will thus tend to have a comparative advantage if it is relatively closer to international best practice than the other sectors of the economy.*

Fifth, the steep drop in productivity observed during the 1980s shows just how critical it is from the standpoint of industrial policy to keep basic macroeconomic disequilibria within certain limits (Hausmann and others, 1995). The macroeconomic instability resulting from the external debt crisis, which was, in most cases, exacerbated by poorly designed or badly implemented stabilization policies, led to sharp drops in production, adversely affecting the use of installed capacity, investment, the work of

engineering and design teams, and innovation. Efficiency improvements at the firm level did not succeed in offsetting the serious setbacks occasioned by these macroeconomic disequilibria, and productivity consequently fell in virtually every country of the region during the 1980s. This implies that both macroeconomic stability and microeconomic efficiency are essential factors in raising competitiveness.

IV. A PRODUCTIVE DEVELOPMENT POLICY, OR HOW TO CLOSE THE PRODUCTIVITY GAP

The offsetting advantage of having such a huge productivity gap is that, if the countries of the region succeed in adopting the internationally available best practices that are most suited to their needs, they will then be able to switch onto an accelerated growth track, as have all the other successful "latecomers" to development. A key factor in attaining that objective is the achievement of a greater degree of international competitiveness.

In order to raise competitiveness, it is necessary to improve efficiency at four levels: first, at the plant (*microeconomic*) level, since companies in the region operate far below the level of best practice found in the international economy. However, competitiveness and productivity are a function of efficiency not only within the firm, but also the environment (factor markets and physical and institutional infrastructure) in which the firm operates (*mesoeconomic level*). Lastly, improved productivity at the micro- and mesoeconomic levels will serve little purpose if achieved under conditions marked by *severe macroeconomic disequilibria* or by a *misguided development strategy* (as, we can now see, occurred to a progressively greater extent with import-substitution policy starting in the mid-1960s). The overall efficiency of these four (*micro-, meso- and macroeconomic, and strategic*) levels —which has been termed *systemic* competitiveness—is, in the final analysis, what determines the extent of one country's competitiveness *vis-à-vis* the rest of the world. Systematic, sustained improvements in productivity are the only way to achieve *on-going* —as opposed to *one-time*— gains in competitiveness.

A. CONSENSUS

There is a growing degree of consensus as to what general lines of economic policy (the *macro* components) need to be followed in order to narrow the wide productivity gap that currently exists between the developing countries and the developed world. These include: i) maintaining basic macroeconomic equilibria as a basis for the achievement of high rates of saving, an appropriate allocation of investment and full use of installed capacity; ii) carrying forward the trade liberalization process with a view to building stronger linkages between the economies of Latin America and the Caribbean and the world's largest and most dynamic markets, thus enabling the region to benefit from economies of scale and from the invigorating effect of healthy competition; and iii) giving market forces and the private sector a greater role to play in spearheading this form of development, since the world is now fully aware that not only the market, but the State, too, suffers from imperfections.

With respect to the first of these requirements, if there is one lesson to be learned from the "lost decade" of the 1980s, it is that if macroeconomic disequilibria are not kept within certain limits, the resultant instability may jeopardize economic growth or even halt

it altogether by focusing economic agents exclusively on the very short term, thereby prompting financial speculation and precluding any reasonable sort of economic planning. In addition, it has been observed that the worst setbacks as regards income distribution stem either from a loss of control over macroeconomic equilibria, or from efforts to restore those balances. Hence the current consensus, spanning the entire political spectrum, that maintaining macroeconomic equilibria within certain tolerances is a precondition (though not in itself sufficient) for consolidating growth and improving income distribution.

Second, at the *strategic* level, it is also generally agreed that the region should increase its linkages with the international economy in order to overcome the growth inhibiting effects of its relatively small domestic markets —except, of course, in the case of Brazil and possibly Mexico. Of course, from the neoliberal perspective import-substituting industrialization was *always* a mistake. In contrast, neostructuralists believe that such a strategy made sense at one time, in view of the fact that, from the time of the Great Depression of the 1930s until at least the final stage of European reconstruction in the late 1950s, the prevailing external environment was hostile to international trade. Nonetheless, this inward-looking strategy was always regarded as *an initial* (learning) phase of industrialization. Yet this phase lasted far longer than it should have. It is now time for the region to capitalize on its industrial base and learn to compete in international export markets. If countries adopt this course of action, they will be in a position to benefit from the production know-how they have already acquired, the quality and efficiency incentives generated by international competition, and the economies of scale offered by external markets (especially for small countries or those with small domestic markets).¹¹

Third, everybody now recognizes (and this is especially true of neostructuralists, who overlooked this fact in the past) that, while the market certainly has its flows, State intervention, too, has its limitations, especially when government becomes involved in an ever-increasing number of fields of activity. Typically, this sort of overextension on the part of the State has undermined its ability to perform even those functions that are clearly its exclusive responsibility (such as maintaining macroeconomic equilibria, providing access to at least a basic minimum, in terms of both quality and quantity, of education, health care and social security, and ensuring public safety).

This state of affairs has led to a positive reassessment of the merits of the market —even with all its imperfections— since now it is being compared, not with some utopian sort of State intervention, but with a real-world public sector that *also* suffers from its own limitations and shortcomings. Thus, it has become a matter of improving both the workings of the market and the action of the State, rather than of *expanding* one at the expense of the other. This has led to a recognition of the fact that production is primarily the job of the private sector; by the same token, the idea of the State as entrepreneur has been superseded by a concept that focuses on the satisfactory performance of its essential functions —which include the promotion of development. And, surely, in contrast with the past —when State intervention was not only excessive, but also tended to supplant the market— any intervention in today's environment has to be not only selective (aimed at overcoming the most critical bottlenecks) but also *market friendly*.

B. DISAGREEMENTS

However broad a consensus may exist concerning the three lines of policy mentioned above, at the strategic and macroeconomic levels these are necessary conditions —though

not enough in and of themselves— sufficient for skipping stages, closing the productivity gap and moving onto a faster-growth track. Policies at the mesoeconomic level (sectors and factor markets) and the *microeconomic* level (the firm) are also required. But it is in these areas that major disagreements arise: i) What are the main obstacles to be overcome at the meso- and microeconomic levels?; ii) And what, then, are the most suitable tools for this task? It is simply a matter of getting prices "right" (i.e., decontrolling prices) or are active policies needed to overcome the most critical bottlenecks?; and iii) What kind of role should the State play: an active or a passive one? And if active, to what degree?

At the risk of oversimplifying the situation, two markedly different approaches and sets of policies can be identified. On the one hand, there is the *neoliberal* approach, according to which the main obstacles to be overcome at the meso- and microeconomic levels are market rigidities that, in *large part are the result of economic policy itself or of the economy's institutional framework*. The neoliberal school of thought focuses on the need to liberalize the market and increase its flexibility—in the belief that if this were done the market would function quite satisfactorily— or that it *assigns a relatively neutral, "hands-off" role to the State*. One of the assumptions underlying this approach is that the going price in a deregulated market is the "correct" long-run equilibrium price.

In contrast, the neostructural view claims that there are certain *fundamental* flaws in the market which mean that the market-clearing prices, i.e., those that balance supply and demand at any given point in time, may not be long-run equilibrium prices, and hence that such prices will not reflect the real scarcity of goods and, above all, of factors. Accordingly, neostructural thought sees the principal obstacles to be overcome as deriving, *at the mesoeconomic level, from major gaps and flaws in factor markets and, at the microeconomic level, from externalities* associated with the identification, adoption, adaptation, and dissemination of international best practice, leading to underinvestment in such activities by individual firms. This is why the neostructuralist school contends that *an active State and selective meso- and microeconomic policies* are needed in order to alleviate the most critical bottlenecks in factor markets—technology, foreign exchange, physical capital and human capital—and to help firms internalize the externalities associated with the process of absorbing modern technologies (i.e., to correct flaws in the information market at the plant level).

C. LESSONS CONCERNING A MODERN PRODUCTIVE DEVELOPMENT POLICY

The above-mentioned interpretation is not simply a theoretical construct. On the contrary, *the exceptional dynamism of the newly industrialized economies of Asia*, and the notable export successes achieved by some Latin American economies in cases where liberalization has been accompanied by a sensible, redesigned industrial policy (e.g., the motor vehicle and the automotive parts and spare parts industries, especially in Brazil and Mexico, and the wood, paper and pulp industries in several countries of the region) suggest that it is possible to acquire competitive advantages by means of productive development policies that reinforce, rather than supplant, market forces, provided that the following conditions are met:

i) Incentives must be of a *temporary* nature, since it is only when a definite period is set in which firms must learn to compete internationally that businessmen will shed their rent-seeking mentality and adopt an attitude that stresses genuinely productive activities;

ii) *The volume of production needs to be large enough to take advantage of economies of scale*, whether this is the result of a sizeable domestic market (the traditional sectors in most of the countries, the motor-vehicle assembly industry in Brazil and Mexico), or because plans to export were made from the outset (as in the case of Mexico's production of motor-vehicle engines and of other production activities geared towards foreign markets by means of export promotion policies, as in Brazil and Colombia), or because the production facilities in question are continuous-process industries, producing goods that can easily be exported should domestic demand prove insufficient (as occurs with a large portion of the production of intermediate inputs in Argentina, Brazil and other countries) (see Katz, 1996);¹²

iii) It is important to *avoid the use both of outdated technologies and of leading edge technologies that are still evolving rapidly*. Outdated technologies should be avoided because any comparative advantage will be based solely on the prospect of keeping labour costs low, an advantage which in any case may easily be lost as a result of technological progress. But care should also be taken to avoid sectors in which technology is progressing by leaps and bounds because no sooner will that technology be mastered, than international best practice will have made another leap forward (apparently this goes some way towards explaining the failure of the pharmaceutical industry in some countries and of capital goods or parts production activities that served producers of intermediate inputs at a time when few factories of this type existed). Thus, experience suggests that it is important to adopt a *relatively advanced, yet already tested and well-established technology* (as was the case of motor-vehicle engines produced in the facilities located in Hermosillo, Mexico), which can be mastered and even adapted to some degree before it is replaced by some other, radically different technology. In practice, the idea is to avoid learning processes that lead nowhere (as happens with outdated technologies) or that are concentrated in specific areas where developing countries are not capable of *remaining* close to international best practice because the rate of technological progress is too fast (e.g., informatics technology in Brazil). This means that the chosen production technology should not only be one which, within a reasonable period of time, will enable the country to conform to standards of international best practice, but should also be one in which it is *capable of keeping up to date*;

iv) *The production activity in question should be based on some type of comparative advantage*, such as proximity to a natural resource in cases where transport costs are high; or closeness to a large, fast-growing market; or the availability of readily trainable workers and suppliers or of competent specialists who are knowledgeable about the current technology but whose level of remuneration is relatively low; or some other factor.

Experience also suggests that there is not *one*, but rather a wide variety of possible approaches to successful intervention, such as: i) development led by conglomerates (Korea) or by small and medium-sized enterprises (Chinese Province of Taiwan); ii) growth driven by national firms (Korea, Chinese Province of Taiwan and Japan) or by direct investment on the part of transnational corporations (Singapore); iii) utilization of comparative advantage based on mass markets, or on entry into niches or specialized segments of the market; iv) development based on the use and processing of natural resources and the subsequent formation of backward, forward and even lateral linkages¹³ (Denmark, Sweden and Finland, among others, in the past; and, currently, Thailand, Malaysia and Indonesia), as well as development in the absence of abundant natural resources (Japan, Korea and the Chinese Province of Taiwan); v) industrialization that is either geared towards exporting from the outset, or that is initially oriented towards import substitution but is premised on the idea of exporting at some later stage; vi) an initial phase

of "liberalization" based on an *active* export promotion drive (in some cases, such as Korea, countries may go so far as to set explicit export performance targets), followed by a limited effort to open the economy up to inputs and, later, more extensive trade liberalization (as occurred in most of the newly industrialized Asian economies), or free trade virtually from the start (Hong Kong, Singapore); and vii) strategies noteworthy for their ability to convert obstacles into advantages (for example, the policy of "permanent employment" —under which income is tied to performance— that has been applied in Japan came about partly as a response by employers to "progressive" laws imposed during the occupation by the United States authorities —old-style "*new dealers*" interested in preventing Japan from re-industrializing too swiftly— whose provisions favoured unions and made layoffs difficult).

V. SPECIFIC PRODUCTIVE DEVELOPMENT POLICIES: A COMPARISON OF THE NEOLIBERAL AND NEOSTRUCTURAL APPROACHES¹⁴

In order to close the productivity gap and take advantage of technological and organizational breakthroughs achieved by the more advanced countries, and by so doing "leapfrog" stages of development and move on to a fast-growth track —as has tended to occur in the successful "latecomers" to development—, in addition to "sensible" macroeconomic and trade policies, two sets of complementary policies are required which will reinforce market forces instead of taking their place (ECLAC, 1996): i) rather than "vertical" or sectoral policies, whose aim is to "pick winners", there is a need for "*mesoeconomic*" or *horizontal policies* —i.e., policies designed to enhance the systemic competitiveness of the *environment* in which the firm operates, inasmuch as the productivity gap separating the countries of the region from international best practice is substantial in *virtually all* production sectors. In particular, government action should focus on filling the gaps and rectifying the most critical bottlenecks in *factor markets*, which involves implementing policies on technology, export promotion, financing, training and infrastructure; and ii) *microeconomic policies* to help firms to internalize the externalities associated with the identification, adoption, adaptation, and diffusion of the best practices and technologies —"hard" and "soft" ones alike— available at the international level.

A. POLICIES AT THE MESOECONOMIC LEVEL

1. The foreign exchange market: Promoting exports

Firms underinvest in the development of new export products and in the opening of new markets abroad not only because the costs of such activities, in terms of both time and resources, are high for any *individual* producer, but also because the first producers to open up a market or introduce a new export product are not able to capture the full benefits of those activities; naturally, these costs are proportionally greater for small and medium-sized enterprises. In addition, the absence of medium-term foreign exchange futures market increases the degree of uncertainty as to the stability over time of key prices (the real exchange rate, in particular). This points up the need for an exchange rate policy which, in cases where exchange risk insurance on exports is not feasible, simulates a futures market so as to provide exporters with signals regarding foreseeable macroeconomic trends over the medium and long terms. In practice, exchange rate uncertainty tends to have a greater impact on non-traditional exports and on domestic and less diversified firms.

Table 8

NEOLIBERAL AND NEOSTRUCTURAL APPROACHES: DIFFERENT MESO- AND MICROECONOMIC POLICY INSTRUMENTS

Key areas	Instruments used in the neoliberal approach	Additional problem	Instruments used in the neostructural approach (ECLAC)
1. Exports	Neutral: high real exchange rate and low tariffs	Neutral incentives that lead to under-utilization of the industrial base created by import substitution	In addition, temporary bias in favour of non-traditional exports (especially new and pioneering ones), and of the penetration of new markets
2. Saving (raising it) a) Public b) Private	Reduce expenditure Decontrol interest rates Hold down real wages	Tax yield insufficient to finance the necessary public investment in infrastructure and human capital Regressive	Increase the (currently low) tax burden of the private sector (by expanding the tax base and curbing tax evasion) Maintain positive real interest rates; increase forced saving under the social security system (or reduce the actuarial deficit)
3. Investment (improving allocation)	Free interest	Segmentation: only large firms have access to long-term capital	Develop capital markets and put an end to their segmentation, making them more accessible to small and medium-sized enterprises through leasing, factoring and access to <i>venture</i> capital
4. Employment	Deregulate the labour market; control real wages	Already confrontational labour relations worsen; low productivity and underemployment	Link wages, at least in part, to the individual firm's output and performance in order to increase productivity and boost employment

Table 8 (concl.)

Key areas	Instruments used in the neoliberal approach	Additional problem	Instruments used in the neostructural approach (ECLAC)
5. Private investment in human capital	None	Unavailability of private loans for investment in human resources	Develop capital markets to finance higher education and training with private loans, using individual retirement funds as collateral
6. Technological development	Ignore; this is a "black box"	Huge productivity gap due to failure to take advantage of best practices in "hard" and "soft" technologies	Organize tours of best practice firms abroad; link up scientific and technological research to production sectors; promote the market in consultancy and modernization expertise; cofinance a set percentage of consultancy services for firms; undertake industrial extension activities
General	"Hands-off"/deregulate		Proactive/promote

The standard neoliberal proposal for an outward-looking approach — maintenance of a high, stable real exchange rate and low and as uniform as possible tariff rates— is insufficient, from a neostructuralist perspective, because even though it entails a reduction in the anti-export bias of protectionist policies, that bias will nonetheless remain so long as the tariff rate (at least in terms of its permanent level) is not zero. Even drawbacks will not completely offset this anti-export bias unless they also apply to all "indirect" exports (i.e., inputs for exports produced by domestic industries).

The main issue, however, is to determine whether a system of neutral incentives is sufficient, or whether the existing situation warrants the introduction of a *temporary* pro-export bias. Proponents of neoliberalism, true to their belief that the main task is to eliminate policy distortions, argue that a system of neutral incentives will suffice to promote exports. The advocates of neostructuralism, in contrast, feel that the foreign exchange market suffers from serious flaws and that additional State intervention is therefore justified in order to correct problems stemming from the very limited appropriability of such innovations as the discovery of a new non-traditional export or the opening up of a new market for a traditional product. Thus, in keeping with their views on underdevelopment and its causes, neostructuralists continue to espouse an active yet selective State but now one with an outward orientation, in contrast with its previous inward orientation (see figure 4). In fact, whereas in the past the assumption was that the

Figure 4
DEVELOPMENT ORIENTATION

		DEVELOPMENT ORIENTATION	
		OUTWARD-LOOKING	INWARD-LOOKING
R O L E O F T H E S T A T E	PASSIVE	ORTHODOX	
	ACTIVE	ECLAC AT PRESENT	ECLAC IN THE PAST

Source: ECLAC.

infant industries that the State sought to promote were producing for the domestic market, which made protective tariffs the most suitable instrument for this purpose, neostructuralists feel that today's true infant industries consist in the *penetration of external markets* with non-traditional products. Accordingly, the neostructuralist school is proposing the creation of a special incentive scheme which would temporarily have a pro-export bias (bigger drawbacks, loans at international rates, tax exemptions, etc.) in order to promote both new or pioneering exports and the development of new markets for traditional exports (Macario, 1995). Both tasks require an enormous innovation effort on the part of the first producers to penetrate an external market, and both generate significant externalities for those producers who follow in their wake, and for that reason these Schumpeterian innovators deserve a premium akin to that granted to technological innovators under existing patent laws.

2. Capital markets: Boosting saving and correcting the segmentation of access to resources

In order to foster development, it is necessary to boost saving and correctly allocate capital to the most profitable projects. However, national savings rates in the region are relatively low (they are below 20% of GDP at present and have never been over 24%, as compared to rates of nearly 30% in the recently industrialized Asian economies). Moreover, the domestic capital market *has serious flaws and is at an extremely early stage of development*, even in countries that are not troubled by any major macroeconomic imbalances and have large institutional investors, such as Chile. Three observations can be made in this regard: i) there is actually no true long-term capital market, except for the small number of firms listed on the stock exchange. The problem is not limited to small and medium-sized enterprises, but affects the great majority of local firms whose shares are not traded on the stock exchange; ii) access to capital markets is highly segmented, since the main criterion is a firm's ability to put up collateral (the result of past performance), rather than projections of future profitability. As a result, firms cover the bulk of their financing requirements with their own funds, which fosters productive inertia and works against a restructuring process that would promote the firms that have the best prospects; and iii) there are a number of formidable stumbling blocks which make it difficult to secure financing for new firms or for technological innovation — whether of products or processes.

The orthodox proposal for dealing with the problems of low savings rates and an imperfect allocation of capital stresses the decontrol of interest rates. Although negative real interest rates, such as those seen in the past, are indeed a disincentive to saving, experience shows that once real rates become positive, saving is very insensitive to subsequent rate hikes (due to the countervailing influence of substitution and income effects). This is why, in order to raise saving above this level, neostructuralists advocate the use of "forced saving" measures. One option is to increase the effective tax burden, which on average is 10 percentage points lower than in developed countries. However, in view of the region's relatively high marginal tax rates, it would be preferable to boost revenues by expanding the tax base and eliminating unjustified exemptions rather than by raising taxes. The other option is to increase institutional saving (e.g., by raising social security contribution rates or extending the contribution period in line with increased life expectancy) (ECLAC, 1996). Both proposals involve State intervention.

However, interest rates are not the only problem. In fact, access to capital markets is highly segmented, and this works to the detriment of small and medium-sized enterprises and greenfield projects, which, by their very nature, can offer few guarantees. In order to help eliminate segmentation and deepen capital markets, the neostructuralist school advocates the creation of new financial instruments, such as leasing, factoring, securitization, and the establishment of venture capital funds for new businesses.

3. The labour market: Promoting productivity and full employment

The main problem besetting the labour force of the region is not so much high unemployment as the fact that a large portion of the available jobs have very low levels of productivity and are thus poorly paid. Mainstream theory attributes the twin phenomena of underemployment and unemployment primarily to labour-market rigidities: hence that school of thought's emphasis on measures designed to facilitate firings and layoffs, restrict

unionization, make it difficult to strike, deregulate entry into certain jobs, and eliminate or reduce the minimum wage. Certainly, union monopoly is dangerous, as are occupational entry barriers (let us not forget the high costs of having ports controlled by small groups of stevedores, especially in the case of economies such as those of the region, whose development strategy is based on exports and openness). However, in focusing exclusively on these sorts of measures, analysts tend to overlook the other, more important types of rigidities associated with standard fixed-wage contracts, which cut the link between earnings and company performance, and thus sacrifice major potential gains in productivity while also making lay-offs the only practical method of dealing with economic downturns.

For the reasons mentioned above, neostructuralism advocates contracts which include a variable wage component that is tied to the firm's performance; contracts of this sort are currently in use in Japan, Korea and the Chinese Province of Taiwan. By linking workers' interests more closely to the performance of the company (or division or department or unit), such contracts tend to improve labour relations within the firm, as well as productivity (Weitzman and Kruse, 1990). Moreover, the fact that a significant portion of an employee's income is tied to the company's (or division's or unit's) performance has a positive impact on employment. This is because a conventional firm that pays fixed wages will tend to lay-off staff if demand for its product slackens, whereas, faced with a similar situation, a firm in which a portion of each employee's salary is based on that firm's own performance will be more willing to lower its prices in order to maintain demand (and thus its levels of output and employment) because it knows that its wage bill will also drop automatically.¹⁵

4. The human capital market: Creating a private credit market for investment in human resources

Despite high rates of return (20%-25% per annum), there is no *private* lending for investment in training and higher education owing to the lack of security inherent in this type of investment. Hence, there is underinvestment in human capital. Indeed, a typical worker receives barely one month of training during the 40 or 50 years of his or her working life. This is partly due to the fact that firms, that do have resources at their disposal, are not prepared to pay for general education —which only benefits the worker. This means that firms' investment in training will tend to concentrate on the skills required by the worker and peculiar to that firm, since these are the ones that the firm is most likely to appropriate fully, whereas investment in general training (which raises worker productivity over a range of activities) will tend to be suboptimal, since here the worker, rather than the firm, usually reaps the benefits. Consequently, firms tend to limit general training to the minimum required for workers to be able to understand how to operate new equipment or apply new work methods properly.¹⁶

Moreover, people planning to enter the workforce in the future, who potentially stand to benefit the most from training or higher education, lack the collateral they would need to obtain loans for that purpose. As a result, they underinvest in themselves, since their investment in human capital is determined by their families' financial capacity rather than by the future earnings those studies might provide the worker.

The standard neoliberal proposal for improving resource allocation —decontrolling interest rates— provides no answer to this problem of a lack of collateral. In light of this situation, neostructuralists propose the use of the potential beneficiary's pension rights (or, in the event of default, those of the guarantor) as security for private loans; punctual

repayment would be assured by means of automatically discounting loan payments, together with social security contributions, from the beneficiaries themselves (or their guarantors), once their studies or training had been completed. By thus surmounting the problems posed by a lack of collateral and by the difficulty of ensuring repayment, this approach would enable those gaining the most from general training and higher education, i.e., employees themselves, to secure ample access to the private credit market to finance their highly profitable investments in human capital.

B. POLICY AT THE MICROECONOMIC LEVEL

Although the competitiveness of the meso- and macroeconomic environment is of great importance, it is generally agreed that competitiveness and productivity are essentially generated at the level of the individual firm. However, since whatever happens *within* a company is solely the responsibility of the entrepreneur and not of the State, neoliberals assert that the public sector has no role to play at this microeconomic level.

Even microeconomic policy as such undoubtedly plays a secondary role, neostructuralists feel that it performs a key function as a catalyst for productivity increases at the individual plant level. Clearly, companies are the ones that have to catch up with developed countries' productivity levels, and in order to do so they have to select, adapt and adopt those of the internationally available best practices which are most appropriate for their country. The firm that is the first to modernize pays a price for the effort, however, since it can appropriate only a portion of the benefits. As each firm would prefer this cost to be absorbed by another, which it could then rapidly imitate at much less expense, there is sure to be underinvestment in such an effort.

That is why neostructuralists see this problem as possibly the greatest challenge to be overcome in modernizing firms and closing the productivity gap. In order to do so, this school of thought proposes that a massive programme should be implemented to speed up the diffusion of technology by confinancing visits to best practice firms overseas.

The idea would be to organize and confinance¹⁷ inspection missions by 15-20 persons (businessmen, engineers, technicians, supervisors, operators and trade unionists) from each of 50 subsectors (in the case of a typical country of the region) who would visit from six to eight foreign factories regarded as examples of best practice.^{18 19} The visits would be around six weeks in length, and on its return each group would submit a report (and videos) on best practices, not only in terms of equipment and technologies, but also with regard to production methods, organization of work, industrial relations, quality control, marketing, etc. Participants from each subsector would then present the results of the visits to between five and 10 other companies in their own country.

A similar initiative was conducted during the reconstruction of Europe after the Second World War under the European Recovery Programme (the Marshall Plan). At a very low cost (at today's prices around US\$ 20 million per country to send groups of some 20 people to 50 manufacturing subsectors), this programme enabled each participating company to achieve productivity gains on the order of 25%-50% without making any significant increases in net investment.²⁰ A similar initiative in the region ought to yield similar or even better results²¹ since the TFP gap between the developed countries and Latin America (around 2.5:1) is far greater than the gap that existed between the United States and Europe in the late 1940s.

This is not a gratuitous assertion. The region's iron and steel industry can be used as an example to demonstrate that it would indeed be possible to increase productivity significantly and move closer to best international practices quite quickly. Average productivity in this sector is on the order of 40% of what it is in the United States. According to a recent in-depth study, that figure could be raised to 80% in only a few years, *without substantial additional investment*, simply by restructuring and reducing the number of semi-redundant jobs, improving the way in which the production process is organized and investing in the elimination of bottlenecks. In addition, measures such as the following are suggested:

i) Cut the number of product lines and concentrate on a smaller clientele, since 29% of the sector's products and 23% of its customers generate 95% of its income. This would optimize batch production processes, thereby enabling minimum production runs to be achieved, and would reduce set-up times its associated costs, as well as the cost of maintaining inventories of too wide a product range;

ii) Streamline processes by making a single person responsible for following-up and coordinating each order all the way through from sales operations, production warehousing and invoicing, right up to delivery. It is estimated that doing away with the present sequential process, whereby an order is passed through a series of departments with no one in particular taking responsibility for its coordination, would cut order-handling costs by as much as 50%;

iii) Replace the current management mentality, which retains a traditional focus on products and processes, is autocratic in style and revolves around individual effort, with one that focuses on customers and processes, is more participatory in style and revolves around team effort;

iv) Make modest investments in automation and in efforts to eliminate critical bottlenecks, thereby increasing production by 10%-20% and improving quality;

v) Improve investment processes (in fact, there have been cases in which investments have taken over 10 years to complete and their total cost has turned out to be three or four times higher than what it would have cost to purchase an entirely new high-technology plant.

To sum up, a general programme of overseas technological missions would have an *extremely high cost/benefit ratio*, since the required investment would be small and could lead to significant increases in productivity. What is more, this would be a *large-scale* exercise, since, applying the same multiplier that the Marshall Plan achieved,²² the experience gained from such missions would be disseminated to 5,000-10,000 companies²³ at a cost of just US\$ 20 million. This would enable the region to take advantage of its late development by skipping a number of stages and thus rapidly advancing towards the global technology frontier.²⁴

A final point to note is that an essential precondition for a speedy, massive and effective adoption of technology and for its adaptation to local conditions is the existence of at least a basic minimum of scientific and, particularly, technological infrastructure, which incorporates some measure of independent research and development capabilities, and *is very closely linked to the production system* (Peres, 1993). The absence of such a minimum infrastructure would make it very difficult to implement this plan.

VI. STRATEGIC QUESTIONS

Finally, we need to address *questions of strategic importance*. One such question is whether a liberalization strategy is a sufficient condition for a successful strategy of export promotion. Some wonder whether an export base of raw materials will not turn out to be another dead end. There is also a debate over the significance of the successes recorded by the newly industrialized Asian economies, with some groups emphasizing the possibilities of "picking winners" and the benefits to be gained by boosting and promoting "high-tech" sectors, while others maintain that the success of the Asian interventionist experiment has been a matter of chance and point to the costly failure of Brazil's effort to promote its computer industry and to the mixed results of Korea's drive to develop its chemical sector.

There are also those who —like the author— believe that the best strategy for the region is none of the above, but rather the one adopted by, *inter alia*, the Nordic countries, Canada, New Zealand and Australia, all of which, like Latin America, are rich in natural resources. Taking these countries as the point of reference, the starting-point for the region's development and industrialization would be *its natural resources*. Thus, the most suitable development policy for the region would be one that accelerated the development of those activities that naturally tend to cluster around the forestry, fishery, agricultural, mining, iron and steel, energy, and tourism sectors and the other natural resources the region possesses in abundance.

Within this framework, the mature production "clusters" to be found in the developed countries could help to point out the way for the region's future development *strategy*. The analysis of the origins and development of such incipient clusters in the region and their comparison with the mature clusters of developed countries could be used as a basis for identifying opportunities and bottlenecks and for indicative planning (on an entirely voluntary basis, naturally) of the probable course of development of this region's own incipient clusters with a view to taking advantage of possible externalities by exchanging information on the different agents' plans, harmonizing aims and coordinating investment.

It is clear, then, that "industrial policy" not only has a place but has an important part to play in open economies, particularly in the case of latecomers to development such as the countries of Latin America and the Caribbean. The decisions as to what areas to emphasize (increased flexibility, or promotion) and what levels to focus on (the mesoeconomic level only or strategic and microeconomic levels as well?) will depend on which approach —neoliberal or neostructural— is adopted (see figure 5).

Figure 5

	STRUCTURALISM	NEOLIBERALISM	NEOSTRUCTURALISM
ROLE OF THE STATE	Unrestrictive, active	Passive	Selective, active
DEVELOPMENT ORIENTATION	Inward-looking	Outward-looking but neutral	Transitorily ultra export-oriented in favour of non-traditional exports
INDUSTRIAL POLICY	Vertical or sectoral	Microeconomic: none Mesoeconomic: horizontal (making factor markets more flexible) Strategy: none	Microeconomic: diffusion Mesoeconomic: horizontal (correcting factor market failures) Strategy: (promoting development of clusters around natural resources?)

Notes

¹ It should be emphasized that it is not possible to gauge the impact of trade liberalization without taking into account the level of, and trends in, the real exchange rate (ECLAC, 1994). A tariff reduction when in, the mid-1980s, the real exchange rate was extremely high as a result of the debt crisis, had a very different effect (generally positive and expansionary) than one carried out in the presence of a low exchange rate or abundant capital inflows, with the resultant upward trend in the exchange rate (as occurred in the region in the late 1970s and again from 1991 on).

² Since any adjustment made to cope with an external imbalance requires a transfer of resources from non-tradables to tradables, such a process must necessarily be gradual. In fact, an external imbalance may be corrected by means of expenditure reduction to whatever extent is necessary to "free up" resources, but such resources will not automatically be taken up by matching increases in the production of tradables. Among other reasons, this is because increasing exports takes time and money, while imports can be reduced as sharply as desired. Unfortunately, the region (with few exceptions, such as Brazil and Colombia) did not take advantage of the capital inflows at its disposal between 1979 and 1982 to shift production towards tradables, opting instead to postpone adjustment efforts altogether; as a result, when the supply of external finance dried up in August 1982, the necessary adjustment had to be made by means of a Draconian cutback in imports, which inevitably triggered a severe economic downturn (Bianchi and others, 1987).

³ This is a reference to the effects of runaway inflation, as occurred in Argentina (1988-1989), Bolivia (1983-1985), Brazil (1988-1990), Nicaragua (1987-1988) and Peru (1988-1990) or failed stabilization programmes which focused on controlling aggregate demand, but did not tackle the problems associated with the rigidity of inflationary expectations. This often prompted undesirable declines in output instead of a slowdown in inflation; examples of this phenomenon include Dominican Republic (1990-1991), Peru (1991-1992) and Venezuela (1989) (Ramos and Eyzaguirre, 1991).

⁴ It is noteworthy that a somewhat similar situation arose in Chile starting in 1975, in the wake of that country's move to open up its economy. In point of fact, in spite of a recovery in industrial output (following the 1974-1975 depression brought on by the Government's anti-inflationary policy), which expanded at an annual pace of 7.6% between 1975 and 1980, employment in the manufacturing sector fell at a rate of nearly 3% per annum over that same period! This suggests that the liberalization of the customs regime was a major factor in the restructuring process and the resulting productivity gains (which amounted to more than 10% per annum over that six-year period). In contrast, during the economic recovery and expansion of 1983-1993, employment in manufacturing rose in parallel with output (in approximate terms, both variables doubled). This was because restructuring had *already* taken place in the 1970s, thereby setting the stage for the recovery from the 1982-1983 macroeconomic crisis to generate significant increases in both employment and output, unlike what occurred in other countries of the region, which did not begin to open up their economies until the mid- or late 1980s.

⁵ Total factor productivity does not refer to the productivity of any single factor of production —such as value added per worker or per unit of capital— but to the productivity of all factors of production taken as a *whole*, i.e., the portion of production that cannot be explained by increases in either the quantity or the quality of capital and/or labour. In fact, it refers to the productivity of the factors of production as a whole even *after taking into account any differences* that may exist in terms of the relative scarcity of the various factors and thus makes it possible to compare the relative efficiency with which each country uses the resources available to it.

⁶ Nevertheless, it is interesting to note that the highest relative levels of productivity are to be found in the sectors that produce intermediate inputs. This could mean either that intermediate inputs are actually closer to their technological frontier, or that the production of finished and capital goods offers more opportunities to substitute labour for capital without departing too far from best practice.

⁷ Clearly, sector productivity varies greatly from country to country in the region. Table 1 is simply an attempt to summarize the overall situation in the region. Even so, there are still great disparities in sector productivity between even the most advanced countries of the region and the developed world.

⁸ See Nelson (1968); similar patterns have arisen in other countries as well, such as Mexico (PREALC, 1979).

⁹ These categories of "offensive" or "survival" strategies are taken from B. Kosacoff (1996), who estimates that 2% of Argentine manufacturing companies, accounting for 40% of manufacturing GDP, have adopted offensive strategies and are now approaching international best practice. Although such companies are to be found in all sectors of industry, they tend to be subsidiaries of transnationals or to be owned by or connected with conglomerates. By contrast, the approximately 25,000 companies, including nearly all small and medium-sized enterprises (but not including small workshops), that account for 60% of manufacturing GDP have adopted "survival" strategies.

¹⁰ Nevertheless, convergence with the best-practice frontier is not simply a function of the level of backwardness. On the contrary, the evidence suggests that leaps of this kind are not common and require a number of additional conditions: *not until a certain threshold has been crossed* —not one of per capita income but rather one of stability, market-formation, management capacity and general knowledge— *and a development "ethos" or environment has been engendered* will it be possible for a country to make this leap; once this has occurred, the country will be in a position to move onto a steady growth path whose pace will be a direct function of its level of backwardness.

¹¹ For example, given its greater purchasing power, Sweden's market (measured in terms of GDP) is the same size as Mexico's, even though Sweden's population is just 10% of Mexico's; for its part, Canada has one-sixth the population that Brazil has but its market is more than a third bigger.

¹² The production of intermediate inputs tends to be very capital-intensive and to require the use of continuous processes which limit the possibilities of reducing its scale. Because output is generally of a relatively homogeneous quality, it can be easily exported. Owing to these activities' capital intensiveness, their variable costs are significantly lower than their average costs. Thus, although these activities may compete in the short run, because they sell their products at a price that exceeds their variable costs, it is not certain that they can compete over the long run, when the price has to cover not only variable but also fixed costs.

¹³ Lateral linkages refer to shifts towards: i) complementary products (e.g., switching from wearing apparel to footwear because they use similar distribution channels); ii) different products, but with a similar technological base (as in a shift from the production of bovine insulin to porcine insulin to human insulin, or from the production of specialized equipment for the separation and selection of different qualities of coffee beans to the electronic selection of any sort of bean according to colour, texture or size); and iii) closely-related substitutes (e.g., moving from the production of juices of one flavour to a variety of flavours, or from regular beers to light beers).

¹⁴ Table 8 presents a comparative overview of the neoliberal and neostructural proposals in each of six key policy areas, most of which are examined in this and the following section. For further details, see ECLAC (1992).

¹⁵ The inclusion of a wage component that varies according to the firm's performance also has beneficial effects when demand picks up, for the firm will then be more inclined to expand its production (and hence employment) than to raise its prices, since it realizes that any increase in prices will automatically entail a rise in wages. In contrast, a conventional firm that pays fixed wages will tend to respond to increased demand with larger price hikes and smaller increases in output, as this course of action will bring it quick profits.

¹⁶ For the exact same reason, small firms will tend to offer little *formal* training, since practically any training they could offer would be of a general nature and would therefore be of use to that same worker in any number of firms. Thus, worker training in such enterprise usually extends no further than learning-by-doing; moreover, employees are usually charged indirectly for this type of implicit training, as they are paid a lower wage than they would earn in larger firms.

¹⁷ One possible cofinancing arrangement would be as follows: The companies would pay the salaries of their own staff members who participated in the six-week programme (the estimated time required for the visits and for the preparation of the relevant report). The Government would cover travel costs, per diem and administration of the programme (the estimated total is US\$ 20,000 per participant, or US\$ 20 million for the entire programme, which would involve 20 persons from each of 50 branches of production).

¹⁸ Obviously, there is more than just one best practice, since it will vary with size, type of market, factor costs and other considerations. Nevertheless, the aim would be to study the plants with the highest productivity and that best match the requirements of the kind of companies found in the countries of the region.

¹⁹ Clearly, the number of sectors and the choice of best-practice facilities would differ according to the size and current stage of technological development of the participants' country. Participants from Brazil, which has a large-scale, highly sophisticated industrial sector, would not visit the same factories—even though they might be examples of best practice—as would producers from Central America, which has smaller-scale industries that produce for specialized, integrated niches.

²⁰ See Silbermann and Weiss, 1992.

²¹ In fact, Chile has been conducting a programme of technological missions since 1995. During the first 18 months of the programme, more than 50 missions were carried out, and the preliminary results are reported as very promising.

²² Under the Marshall Plan, each member of a mission transferred his or her experience to an average of between 5 and 10 other firms in the member's home country.

²³ Offering the programme on such a large-scale would avert the possibility that only big companies would participate in, and benefit from, this initiative.

²⁴ What is more, the implementation of this proposal, which would call for a national effort, rather than just on the part of businesses or a few trade unions, could make *productivity into a central, unifying theme*, as well as the chief source of solid, lasting improvements in the standard of living of the country's *entire* population. It would also forestall the problem of "picking winners", since the programme would be open to all sectors wishing to take part, or at least the first 50 sectors to get organized, submit an annual programme, and offer to help finance the programme.

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