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Notes and explanation of symbols
The following symbols are used in tables in the Review:

(...)	Three dots indicate that data are not available or are not separately reported.
(—)	A dash indicates that the amount is nil or negligible.
	A blank space in a table means that the item in question is not applicable.
(-)	A minus sign indicates a deficit or decrease, unless otherwise specified.
(.)	A point is used to indicate decimals.
(/)	A slash indicates a crop year or fiscal year, e.g., 1970/1971.
(-)	Use of a hyphen between years, e.g., 1971-1973, indicates reference to the complete number of calendar years involved, including the beginning and end years.

References to "tons" mean metric tons, and to "dollars", United States dollars, unless otherwise stated. Unless otherwise stated, references to annual rates of growth or variation signify compound annual rates. Individual figures and percentages in tables do not necessarily add up to the corresponding totals, because of rounding.

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—The submission of an article assumes an undertaking by the author not to submit it simultaneously to other periodical publications.

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—All contributions should be accompanied by a note clearly indicating the title of the paper, the name of the author, the institution he belongs to, his nationality, his fax and telephone numbers, and his e-mail address.

—Footnotes should be kept to the minimum, as should the number of tables and figures, which should not duplicate information given in the text.

—Special attention should be paid to the bibliography, which should not be excessively long. All the necessary information must be correctly stated in each case (name of the author or authors, complete title (including any subtitle), publisher, city, month and year of publication and, in the case of a series, the title and corresponding volume number or part, etc.).

—The editorial board of the *Review* reserve the right to make any necessary revision or editorial changes in the articles, including their titles.

—Authors will receive a one-year courtesy subscription to the *Review*, plus 30 offprints of their article, both in Spanish and in English, at the time of publication in each language.

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Beyond the *Washington Consensus:* an ECLAC perspective

José Antonio Ocampo

*Executive Secretary,
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This paper updates and complements the ideas that ECLAC has been putting forward throughout the 1990s, beginning with the document *Changing production patterns with social equity* and the contributions of Fernando Fajnzylber. After a short introductory section (section I), the salient features of the present situation of the region in the macroeconomic, social and production restructuring fields are examined in section II. In the following sections, guidelines and policies are proposed in each of these areas, with proposals that emphasize the common need to make progress with a second wave of reforms which are not merely limited to greater liberalization of markets, but seek a pragmatic inter-relationship between the State and the market. Section III examines the macroeconomic challenges involved, especially ways of handling external vulnerability and the investment, saving and financing process. Key areas at the mesoeconomic level are then analysed, especially technological development, the strategic complementarities between investment decisions, and the regulation of infrastructure services (section IV). Finally, section V deals with the issues of equity and social policy, especially the factors determining equity, the spaces for social policy, and the second generation reforms in this field.

I

Introduction*

In the course of the 1990s, the international and regional economic debate has gradually been changing in terms of its content. The initial emphasis on the principles of the Washington Consensus on macroeconomic adjustment and market liberalization has been giving way to a more balanced view in which, as the chief economist of the World Bank recently noted, more instruments and broader objectives are proposed for the development process (Stiglitz, 1998). While not denying the importance of macroeconomic stability and the advantages of more open markets, improved functioning of such markets and of the public structures is increasingly seen as an important complementary means of pursuing objectives which go beyond economic growth to include equity and social cohesion, environmental sustainability and democratic development.

In line with this approach, it is argued here that after the advances made through the structural reforms in the areas of macroeconomic stability, external openness and rationalization of the State, a second wave of reforms is now called for. These reforms cannot be limited merely to greater liberalization of the markets, however, but must pragmatically seek a mutual relationship between the State and the

market which will make it possible to develop such a broad agenda. In some cases, it may also be necessary to reform the reforms themselves, in order to correct gaps in the first wave of reforms which have become evident in recent years (Ffrench-Davis, forthcoming). The present article updates and complements the ideas put forward by ECLAC in the course of the 1990s, beginning with the document *Changing production patterns with social equity* (ECLAC, 1990) and the seminal contributions of Fernando Fajnzylber on which it was based (see in particular Fajnzylber, 1990).

The article first makes a brief review of the features of the present situation in the region and then deals successively with the main issues of macroeconomic management, mesoeconomic management, and the distribution of the fruits of development. Unfortunately, shortage of space prevents similar consideration of other equally important aspects such as environmental sustainability, democratic development and government structures. The brevity of the article means that it is not possible to do full justice to each of the issues dealt with, but it does serve to outline the basic elements of the strategy which ECLAC has been proposing to the countries of the region.

II

An overview of the region

The most noteworthy economic event in the 1990s in Latin America and the Caribbean is undoubtedly the renewal of growth. This has been much more evident in Latin America, where the average growth rate of

GDP between 1990 and 1998 was markedly greater than in the previous decade (3.2% as against 1.2% in the 1980s) and speeded up in all countries except Paraguay. In the Caribbean, however, the average

* This is a revised version of the document prepared for the seminar "Development models and policies: a tribute to Aníbal Pinto" organized by the Inter-American Development Bank and the Brazilian National Economic Development Bank (Rio de Janeiro, 22-23 June 1998). The author wishes to thank Oscar Altimir, Osvaldo Rosales and Osvaldo Sunkel for their comments on a previous version of this paper and also wishes to express his gratitude for the collaboration received from various ECLAC staff members, including in particular Ricardo Ffrench-Davis,

Gunther Held and Stephany Griffith-Jones, who took part in the preparation of previous documents, some of whose conclusions are incorporated in part II of this article. Conversations with Oscar Altimir and Samuel Morley were extremely useful in clarifying some of the ideas in section V, which to a large extent incorporates the findings of a previous document by the present author (Ocampo, 1998a). Finally, the author also wishes to thank Camilo Tovar for preparing the tables and figures of this article.

FIGURE 1
Latin America and the Caribbean: GDP growth

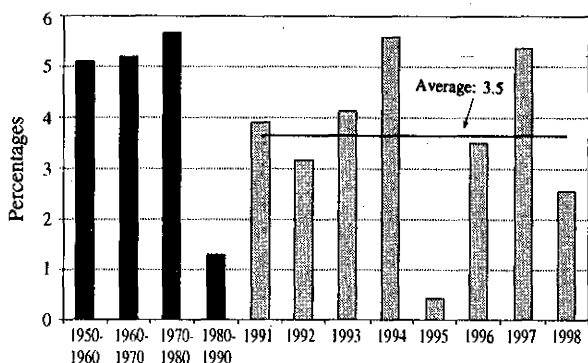


FIGURE 2
Latin America and the Caribbean:
Gross fixed capital formation
(% of GDP)

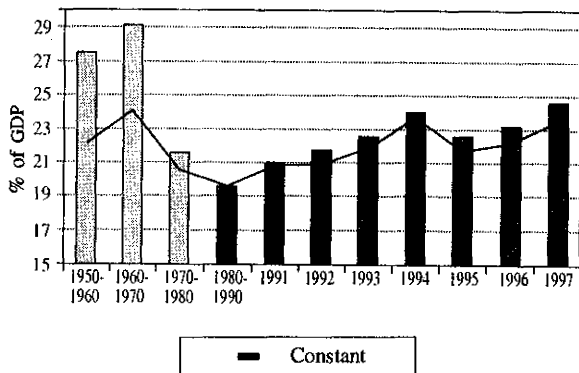


FIGURE 3
Latin America and the Caribbean:
National saving vs. gross capital formation

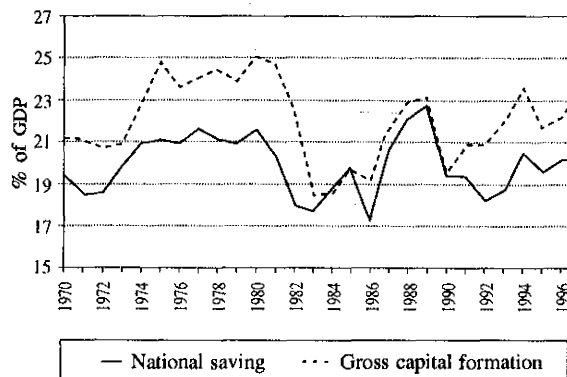
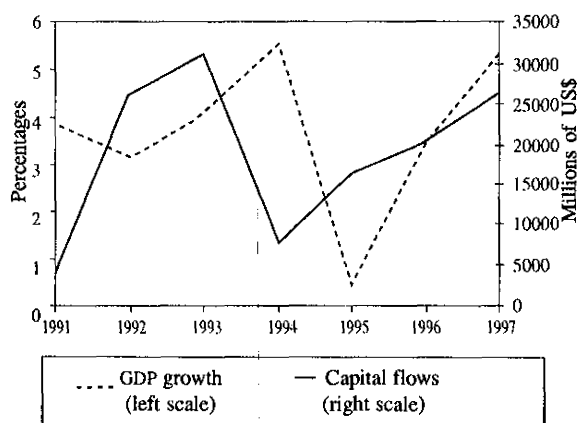


FIGURE 4
Latin America and the Caribbean:
Growth and capital flows



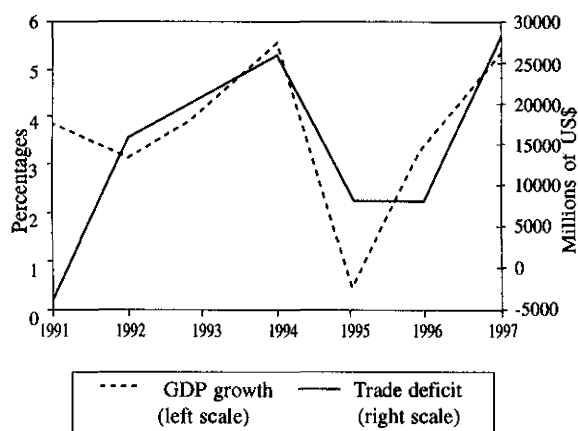
growth rate continues to be lower (1.5%), and there are signs of slackening in a number of countries.

The average growth of the region not only continues to be slower than the level which ECLAC considers desirable for closing the gaps separating the region from the most highly developed countries (6 %-7 % per year) but is also lower than the average rate (5.5% per year) registered by the region between the 1950s and the 1970s (figure 1). It also reflects the difficulty of recovering the levels of investment registered in the phase of fastest economic growth. Figure 2 clearly illustrates this phenomenon: the rate of investment has recovered from 20% of GDP at the beginning of the decade to an average of 23% or 24% in recent years, but it is still well below the levels registered before the debt crisis. A feature which also gives grounds for concern is that national saving has remained at a low level, so that the financing of investment now depends to a greater extent on external saving (figure 3).

This faster growth has been accompanied by greater macroeconomic stability. The stability achieved –unprecedented in several decades– and the promptness with which the authorities take decisive action to deal with any financial imbalances which arise are clear signs of strength which have endowed the region with some strengths in the face of the upsets generated by the Asian crisis (ECLAC, 1998c). The clearest sign of macroeconomic stability is the reduction in inflation. Even after all the hyperinflationary processes had been brought under control, reducing the rate of price increases from averages of three digits at the beginning of the decade to 25.9% in 1995, the rate was further reduced to only 10.5% in 1997 and 10.2% in 1998. Furthermore, although problems still persist in some countries and there are clear cases of fragility, the reduction of fiscal deficits to average levels of between 1% and 2% of GDP is

FIGURE 5

Latin America and the Caribbean: Growth and the trade deficit



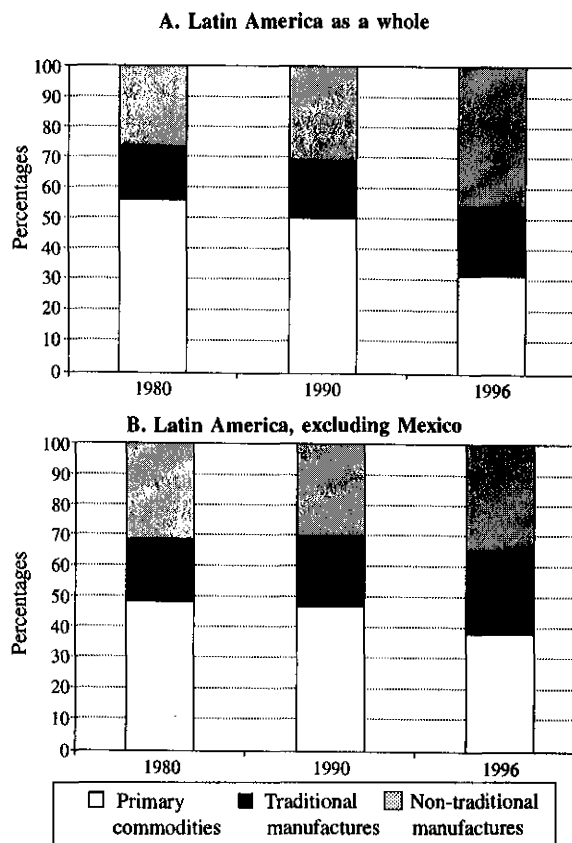
another sign of the progress made in terms of stability, as noted in the recent ECLAC report entitled *The fiscal covenant* (ECLAC, 1998b).

There are, however, some elements of concern in this field. The first is the great sensitivity of economic growth to capital inflows (figure 4), one of whose most disturbing elements is the tendency to replace domestic saving with external saving (see section III of this paper). The second is the great sensitivity of the trade deficit to growth (figure 5), which in turn reflects the high income-elasticity of demand for imports currently displayed by the Latin American economies. In this context, the bias displayed by the recent packages of stabilization measures—emphasis on fiscal and monetary measures, yet great reluctance to use relative prices (the exchange rate) as an adjustment mechanism—seems paradoxical in view of the widespread process of real revaluation undergone by the region in the 1990s. This can bring lower rates of inflation (which is why this policy mix is more justified in countries with an important inflationary tradition), but it can lead to greater contraction than is necessary in the downward phase of the business cycle and, in general, can cause more unstable behaviour of economic activity.

On the export side, the greater dynamism induced by the reform processes is beyond question. The volume of exports has been rising by an average of more than 10% per year since 1993, which is much faster than the average 5% growth rates of the 1980s and early 1990s. Intra-regional trade has been particularly buoyant. Mutual trade within MERCOSUR and the Andean Community grew at the rate of 20% a year in the last five years, which puts it among the most

FIGURE 6

Latin America: Export diversification



dynamic trade flows in the world. This process has coincided with a major diversification of exports: the share of primary commodities has gone down, as the relative importance of exports of manufactures has increased. This process has been particularly marked in the case of Mexico, but it is also true for the region as a whole even when that country is excluded (figure 6). Intra-regional trade has played a decisive role in this diversification. The trade boom has been based on a policy of open regionalism which has broken both with regional practices of the past (including the tendency to restrict integration agreements to non-competitive trade) and with the more orthodox views on economic integration (ECLAC, 1994).

Finally, the trade boom has coincided with an unprecedented increase in foreign direct investment: from a little over US\$ 10 billion at the beginning of the decade to US\$ 55 billion in 1997 (ECLAC, 1998e). This growth has been based fundamentally on three processes: the privatization of State assets in the services and natural resources sectors (telecommunica-

tions, financial services, energy and gas, etc.); the establishment or improvement of suitable conditions for the participation of private capital in the infrastructure and mining sectors, and the reorganization of transnational manufacturing firms in order to improve their international competitiveness under regional agreements (including the North American Free Trade Agreement and the Caribbean Basin Initiative) or to defend their shares in national or subregional markets. Last but not least, there has been an unprecedented increase in intra-regional investments. The increase in direct investment has markedly improved the structure of the capital flows received by the region, undoubtedly helping to explain in part the strengths of the region in the face of recent upsets.

Although a full assessment has not yet been made of the processes of restructuring of production at the sectoral and microeconomic levels, some studies under way allow some generalizations. Although there are big differences between countries and sectors, companies have shown a surprising capacity to adapt both to the upsets of the 1980s and to the radical changes in the macroeconomic and mesoeconomic environment in the 1990s (see, for example, Peres (ed.), 1997). Various strategies, both defensive and offensive, have been adopted for this purpose (ECLAC, 1996; Benavente, Crespi, Katz and Stumpo, 1997; Katz, 1998). The defensive strategies have been centered on: i) organizational restructuring (reduction of the number of hierarchical levels, concentration of activities in business units or centres, enhancement of the professional quality of management); ii) restructuring of production with minimal investment (reduction of production lines, greater specialization and de-verticalization, both by importing specialized inputs and by outsourcing production activities); and iii) new marketing strategies (imports of goods and their marketing in order to complete a wide range of products and improvements in client-supplier relations). The offensive strategies included the foregoing but also added substantial increases in new equipment and technology, acquisition of international licenses and strategic alliances with national, regional and transnational partners. The response capacity displayed shows that there has been some solid learning in previous stages of development. Trade integration has played a very important role in this process of adaptation, especially in the branches of manufacturing with the highest technological content, which makes it possible to take advantage of economies of specialization and enter into strategic intra-regional alliances to serve markets

TABLE I
Latin America and the Caribbean (selected countries):
Relative productivity gap compared with
United States industry

	1970	1980	1994	1997
Argentina	0.42	0.41	0.55	0.67
	0.28	0.26	0.29	0.37
Chile	0.25	0.24	0.23	0.28 ^a
Colombia	0.29	0.25	0.37	0.34
Costa Rica			0.15	0.14 ^b
Jamaica	0.26	0.16	0.16	0.13 ^b
Mexico	0.32	0.30	0.44	0.38 ^c
Peru	0.33	0.25	0.16	0.15
Uruguay	0.35	0.22	0.20	0.22 ^a

Source: Katz (1998).

a 1995. b 1992. c 1994.

which to other partners in the alliance know better. The adaptation of the larger enterprises has generally been less traumatic than that of the small and medium-sized firms, but even the former have lost ground to transnationals.

Generally speaking, however, there continues to be a substantial technological gap between manufacturing in the region and the best international practices (table 1). Some countries (especially Argentina, Brazil, Colombia and Mexico) are narrowing this gap: a process which began in almost all these cases in the 1980s and which, in two countries (Colombia and Mexico), was interrupted in the present decade. A very large number of enterprises have applied defensive strategies of administrative reorganization and rationalization of their production processes, but the number which have moved on to offensive strategies, making heavy investments in equipment and technology and thus coming closer to the international technological frontier, is much smaller. In the cases where companies have expanded, there has been a tendency to increase employment, although with a much higher capital-labour ratio than in the past and with technologies making heavy use of computerization. In the case of the firms which have applied exclusively defensive strategies, the increase in productivity has been accompanied by a contraction in levels of employment, so that industrial employment has gone down markedly in almost all the countries of the region. The decline in the cost of capital goods which accompanied the recovery of the 1990s referred to earlier has also furthered this process.

Although in one group of countries the agricultural sector has recovered growth rates similar to or higher than those of the 1970s, this has not occurred

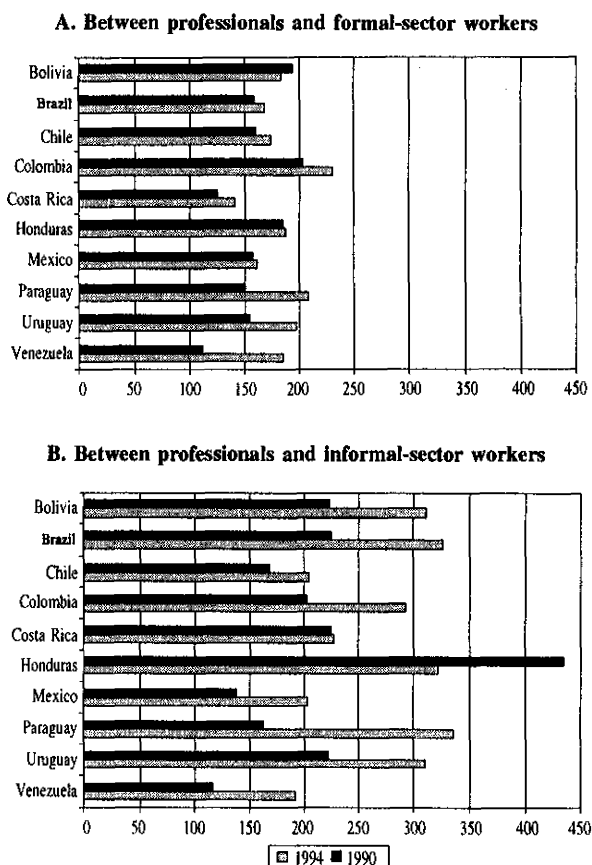
in the region as a whole. Furthermore, in many countries there is a disturbing weakening of the institutions for the development and transfer of agricultural technology, and the smaller producers have been affected by the disappearance or serious problems of the bodies which previously gave them support, without these bodies having been replaced by others of equal or greater effectiveness (Ocampo, 1998b).

The existing studies indicate that the population under the poverty line increased markedly in the 1980s. In the 1990s the situation has improved in most countries of the region, but even so, with few exceptions, the percentage of poor households is higher than before the debt crisis. In 1980, 35% of all Latin American households were in a state of poverty, and by 1990 that proportion had risen to 41%, but the level still stood at 39% in 1994 (unfortunately, there are no similar estimates for the Caribbean or more recent global calculations for Latin America as a whole).¹ The 1980s was also a period of deterioration in terms of income distribution. Expectations that the renewal of economic growth would reverse that trend have not materialized, and indeed there has been a further deterioration in some countries, so that the levels of inequality are now greater than the already high levels which existed before the debt crisis (ECLAC, 1997; IDB, 1997; Morley, 1995).

In the 1990s, there are two particularly disturbing tendencies in the labour market which are generating additional pressures in the direction of greater inequality. The first of them is the growing disparity between the wages of the highly skilled workers and those who have lower levels of skills (ECLAC, 1997). This gap has increased in almost all the countries of Latin America during the first half of the 1990s (figure 7). The second tendency is the low level of generation of formal employment and the consequent deterioration in the quality of jobs. According to estimates by the ILO (1997), a little over 8 out of every 10 jobs created in the 1990s correspond to low-quality jobs in the informal sector. Although the informal sector continues to be the main

¹ Because of the reduction in poverty in Brazil as a result of the successful application of the Plano Real and the subsequent readjustment in minimum wages, the global poverty indicator has almost certainly continued to go down in recent years. The reduction in poverty in a broad group of countries of the region in the 1990s is also noted by Morley (1997), on the basis of the results of a comparative study organized by UNDP, IDB and ECLAC.

FIGURE 7
Latin America: Wage gap



means by which the Latin American economies tackle the problem of the low rate of creation of jobs, the rate of open unemployment also increased in most of the countries of the region in the three-year period 1995-1997 (ECLAC, 1998d).

Furthermore, in the 1980s the crisis was reflected in a marked reduction in public social expenditure, both on a per capita basis and as a proportion of GDP. In the 1990s, such expenditure has recovered the levels registered before the debt crisis in Latin America, but not in the Caribbean. This recovery has been uneven in the different countries, however, and has been concentrated in types of expenditure which, according to the existing studies, have the least favourable impact on distribution (e.g., expenditure on social security). Per capita expenditure on education, however, only recovered its pre-crisis level in the mid-1990s (ECLAC, 1998b, chapter VI).

III

The macroeconomic challenges

The recovery of high levels of macroeconomic stability, the positive view taken of the opportunities offered by open regionalism in the present context of globalization, and the search for more effective and efficient State structures are achievements of the economic restructuring process which has taken place in Latin America and the Caribbean in recent decades. As we have seen, however, there are still two disturbing elements in the macroeconomic area: the high sensitivity of growth to external capital flows and the insufficient recovery of investment levels.

1. Dealing with external vulnerability

In the 1990s, the Asian crisis came on top of the 1994-1995 "tequila effect" and the crisis in the European monetary system in 1992-1993, as well, of course, as the Latin American debt crisis in the previous decade. The instability characteristic of international capital flows, which has shown itself in this way in recent decades, is inherent in the functioning of such flows, as shown by economic history² and the extensive literature on market flaws associated with information problems. As a result, the market has gone through a succession of waves of excessive expansion and financial panic, indicating that it tends first all to grow and then to contract more than is called for by fundamental economic factors. During the recent crises, other phenomena have become increasingly evident: the shortcomings in macroeconomic coordination among the nations which are most influential in the markets and the absence of suitable international institutions to manage a sophisticated but unstable financial market.

Thus, there is no international institution which helps to prevent the development of unsustainable financial booms, and the International Monetary Fund has only a limited capacity to handle the subsequent crises. The Bank for International Settlements has made some progress in the formulation of rules on bank prudential regulation and supervision, but they

have only been implemented to a limited extent so far. The risk grading agencies, for their part, which should be playing a role in this area, tend to accentuate rather than smooth financial cycles, as a recent study by the OECD Development Centre shows (Larraín, Reisen and von Maltzan, 1997).

This indicates that the present time would be a good opportunity for rethinking the international financial order but not a good time for considering further liberalization of that market: an issue which is currently under discussion in connection with the idea of the changing the statutes of the IMF to give it mandates with regard to the convertibility of the capital account. In this field, recent experience indicates two things. First, our attention should be centered on managing booms, not crises, since the latter are in many respects the result of booms which have not been properly managed. This is an essential point, since to some extent the existing institutions, especially the IMF, have been designed solely to handle crises, whereas we lack suitable instruments to warn us about the generation of unsustainable booms or, even better, prevent them. Secondly, the absence of a suitable regulatory framework at the international level justifies the adoption of national measures aimed precisely at controlling booms which the authorities consider to be unsustainable, especially the systems of compulsory reserve requirements on external liabilities which Colombia and Chile have been using successfully. The design of suitable domestic mechanisms for handling the volatility of external financial flows has in fact been one of the central issues studied by ECLAC in recent years (see, for example, ECLAC, 1998a, part 3 and French-Davis and Reisen (eds.), 1998).

The design of these measures should be based on the development of suitable policy instruments and institutions for handling booms or –which amounts to the same thing– for forestalling crises. In reality, the excessive attention given to crisis management overlooks a fact which ought to be self-evident: the leeway for action open to the authorities is greater in booms than in crises. Once a crisis breaks out, the authorities have no option but to take the necessary

² For a Latin American view, see the classic study by Bacha and Díaz-Alejandro (1982).

measures to restore confidence, which means in practice the adoption of procyclical measures. A boom marked by excessive expansion of public and private expenditure inevitably gives way to an adjustment whose severity depends on the excessiveness of the previous expenditure. Thus, an unsustainable increase in public expenditure based on windfall tax revenue and transitory access to external credit gives rise to a severe subsequent adjustment. Excessive private sector indebtedness, based on underestimation of the risks of such indebtedness, gives rise to a subsequent severe contraction in credit which, in the context of lower growth rates and higher real interest rates typical of adjustment phases, can lead to portfolio losses equivalent to high proportions of GDP, as is shown by a wide range of bank crises inside and outside the region. Overvaluation of the currency based on windfall capital inflows or transitory high prices of export products gives rise to heavy pressure on the exchange rate or interest rates once those transitory phenomena disappear.

Thus, the basic challenge for handling the external vulnerability of the economies of the region is to design suitable instruments for managing boom periods, that is to say, for forestalling crises. Some such instruments have been extensively highlighted, especially those connected with the establishment of strong prudential regulation of the domestic financial systems, including both suitable capital requirements for the financial intermediaries and systems of prudential regulation and supervision designed to prevent them from assuming unmanageable risks in boom periods. One of the corollaries of the foregoing analysis is that, when the vulnerability is greater than that which is characteristic of the more industrialized nations, the capital requirements of financial intermediaries should be stricter than those proposed by the Basle Committee of the Bank for International Settlements. There should also be strict prudential supervision of short-term external credits, particularly those intermediated by the domestic financial system. Special caution should also be adopted with respect to the use of assets whose prices are of an excessively cyclical nature as collateral for debts. For this reason, in periods of inflated asset prices, it is appropriate to make the requirements with respect to the use of such collateral more severe. Naturally, as the recent controversies on the Asian crisis also show, the authorities must give clear signals that they will in no circumstances take any action to save the assets of the owners of financial institutions (and act appropriately if a crisis does break out), thus avoiding "moral

hazard" problems and demanding transparency in corporate finances in order to prevent additional financial risks.

In the foreign exchange area, the market has repeatedly rewarded a good external debt structure; hence, efforts to improve the maturity profile of public and private external liabilities play an essential role. In the case of public sector indebtedness, direct control should be exerted over the liabilities of all public entities, even those which are autonomous or quasi-autonomous. In the case of private indebtedness, as already noted, a system of compulsory reserve requirements (or taxes) on foreign currency liabilities is desirable. Such a system helps to improve the debt profile and, at least according to some studies, also tends to reduce (at least temporarily) the magnitude of flows during boom periods, thus playing the additional role of moderating the exchange rate and monetary pressures generated during such periods. The system designed by Argentina—establishing high liquidity requirements for financial institutions as a function of their short-term liabilities—can play a similar role. Within certain limits, the sterilization of the monetary effects of the increases in international reserves generated by capital inflows has also proved to be useful for preventing such inflows from giving rise to an excessive increase in domestic credit. Finally, managed exchange rate flexibility can also be useful. For this purpose, however, it is necessary to allow such flexibility to operate in both directions, avoiding the bias toward revaluation observed in many countries of the region throughout the 1990s.

Handling external vulnerability also requires the design of suitable fiscal instruments. These should include, primarily, institutional mechanisms to sterilize transitory fiscal revenues. The partial experience built up in the operation of fiscal stabilization funds associated with basic commodity exports should be extended to the management of transitory tax revenues. This means that fiscal targets should not be established as a function of the current budget deficit, but of some measure of the structural deficit, as is done in the member countries of the Organization for Economic Cooperation and Development (OECD). Indeed, many countries could opt to fully or partly offset short-term private expenditure cycles through movements in the opposite direction by public expenditure or income, thus allowing public indebtedness to compensate for trends in private indebtedness. A sound fiscal situation, both in terms of flows (surplus

or deficit) and stocks (indebtedness) is essential, together with the maintenance of sound domestic financial systems, to obtain the degree of freedom needed to handle unfavourable external disturbances.

2. Investment, saving and finance

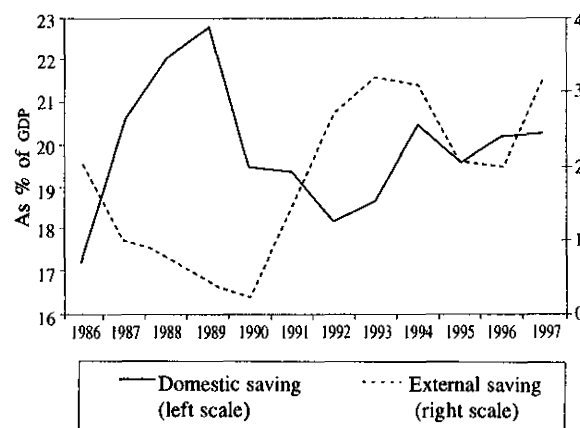
The causal relations between saving, investment and growth³ operate in many different directions, giving rise to virtuous (or vicious) circles: a high level of investment generates more growth, which, in turn, increases saving and facilitates the financing of higher levels of investment. The empirical evidence tends to back up the Keynesian lines of causality, however, establishing that higher levels of saving are an effect rather than a cause of faster economic growth, and that it is the latter, through the accelerator, which induces higher levels of investment. This indicates that "autonomous" improvements (or deterioration) in the growth rate tend to reproduce themselves, through their positive effects on saving and investment.

On the other hand, high rates of investment are invariably associated with high rates of domestic saving. This association is due fundamentally to the limits which exist on the sustainability of high current account deficits (external saving). There is also ample evidence of substitution of domestic saving by external saving (figure 8), which strengthens the aforementioned linkage and indicates that a substantial part of the variations in the latter are reflected in higher or lower levels of public or private consumption.⁴ Furthermore, greater domestic saving is essential to cope with episodes of high inflows of capital, by accumulating international reserves in order to sterilize the expansionary effect of such capital and maintain a stable macroeconomic environment.

High levels of domestic saving are related, in turn, with high rates of public and entrepreneurial saving. The importance of the latter, in the form of undistributed profits and reserves for depreciation, was a striking feature of the Asian countries during their phase of rapid growth, and it has also been a feature of the recent experience of Chile. This indi-

FIGURE 8

Latin America: Domestic saving and external saving



cates that the key to rapid growth is a strong link between the investment and profits of enterprises, as noted in some recent studies (for example, Akyüz and Gore, 1994). The incentives to retain profits implicit in the tax system seem to have been one of the most important elements in the recent high business saving rate in Chile.⁵ On the other hand, there is no solid evidence in Latin America (or even in general) which confirms the positive effects of high interest rates on saving. This indicates essentially that the substitution effects on which the positive relation between these two variables depends are offset by the income effects of the higher interest rates, which tend to increase consumption. At all events, interest rates play an important role in financial intermediation, in the allocation of resources generated through it, and in the regulation of capital flows. Household saving is much more sensitive to forced saving mechanisms, especially those associated with the social security system, but with other types too (for example, prior saving requirements for obtaining housing loans, the requirement that part of a worker's wages must be saved in severance payment funds, etc.). It is worth noting that the importance of public saving referred to at the beginning of this paragraph also establishes an important connection between saving and taxation. Although a reduction in taxation can induce higher private saving (and there is thus

³ Among many recent contributions to the debate on the mutual relations between these variables, see Held and Uthoff (1995), ECLAC (1996), Schmidt-Hebeel, Servén and Solimano (1996), Uthoff and Titelman (1998) and Gavin, Hausmann and Talvi (1997).

⁴ Half, according to estimates by ECLAC (1996) and Uthoff and Titelman (1997).

⁵ High incentives of this type also give rise to unfavourable effects, however, which have not been absent in Chile. In particular, they facilitate the concentration of property. They also generate incentives for the tax evasion practices which are a natural feature of any system of taxes on capital income, such as presenting private consumption expenditure of the owners of enterprises as intermediate expenditures of the latter.

some substitution of public saving by private saving), it will generally tend to be reflected, through its effects on the public accounts, in lower overall levels of national saving. In other words, taxation operates as a forced saving mechanism.⁶

In this context, the great expectations aroused by the transformation of social security systems from unfunded systems into systems based on individual capitalization are only partially valid. The most important effect of these reforms is that on the budget deficit, as they make it possible to reduce or eliminate the dissavings which have tended to accumulate with the unfunded systems. The new systems can also make an important contribution to the supply of long-term financial resources, although the actual channeling of these into productive activities depends on the development of suitable institutional mechanisms. The gross contribution to saving made by these systems tends to be only small, however (a little over 3% of GDP during the 1990s in the Chilean case) and their net effects depend on whether or not the forced savings generated by the social security system are offset by smaller voluntary saving. In the case of Chile, this latter requirement has not been fulfilled, since the greater social security saving seems to have been substituted by voluntary personal dissaving, facilitated by the ample availability of consumer goods and credit resulting from the trade and financial liberalization. Furthermore, the fiscal cost of these reform processes is high and must be taken duly into account before embarking on them (ECLAC, 1998b, chapter VII).

The irreversible nature of investment decisions, for its part, means that this variable is sensitive to the existence of stable rules and macroeconomic environments. Measures designed to reduce macroeconomic volatility thus have positive effects on it, as also do complementary public investments, especially in infrastructure, and the availability of long-term external or domestic credit. Other important determinants are the relative prices of capital goods (which in many countries are closely associated with the real exchange rate) and, in countries with more highly developed stock markets, stock prices. Specific fiscal incentives, such as those which seek to promote investment in activities of high technological content, can also have favourable effects, but incentives which encourage investment in more general terms can prove costly in relation to their possible benefits.

⁶ Assuming, of course, that the higher taxation is not reflected in excessive public consumption expenditure.

The efficiency with which the financial market channels savings into investment is also an essential factor in the development process. Important requirements for this are the creation of suitable institutions and instruments, with different profit, risk and liquidity profiles, the provision of services with low intermediation costs, and prudential regulation and supervision. The public sector has a fundamental role to play in ensuring that all these conditions are fulfilled. We have already referred to the question of prudential regulation, in which respect substantial progress has been made in many Latin American countries. The high cost of financial services almost everywhere in the region indicates that there is ample room for the promotion of more competitive practices and for reducing certain macroeconomic uncertainties which are reflected in high intermediation spreads.

We will concentrate our attention, however, on the first of these instruments. The two fundamental tasks that the public authorities must face in this area are to ensure that small enterprises and poor families have access to credit, and to promote the availability of long-term funds to finance investment. Lines of credit through "second-tier" banks, subsidies for demand and/or transaction costs, and the design of guarantee funds or insurance mechanisms are the basic means of ensuring adequate coverage of financial services for small enterprises and poor urban and rural households. In spite of the progress made in some countries, this coverage is still very precarious.

The tendency of savers and creditors to reduce their risks by concentrating their operations on short-term and fixed-income transactions also calls for an active role by the public sector in this field. The most important mechanisms for this purpose are the creation of new institutions or instruments (pension funds; other institutional investors, including overseas funds; new instruments to facilitate the financing of housing and private infrastructure; guarantee funds or credit insurance, etc.); the design of suitable regulatory frameworks and systems of incentives, and the supply of financial services by public or mixed development banks or venture capital funds.⁷ In this case,

⁷ The channelling of all or part of the stock of privatized enterprises through the stock exchanges and leadership by the government in the issue of longer-term bonds are also important elements, as is shown by the experience of various countries of the region. It is also important to facilitate the issue of bonds or shares abroad, even though in this case there is no direct action to promote domestic financial intermediation.

as in the provision of services for small economic agents, almost all the countries have largely maintained some public public sector institutions. Indeed, this may be the best solution, provided that rules are established which ensure the professionalism of their activities and efforts are made to avoid political interference and, above all, the temptation to turn such institutions into mechanisms for channeling subsidies, which led to their downfall in the past. However, progress in this direction, especially in the case of the capital market, is limited by a structural feature: the predominance of primarily family firms, which is of course greater in the smaller economies. This is a central factor in the design of regulatory and market promotion measures (for example, those affecting the use of resources from pension funds). In the absence of a broad supply of stocks, development banks can do much to help channel those resources into investments. Finally, although Latin American firms are making increasing use of the international market (stock issues on the New York Stock Exchange, in particular), there do not seem to be any signs of the development of regional stock markets. This could be one of the priority areas for public action in the future.

IV

Key mesoeconomic areas

The functioning of markets, their relation with the development of institutions, and the way both of these factors affect microeconomic behaviour have been among the central issues in ECLAC's proposals in recent years. Just as a good macroeconomy is needed to reduce or eliminate basic uncertainties affecting the functioning of markets, the way markets operate affects, in its turn, macroeconomic behaviour. In the ECLAC proposals, a good macroeconomy depends on a good mesoeconomy. The importance we have assigned to the functioning and regulation of the financial and foreign exchange markets in the preceding section bears witness to this assertion. The fundamental role played by the factors referred to at the end of the preceding section on economic growth is another important point.

The key issues at the mesoeconomic level are non-existent or incomplete markets and imperfections in established markets, as well as the close rela-

tion between the functioning of markets and the formal and informal institutions within which they operate (the formal institutions being understood as the formal public regulation organs and the informal institutions as the customs, standards and patterns of behaviour of agents). The key issues are invariably connected with market failures, both those described in the traditional literature on imperfect competition – economies of scale, externalities and public goods – and the problems of information which have been emphasized in the economic literature in recent decades. Obviously, the possibility of correcting such flaws through public action also depends on the correction

⁸ There are, of course, others connected with the legal and socio-political context. See, for example, Barro and Sala-i-Martin (1995) and Barro (1997).

of the no less important government failures, which include the application of rationales which are neither economic nor social (bureaucratic or clientele-based) to the functioning of institutions, problems of representation (principal-agent), the reflection of the dominant economic interests in the actions of institutions (i.e., political economy issues), the opportunities for rent-seeking opened up by State intervention, and the problems of information which also affect government actions.

The pursuit of a suitable balance between the market and the State is therefore an inherent feature of a good mesoeconomy. Obviously, such a balance will necessarily be modified by the fundamental political decisions of each society. In the present stage of development of the countries of the region, this means that special efforts should be made to *create and re-invent* institutions, since many of the existing institutions are profoundly affected by patterns of behaviour inherited from the past or are suffering from the deterioration undergone in the course of a long period of economic adjustment. This is true not only of public institutions affected by bureaucratic processes or corporative and clientele-based rationales but also of private institutions, such as producers' associations and trade unions which have not managed to adapt completely to the changes in their environment. The problem is not solved by the mere elimination of institutions that no longer work, as is implicit in many policy proposals. In reality, experience has shown that the worst of all "institutions" is the *lack* of suitable institutions for dealing with the problems which we will analyse in this section. For example, one of the lessons painfully learned in many countries of the region (and, even more so, in transition economies) is that the absence of suitable State regulations can turn privatization processes into massive transfers of wealth and income, without achieving efficiency objectives.

Although the spheres of action at the mesoeconomic level are very wide, we will concentrate our attention on three of them: technological development, strategic complementation between investment decisions, and the regulation of infrastructure services. These issues, together with the functioning of financial markets, to which we already referred in section III, and those relating to environmental regulations (which will not be dealt with in this paper), are the key mesoeconomic areas.

1. Technological development

The problems raised by technological development are intimately related with the "tacit" nature of technical knowledge, i.e., the fact that it cannot be completely formalized (Katz, 1984; Katz and Kosacoff, 1998). This means that there is no perfectly codified manual ("blueprint") which can be bought in the marketplace, and that the acquisition of such knowledge is therefore necessarily associated with a learning process. This learning is also closely linked with practical experience in production activities, that is to say, it necessarily involves learning by doing. The mastery of a particular type of technology depends on gaining experience in its use, but in addition experience makes it possible to create new technologies and to make innovations on existing ones. Indeed, technologies generally need to be adapted in order to apply them in new production contexts. This is particularly true in the case of disembodied technologies (including management and marketing techniques), but it is also true of the technologies incorporated in equipment or in special inputs (a new plant variety, for example).

Consequently, technical know-how is both a precondition and a result of the production process. At the individual and organizational level, it gives rise to a process of maturing as experience is accumulated, existing activities are expanded, and new ones are undertaken. This process of maturing thus generates individual and organizational forms of human capital. In both cases, learning is linked to the education of the persons involved, giving rise to complementation between technological and educational human capital. Moreover, this capital does not become a form of fixed property: knowledge can be taught or transmitted, the persons who have learned it can move from one organization to another, and obviously, when it is incorporated in equipment or inputs, it can be acquired. This gives rise to different types of externalities which transform both technological and educational capital into a form of social capital which we could term "knowledge capital". The accumulation of this capital is greatly facilitated when there are suitable institutions – "innovation systems" – which support its development and generate dynamic interactions between the educational system, technological research centres and the enterprises themselves and which make it possible to take full advantage of the economies of scale of research and the externalities characteristic of technological know-how

(ECLAC, 1990 and 1996). These institutions are therefore a central element of "knowledge capital".

Due to the very close relation between technical know-how and production experience, there are strong links of interdependence between the use and the generation of technology. Thus, the adaptation of technology can give rise to local innovations, and accumulated production experience can result in more extensive innovations. However, advances in terms of innovation are linked with deliberate efforts to generate new processes or new products or use new inputs, that is to say, with explicit investment efforts. The specific rents obtained by the innovative enterprise are in the nature of monopoly rents and represent the great incentive for such investment, which is further increased by laws providing for its legal protection. In competitive, technologically dynamic contexts, however, investment in technology becomes an essential requirement for the very survival of the companies operating in that market.

Investments in this field involve fixed costs, associated with different types of indivisibilities, and the returns that can be expected from them are uncertain. Even imitation involves fixed costs, because of the need to acquire information, the incomplete nature of the latter, and the costs of patents and other forms of protection of intellectual property rights. For this reason, access to technology is more limited for small enterprises, and over time these tend to accumulate dynamic competitive disadvantages associated with their lower level of learning by doing. In this context, at any given time the production sectors include enterprises with very different levels of technical knowledge, so that the neoclassical concept of the "representative firm" makes little sense. This internal differentiation of the sectors of production is of course essential for understanding the processes of reorganization resulting from competitive shocks, such as those due to the opening up of economies, or from contractionary setbacks.

The foregoing considerations have far-reaching implications for public policies. They mean, first of all, that technological processes are marked by the predominance of dynamic economies of scale, within which comparative advantages are *created* as a result of production experience. They also mean that the loss of production experience can have cumulative effects over time which finally destroy or considerably hold back technological know-how.⁹ Although competitive pressure has the virtue of doing away

with complacent attitudes by firms and obliges them to keep up-to-date in their know-how,¹⁰ it can also have the opposite effect: in particular, if it leads to a decline in the output of a company (or even a whole sector) it can give rise to cumulative effects on the company's competitiveness and prevent it from investing sufficiently in its technological adaptation. The predominance of defensive over offensive strategies during the processes of production restructuring in Latin America and the Caribbean (see section II of this paper) clearly shows that the introduction of more competition does not always set in motion the forms of technological adaptation which have the greatest potential for the generation of comparative advantages ("systemic competitiveness", to use the term coined by Fernando Fajnzylber and extensively used by ECLAC over the last decade). All this explains why there is not a clear association between neutrality of incentives and technological change.¹¹

These factors justify State intervention in the creation, adaptation and dissemination of technology. This is also one of the few areas where State subsidies are explicitly accepted by the World Trade Organization (within certain limits) and are therefore consistent with the present context of globalization. The protection of infant sectors of production or those which are in a stage of intensive learning,¹² as well as the promotion of new export sectors with similar features, are the alternatives to this, but their efficient application requires clear time limits on such protection or promotion and a clear link between benefits and performance.

It may be noted that in the protectionist stage of Latin American and Caribbean history these requirements were not fulfilled, so that the results in terms of increased productivity were clearly less than optimal. This attitude was firmly rooted in some economic policy patterns which are all too well known. For these reasons, while not completely discounting the possible use of protection instruments which comply with the requirements we have posed, State ef-

⁹ See, for example, the simple but elegant model by Krugman, 1990, chapter 7.

¹⁰ This means that firms do maximize their profits, as they are below their production possibility curve, and competitive pressure therefore forces them to be on it.

¹¹ There is a considerable amount of literature on this matter. See, for example, the studies collected in Helleiner (1992).

¹² On the basis of the arguments in question, there is also justification for the graduality of economic openness processes. However, this is now only of historical interest.

forts should be aimed rather at supporting the development of innovation networks, promoting the establishment of new institutions, and allocating resources and generating incentives for channeling private resources to these activities. Among such institutions are sectoral or regional technological research or productivity centers, joint university-industry associations, technical assistance networks for small urban and rural enterprises, technology parks, venture capital funds for supporting technological activities, "enterprise brooders", incentives for innovation activities within firms or private contributions to technological institutions, etc. All these already form part of the Latin America and Caribbean scene, but their development has not yet attained the level which is to be desired (Alcorta and Peres, 1998).

2. Strategic complementarities

There is no idea which is more central to classical theories of economic development –or to location theory, which serves as the basis for regional and urban development theories– than the concept of complementarity between investment decisions or the linkages (forward or backward) that they generate, to use Hirschman's classic concept (1958). When this coincides with the presence of economies of scale in production, this gives rise, in modern terminology, to "strategic complementarities" which lead to processes of agglomeration (Krugman, 1995).¹³

Agglomeration phenomena lie at the very heart of the historical debates on economic development. Likewise, the observation that different economic structures give rise to different rates of growth through the strength or weakness of the economies of agglomeration they generate, as well as particular imbalances associated with the nature of such structures and the way those imbalances are solved, lies at the heart of structuralist theories of development. ECLAC's classic defence of industrialization was part of this tradition. In this context, the aggregate variables analysed by other growth theories may be seen as the effects rather than the causes of these structural dynamics. For example, rates of technical change may

be completely different in different structural dynamics, investment functions can also be affected, and a similar assertion may even be made regarding the rates of development of human capital they generate.

This is not, of course, the place to analyse the costs and benefits of the classic industrialization strategy,¹⁴ but rather to examine the relevance of these strategic complementarities in the present stage of development of the region. Although the new technological revolution and globalization have eroded some of the bases for these processes of agglomeration, their most important implication is that "systemic competitiveness" (or its absence) is the result of synergies and externalities generated among the enterprises belonging to certain chains of production and the way these chains fit into the economy as a whole. This explains, for example, the importance of analysing the linkages generated by natural resource-based production complexes (Ramos, 1998), or the way the integration processes currently under way are generating new production linkages between industrial sectors of different countries (in the automobile industry, for example). Another significant implication in the present stage of development of the region is the desirability of developing new systems of export promotion which provide incentives for joint action in the markets of destination by similar enterprises from the same region or country. This analysis also highlights the importance of promoting mechanisms which facilitate the exchange of information among enterprises in a given sectoral chain of production (especially with regard to possible investment decisions), encourage strategic alliances between enterprises, give rise to complementary investments, further the execution of regular analyses of the competitiveness of specific sectors of production in conjunction with the corresponding entrepreneurs, and encourage the development of research groups specializing in such analyses. The establishment of industrial parks is another strategy of the same type which is particularly important for modern regional and local planning.

The need to take strategic complementarities into account in the new stage of development has been emphasized by ECLAC throughout the 1990s (for example, in ECLAC, 1990, 1996 and 1998a). These pro-

¹³ Transport costs (and distance-related transaction costs in general) play a rather more complex role. They can contribute to agglomeration but, if they are sufficiently high, they can give rise to the opposite phenomenon, as traditional location theory indicates.

¹⁴ My own contributions to this debate are incorporated in the introduction to the study by Cárdenas, Ocampo and Thorp (eds.), 1998.

posals mean, in particular, that the new development strategy does not eliminate the need for new types of sectoral policies (or, as is sometimes expressed in a more restrictive manner, for "industrial policies"). The experience being accumulated in the region indicates that such policies must arise from joint efforts between the public and private sectors, which demands profound changes in the public and private institutions inherited from the previous phase of development. The fundamental objective of such exercises should be to formulate joint "visions" and to reach a consensus on the way in which support mechanisms should be "tailored" to particular sectors. At the global level, these mechanisms are of an essentially horizontal nature (in such fields as technological development, technical training, export promotion, infrastructure, credit, etc.), but in order to be effective they need to be specified in greater detail (for example, by indicating the nature of the institutions which are to support the technological development of a specific sector, the collective requirements of the sector in terms of labour skills, the way in which the financial resources needed for its expansion are to be ensured, etc.).

It is obvious that, even though there might be theoretical justification for them, there are no grounds at present in the region for promoting more aggressive forms of sectoral planning like those carried out by the Asian countries in the past. It is important to note, however, that although strategic sectoral decisions are often not explicit, this does not mean that they do not exist. Economic openness was a clear, more or less explicit, strategic decision: the decision to give stronger support to the sectors making more intensive use of natural resources and eliminate inefficient industrial branches. When public resources are scarce, decisions to allocate funds to some sectors for their technological activities or for the promotion of their exports also involve strategic decisions (to promote these sectors rather than others, or to promote them more than other sectors). For this reason, rather than concealing such decisions, it is desirable to make them explicit through "joint views" agreed upon by the public and private sectors, including labour.

3. Regulation of infrastructure services

The growing privatization of public utilities and the opening of spaces for private participation in new infrastructure projects have generated important op-

portunities (for eliminating serious cases of inefficiency in the corresponding sectors and attracting fresh capital, while allocating scarce public resources to other sectors), but they have also presented innumerable challenges. Because of economies of scale and other types of technological difficulties (which have begun to be overcome in some cases), the infrastructure sectors are almost invariably marked by imperfect competition and even in many cases by natural monopolies (especially at the regional and local level, but even at the national level). Furthermore, in view of their character of non-tradeable services, in this case external competition does not play the same regulatory role as in the production of goods.

The first challenge that arises in this context is the need to establish suitable regulatory frameworks to ensure that the prices charged in these cases are close to those that would be established in a competitive situation and, in particular, that the greater efficiency which may be derived from the privatization processes or from greater competition is effectively passed on to consumers. The regulatory problems in the transition to privatized infrastructure services are extremely complex, especially because they involve the task of creating markets and not just regulating existing ones. Furthermore, the agents are at different stages of assimilation of the new policy frameworks and are working with even more asymmetrical information than in mature markets. It is worth emphasizing the decisive importance, in this context, of establishing not only highly qualified regulatory bodies, but also superintendencies to monitor the application of their decisions and enter one of the areas most often forgotten by the old policy framework: consumer defence.

The second challenge is the proper management of public guarantees. This problem is particularly important in new infrastructure projects, where the private sector only participates if the State is willing to provide guarantees against risks that the private agents consider they cannot assume (regulatory risks and force majeure, but also risks regarding future income, liquidity, or unforeseen cost increases). The assumption of these risks by the State gives rise to considerable fiscal contingencies. For this reason, it is necessary, first of all, to design private participation schemes which minimize the granting of such guarantees, limiting the risks assumed by the State to those which cannot be insured in the market and which the private sector cannot really control. More-

over, the risks assumed by the public sector must be suitably estimated. The corresponding calculations, even if imperfect, must be taken into account in the annual budget debate and it is even desirable that a value equivalent to the annual premium of the "insurance" granted by the State should be explicitly budgeted. This would also make it possible to compare this form of financing with options which involve larger public sector resources, such as projects financed by the public sector but privately managed.¹⁵

The problems arising in connection with regulation and the granting of guarantees bring us to a third challenge: the need to avoid rent-seeking practices

which can be just as much of an aberration as in the previous public scheme, if not more so. In this respect, it is essential to adopt social control mechanisms which avoid the "capture" of the regulatory bodies by the companies they are supposed to regulate. It is also necessary to estimate and publicly discuss, in connection with the budget debate, the practices governing the granting of guarantees and the amounts of such guarantees given by State institutions, as well as establishing clear rules which eliminate "implicit" guarantees (i.e., the perception that private projects which fail will be rescued by the public sector), which can give rise to serious "moral hazard" issues.

V

Equity and social policy

1. The challenge of equity

The equity problems which characterize the region stem from highly unequal distributive structures, largely inherited from previous stages of development. As noted in a recent report by ECLAC (1998d), they reflect a whole set of factors relating to education, employment, wealth and demographic structures. The large inequality in the number of years of schooling of employed persons has been the factor given most emphasis in recent debates. The lack of equity is also related to the unequal distribution of wealth, which is even more concentrated than educational opportunities (see, in this respect, Birdsall and Londoño, 1997). Likewise, the number of employed persons per household is smaller in low-income households, and the jobs they manage to obtain are less skilled. Finally, poor families have more dependent children.

In addition, behind the national patterns there are also considerable regional disparities, so that the problems of poverty are relatively more concentrated in those regions which have the greatest difficulty in integrating into the development process. Although in the long term migration tends to promote the leveling-out of regional disparities, it can have adverse

effects for long periods of time, since it is selective: that is to say, it tends to take the persons with the most human capital away from backward regions. The same thing occurs with the mobility of capital, which, although it may have levelling effects in the long term, can give rise for long periods, through economies of agglomeration, to a strong attraction of capital to the most dynamic centres of development.

Following the studies by Morley (1994 and 1995), various other studies have confirmed that poverty tends to decline with economic growth. The increase in poverty during the 1980s and its reduction during the 1990s is in line with this pattern. Strictly speaking, however, this is only true for urban poverty, since rural poverty, and above all extreme rural poverty, behave in a much more inertial manner, typical of "hard core poverty" (Ocampo, 1998b). Moreover, the data fully confirm the deterioration in income distribution which has taken place over recent decades in a number of countries of the region.¹⁶ The analysis of this process has given rise to an active controversy involving fundamentally two alternative theories. The first of these posits the existence of an asymmetrical behaviour of the incomes of the poorest sectors in acute growth cycles like those which the Latin American economy has undergone in

¹⁵ With respect to these questions, see the studies included in Irwin, Klein, Perry and Thobani (eds), 1997, and ECLAC, 1998b, chapter IX.

¹⁶ For a fuller analysis of these trends, see Altimir (1997), Berry (1998), Morley (1994 and 1995), IDB (1997) and ECLAC (1997).

recent decades: they tend to go down more in periods of crisis than they manage to recover in boom periods. This probably reflects the loss of human capital (experience) during crisis periods and asymmetrical behaviour of the labour market (employment cuts during the crisis are not followed by similar increases in the boom periods, those who lose their jobs also lose labour connections which they never recover, etc.). The second theory holds that economic liberalization and globalization have tended to deteriorate income distribution.

One of the authors who has supported the latter view most strongly is Albert Berry. This author has shown in various studies that there is evidence in the last quarter of a century that the introduction of economic liberalization measures has been associated with often serious deterioration in income distribution (Berry, 1998).¹⁷ The comparative study by Robbins (1996) also shows that trade openness processes have tended to give rise to greater inequality in labour income distribution. The increases in the income disparities between more and less skilled workers during the 1990s (ECLAC, 1997) and the sluggishness of job creation in the formal sector, already referred to in section II, may also help to confirm this view. This growing inequality in wages as a function of levels of skills does not seem to be confined to the region. Indeed, a recent report by UNCTAD (1997) indicates that this may be an almost universal pattern, since it has also affected a number of industrialized countries and some rapidly growing economies in the Asia-Pacific region and in particular has given rise to severe pressures on the middle classes in many countries.

There are various possible explanations for these trends. One of the most interesting is that of Rodrik (1997), who claims that globalization accentuates the asymmetry between the factors which can cross national frontiers most easily—capital and highly skilled labour—and those which cannot do so: less skilled labour. The possibility of relocating production means that the demand for labour is more elastic in all countries, reducing the bargaining power of workers and increasing the instability of their income *vis-à-vis* demand disturbances. Furthermore, Berry (1998) claims that the explanation for this may be connected with the economies of scale in international trade and finance, which are reflected in the

bigger share of the biggest firms in each sector in these activities. These firms are, in turn, those which make intensive use of capital and/or more skilled labour. It has also been suggested that the transfers of technology generated by trade, including technology incorporated in imported machinery and equipment, can cause developing countries in the midst of internationalization processes to adopt technologies which require highly skilled labour and were designed to meet the needs of the industrialized countries (Robbins, 1996). The production restructuring strategies of Latin American enterprises in response to the greater openness and globalization have had unfavourable effects on job creation, as already noted in previous sections.

In the case of Latin America, there may be other explanations for this phenomenon. One of them is that the liberalization process took place after a decade of weakening social expenditure. Thus, the greater demand for more skilled labour came up against an inelastic supply of such workers. Moreover, during the liberalization process no clear efforts were made to link up the demand for and supply of skills. Another explanation might be that the macroeconomic policy which has accompanied the reform process—especially the tendency towards revaluation of exchange rates and opening up of capital accounts—has given rise to growth patterns in which imports have grown more than exports, also generating a bias against the labour-intensive sectors. Macroeconomic management has also been characterized by marked “stop and go” cycles associated to capital flows, which has hindered the generation of more stable jobs.

2. Social policy

These considerations mean that, coming as they did on top of an already unequal distributive structure, the debt crisis, liberalization and globalization (to which the different explanations attach different degrees of importance) have enormously increased the challenge with regard to equity. One of the great challenges facing the region is therefore to show that the new development model is compatible with the gradual correction of the great existing social inequalities. If this objective is not attained, this could undermine the political bases of the reforms, which have been very sound so far, largely because the recovery of macroeconomic stability has been seen as a positive development by the population as a whole. Moreover—which is equally serious—social tensions

¹⁷ This author's information is taken from the cases of Argentina, Chile, Colombia, Mexico, the Dominican Republic and Uruguay, Costa Rica being an exception to this rule.

could arise which make governance difficult and erode the bases of the political consensus which have made it possible to strengthen democracy in the region, undoubtedly another of the great achievements of recent years. In the longer term, the sequels of inequality and poverty could undermine the bases of systemic competitiveness on which the possibilities of development within an increasingly open international context depend.

International experience shows some surprising results with regard to handling the social risks that globalization has brought with it. The study by Rodrik (1997) indicates that in the past, greater openness of economies has been compensated by greater social protection of the population by the State. This has been reflected in a positive relation between the degree of openness and the size of the State. According to this author, this is true both for the OECD countries and for a broad sample of 115 countries, which would seem to indicate that the distributive tensions generated by processes of greater openness have been tackled in the past by trading economic liberalization for greater State protection through a more active social policy.

Social expenditure is undoubtedly the most important component through which the State can influence income distribution. Indeed, there is ample proof that social expenditure has a significant effect on secondary income distribution. The information available for Latin America on this matter indicates that, in absolute terms, the higher-income groups benefit more from social expenditure. As a proportion of the income of each stratum, however, the subsidies channeled through such expenditure are greater for the poorer sections of the population. This global pattern is the result of the very different distributive impacts of different types of expenditure. The degree of focusing on the poor (that is to say, the proportion of the expenditure which is channelled to the poor in relation to the proportion of the population in a state of poverty) is high in the case of expenditure on health, primary education and, to a lesser extent, secondary education. In contrast, expenditure on social security and higher education has a generally regressive tendency. Expenditure on housing is in an intermediate situation, since it benefits in particular the middle strata of the income distribution scale. These results indicate that there is plenty of room for improving income distribution through social expenditure, but also for improving its targeting, as pointed out in a recent ECLAC study. The way in which such

expenditure is financed is by no means irrelevant in this connection: financing from direct taxes tends to be more progressive than financing from indirect taxes and, what is equally important, unsuitable financing which is reflected in an increase in inflation can cancel out the favourable distributive effects (ECLAC, 1998b, chapter VI).

There is therefore a good deal of room for combining economic liberalization with a more active social policy, as indeed traditional international patterns seem to reflect. It is necessary, then, to make an effort to reorient public expenditure towards the social sector—as Latin America has already begun to do in the 1990s—and to target social expenditure and maximize its favourable distributive effects. Some countries could also possibly opt for additional expansion of social expenditure, financed from greater tax revenues. Indeed, this was the alternative chosen by the Chilean government in the early years of the present decade, without thereby adversely affecting real investment or economic growth. This is also the option followed by Colombia in the 1990s (the country of the region which has most markedly increased its social expenditure in this decade), although in this case there has been a financial shortfall making necessary a fiscal adjustment which has not been carried out in full. In these cases, the net distributive impact will depend, as we have seen, on the nature of financing.

In the long term, greater investment in human capital also makes it possible to influence one of the structural factors of income distribution. Thus, the existing studies show that greater allocation of resources to education, which makes it possible to improve the distribution of human capital in society, can have much greater effects on income distribution than those estimated in studies on the short-term incidence on distribution (see, for example, IDB, 1997). As a cautionary note, however, it should be emphasized that there is also confirmation that a big effort in education will tend to be reflected in decreasing returns on the investment in it. Furthermore, as in a growth process the economy demands higher levels of education for the same type of job, there is a “devaluation” of education in the labour market and hence also of its capacity to generate higher income.

This is indicated by a recent report by ECLAC (1998d). This report finds that the increase in the average years of schooling registered in recent decades in Latin America (by an average of three and a half years, if the number of years of schooling of young people between 20 and 24 are compared with

those of their parents) has not succeeded in improving the opportunities of young people from poor social strata. Thus, the report finds that only half of urban young people and a quarter of rural young people have improved their educational level compared with their parents by more than the rise in the educational demands of the labour market, so that they effectively have greater employment opportunities than their parents. This fits in with the results of surveys which indicate that only half of Latin American young people consider that they have better opportunities than their parents.

Likewise, the report in question shows that efforts to expand the coverage of education have not been reflected in a reduction in the distance separating young people of different social strata. In particular, in comparison with the educational capital of their parents, the educational achievements of young Latin Americans have not improved (or have improved only marginally) over the last 15 years.¹⁸ It was also noted that young people with the same educational level and the same occupation earn between 30% and 40% more than the other young people in their age group if they come from households where the parents have higher incomes. This shows that the expansion of education in a context of social inequality does not always result in equality of opportunities. Even in Chile—where a better distribution of educational opportunities has coincided with a very dynamic economy and a positive rate of job creation, which has been reflected in a marked reduction in poverty— income distribution has nevertheless not shown any improvement so far.

For this reason, although higher levels of education and better distribution of educational opportunities are essential, they are not in themselves sufficient to improve income distribution. It is necessary to apply simultaneous policies in the areas of education, employment, distribution of wealth and population, and to direct particularly aggressive action on all these fronts towards rural areas and regions which are backward or have tended to lag behind with the changes in development patterns.

In the case of education, the reforms should be aimed at ensuring that young people receive a full

secondary education of suitable quality at a suitable age, and at reducing the enormous gap that still remains in all countries between educational opportunities in the cities and in rural areas. They should also be aimed at making up for the disadvantages with which children from the poorest homes begin their studies, by expanding the coverage of pre-school education, keeping young people for a longer time in the school system, and dealing adequately with the problems of adolescent pregnancy, which affect the educational opportunities of both the mother and her children. As the extensive literature on this subject indicates, advances in education (and the special efforts in this direction) must also be accompanied by conscious family planning to reduce the problem of a high ratio of dependents which characterizes the poorest households.

With regard to employment, the most important efforts must be aimed at training for future employment and the development of integral support networks (management training, transfer of technology, credit, new marketing channels) for urban and rural small-scale and micro-enterprises, where the persons with the lowest incomes work. Although globalization undoubtedly requires that some labour regulations should be made more flexible, the solution of the structural employment problems in the region obviously does not lie in the radical liberalization of the labour market. Furthermore, such greater labour flexibility as is politically agreed upon in each country must be accompanied by greater social protection in other fields. In particular, there is clear evidence in the region that more active policies with regard to minimum wages (obviously, within macroeconomically sustainable limits) have been associated with bigger reductions in the size of the poor sectors in the 1990s (Morley, 1997). Systems for providing information on employment opportunities and vocational training, especially for those who have lost their jobs, still lag far behind in the region.

Finally, emphasis must be placed on the need to direct attention towards opportunities for improving the distribution of assets, such as policies designed to help small producers and social housing programmes. In this field, one of the aspects which deserves special attention is that of ways of redistributing assets which do not give rise to distortions in economic activity, such as the establishment or improvement of institutions for channeling credit to small enterprises or micro-enterprises without distort-

¹⁸ At the beginning of the 1980s, for example, the proportion of young people whose parents had between six and nine years of schooling but who themselves succeeded in obtaining a full secondary education was between 33% and 43% in the countries studied; in the mid-1990s, this proportion was practically unchanged, standing at between 36% and 46%.

ing the market, or the new agrarian reform schemes which make active use of the land market.

3. Social policy and the second generation reforms

The efforts to increase and target social expenditure in the region must be supplemented with a thorough reorganization of the sector to make the supply of social services more efficient and effective. This is one of the central aspects of what have been called the "second generation" reforms, whose essential purpose is to increase the efficiency of the markets and incorporate criteria based on a microeconomic rationale in the provision of those services where this approach has previously been absent.

With regard to social services, emphasis has been placed on the introduction of elements of competition in their supply (creation of quasi-markets), with the participation of private agents and changes in the forms of State support from the traditional subsidies for the supply of such services to demand subsidies. At the same time, and in a complementary manner, efforts have been made to decentralize the provision of those services for which the State continues to be responsible, to create new systems of results-oriented public management, to give the public bodies responsible for supplying services effective autonomy, and to establish participatory mechanisms for the control of public management. All the components in this reorganization, but especially the first-named, are designed to tackle the government failures which have become evident in the past in the provision of social services and which are reflected in the inefficiency and low quality of the services provided by the State.

Experience shows that while the private sector responds dynamically to the incentives given to it, such participation is subject to market failures, both of a traditional nature, related with economies of scale, and failures associated with information problems, highlighted in the more recent literature, which give rise to phenomena of imperfect competition, adverse selection and "moral hazard" (Ocampo, 1996). In economies with severe disparities in distribution, the most important problem is that of the natural attraction, generated by the market, whereby the private sector directs its supply –both in terms of quantity and, in particular, quality– to the higher income groups. This problem is not necessarily solved through a system

of demand subsidies, and therefore requires that the State should design instruments to increase the supply directed to the lower income groups. As the public supply has in many cases likewise been incapable of reaching certain sectors of the population (as for example in social housing programmes), it is necessary to promote the participation of new agents, generally of a non-profit or community nature.

The above difficulties are further accentuated when the design of private participation schemes does not include clear principles of solidarity, as the private health system in Chile shows (ECLAC, 1998b, chapter VII). In this case, adverse selection –both by income levels and by the health risks associated with the age of the population covered– can be very marked. The introduction of solidarity elements does not automatically solve this problem, however. Thus, for example, the health reform in Colombia established a system in which the benefits are totally independent of the amount of the contribution, but the response of the private sector to the needs of the poorest strata has nevertheless been frustrating. The private response can also be geographically unbalanced: the response is better in large cities, but it is insufficient in small towns and the rural sector, where –because of the very low economies of scale– there may be "natural monopolies" in many services in conditions in which, moreover, their provision is not profitable.

When supply does not respond properly –in terms of quantity or quality– to the incentives generated by demand subsidies, it may be desirable to design intermediate formulas which might be called "demand-oriented supply subsidies" and which would make it possible to influence supply, including the quality of the services provided, while at the same time obtaining the traditional benefits of demand subsidies in terms of the targeting of beneficiaries. Such intermediate schemes consist of the signing of contracts with particular agents to provide services to a specific population group through a system of competitions, or the promotion of community or non-profit organizations with the explicit purpose of entrusting them with the administration of the services in question. This could also be a suitable system for promoting the creation of new services or improving the quality of existing ones (for example, raising the quality of the educational system, as is being done in Chile).

Problems of information are much more serious in the services markets than in those for goods. In particular, there are virtually insoluble asymmetries in information between those who provide

highly specialized services and those who receive them (between doctors and patients, in particular, in the case of health, but similar phenomena are also observed in education). For this reason, the development of quasi-markets for the provision of social services requires the establishment of certain minimum schemes for the provision of information, as well as highly developed instruments for protecting users.

The reforms adopted in this context must be pragmatic and must therefore involve a substantial component of gradualism and learning from experience. It must also be borne in mind that the new schemes of private participation are not a substitute for the public supply of services in all sectors. For this reason, efforts to improve public supply through decentralization, the autonomy of the units providing

services, the introduction of criteria for the assessment of public management, and citizen control are undoubtedly vital elements of any reform with regard to social services.

Finally, it should be emphasized that one of the main features in the reform of social services should be the design of suitable systems of regulation, information and quality control of the services provided. This is particularly important when the specialized nature of the services does not guarantee the transparency of the information that consumers use to select their suppliers. This is a matter which is still at an incipient stage and which will require considerable efforts in the years to come.

(Original: Spanish)

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The Cuban *economy*

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At the end of the 1950s, Cuba's economic structure was marked by serious technological lags and insufficient industrial development. The growth rates of production and investment were low, while income distribution displayed a notable bias towards concentration. Over the period from 1959 to 1989, the product grew at an average rate of around 4% per year and economic policy gave the State a leading role in the production of goods and services, with a marked predominance of planning over the market mechanisms in the regulation of economic activity. In this stage, the economy underwent far-reaching changes in its production bases, although many of the typical shortcomings of the Socialist countries were repeated: over-dimensioned projects, incorporation of obsolete or obsolescent technologies, and neglect of competitiveness. Thus, for three decades Cuba was on the sidelines of the enormous changes which were taking place in Western markets. Under its arrangements with the Socialist countries, the country enjoyed guaranteed markets for its exports, favourable terms of trade (although rather less so in the 1980s) and generous financing for its balance of payments. Albeit with flagrant cases of inefficiency, Cuba increased its stock of capital goods and expanded its physical infrastructure; increased the capacity of its dams; modernized its railway system, and built expressways, highways and rural roads. Progress was made in the electrification of the country, and heavy investments were made in the development of human resources, especially in the areas of health, education, culture and sport. The high social content of the economic policy made possible substantial advances in the provision of basic services for the population and the training of an increasingly skilled labour force.

I

Recent economic evolution

The entry of the Cuban economy into the Council of Mutual Economic Assistance (CMEA) at the beginning of the 1970s gave rise to a period of faster economic growth than in previous periods, largely furthered by heavy net transfers of external resources.¹

After the disappearance of the CMEA, Cuba began the 1990s with structural restrictions on its incorporation into Western trade. The State still controls much of economic activity, on both the supply and the demand side, the currency is not convertible, and the external linkages with the former CMEA countries have still not been completely broken. All this explains the special features of the production structure and distortions in relative prices compared with those prevailing in the market economies. Moreover, in the new circumstances efforts to achieve distributive objectives and make progress in the social field give rise to heavy burdens which are beginning to exceed the capacity of the national economy.

Cuba's need to adjust its economy to the new external circumstances is similar to the situation faced by other Latin American economies in the 1980s, with the difference that in the Cuban case the period of adjustment is shorter and the constraints are greater. Thus, in 1993 the country embarked on an adjustment programme centered, as is usual, on two main elements: a macroeconomic stabilization effort and liberalization in the areas of production, finance and trade. Unlike what happened in the rest of Latin America and in the European economies, however, the reform process did not include a significant privatization component and incorporated deliberate deci-

sions to pursue equity in sharing out the burden of the change of strategy.

An idea of the magnitude of the recessionary adjustments made may be gained from the fact that the product fell by 35% in real terms between 1989 and 1993, which was the year when the crisis reached its height. In this period, total consumption contracted by 13%, with family consumption going down by a similar proportion. Capital formation slumped from 24% to less than 6% of the product, while the fiscal deficit rose from 6.7% to 30.4% of GDP. Balance of payments capital account income went down to less than one-tenth (from US\$ 4122 million to US\$ 404 million), forcing an adjustment in the trade and payments balances. Finally, real wages went down by around 18%.

From 1993 onwards, the combination of significant stabilization efforts and the rearrangement of some structural changes has begun to put the economy on a sounder basis and bring about changes in its traditional forms of operation. Short-term strategic planning has undoubtedly made substantial progress, although the country is still far from completing more far-reaching changes. More specifically, the economy has begun –albeit with some fits and starts– a recovery phase in which annual growth rates averaged 3.4% between 1993 and 1997. Over the same four years, the imbalance in the public accounts went down to only 2% of GDP; monetary liquidity went down from 67% to around 40% of the product; exports and imports doubled, and the situation with regard to the parallel exchange rate improved, with the rate going down from an average of 78 pesos per dollar in 1993 to 19 pesos in 1996, a little over 20 in 1997, and 19 in March 1998.

Despite this progress, the full recovery of the Cuban economy requires the reactivation and greater competitiveness of the sugar industry, which is currently in a very unfavourable situation and has adverse effects on both the external and fiscal accounts, since the latter are affected by the subsidies that the industry absorbs. Sugar production also serves as a guarantee for obtaining foreign credits, which are of decisive importance for dealing with the shortage of

□ This article is based on *La economía cubana: reformas estructurales y desempeño en los noventa* (The Cuban economy: structural reforms and performance in the 1990s) (ECLAC, 1997), and on the presentation of that study made by David Ibarra at the Fondo de Cultura Económica in March 1998.

¹ Many of the economic statistics for Cuba are open to question because until very recently they used methods of calculation different from those recommended by the United Nations. Furthermore, there are shortcomings due to the intrinsic lack of information (on prices, for example), the change in the system of national accounts (from the system of material product accounting to the standard United Nations system) and limitations of access in sensitive areas for reasons of national security (in the case of foreign investment and the external debt, for example).

foreign exchange suffered by the country. In the present economic situation, it might be thought that the slump in oil prices might reverse the unfavourable

trends in the terms of trade, but the decline in the international prices of sugar and nickel tends to wipe out this effect.

II

Economic reforms and changes in institutions

In 1989, the sudden dissolution of its very special linkages with the Socialist countries forced Cuba to make profound reforms in its economy and to change the rules previously governing its social life. Unlike what happened in a number of Eastern European countries, the decisive pressures for change were probably not associated with ideologies or paradigms, embraced by the bulk of the population, which were in opposition to the official line.

Right from the start of the crisis, it was decided to spread its burden evenly, and a complex system of measures was adopted to facilitate the readaptation of production and recover the basic macroeconomic balances. The economic policy responses to the new situation began to be applied in 1993 with the implementation of a broad programme of adjustment and structural change. Subsidies to enterprises were slashed; capital expenditure was kept at very low levels; special taxes were approved, and rationing of imports and a partial freeze on prices and wages were applied in a sort of incomes policy. Although monetary policy continued to be of a passive nature, the government legalized the parallel market and the possession of foreign currency and set up a network of shops to recover foreign exchange, thus encouraging an increase in remittances from abroad, which helped to relieve supply shortages.

The State continues to play an important role in production and resource allocation, with strict regulations on investments and the management of scarce foreign currency and inputs. Central planning has gradually given way to more indirect controls, however, especially at the macroeconomic level. The reform process has advanced on various fronts and must continue to do so if it is desired to consolidate the changes designed to adapt the economy and society to an external environment which has undergone considerable changes. In this respect, it must be ac-

knowledged that the adaptations have mainly been of a domestic nature, but the speed and even the direction of some changes are related with the possibility of easing the external conditions which keep the country on the sidelines of financial markets and many trade flows.

A "second economy" has arisen and gradually become more consolidated with the formation of mixed-capital enterprises, the granting of management autonomy to export enterprises, and the increase in the number of actors in the liberalized markets. These departures from the system of centralized planning have given rise to a new wave of reforms which have altered the fiscal and financial structures and have led to the establishment of indirect State controls of a macroeconomic and micro-economic nature.

1. The external sector

The backbone of the structural reform process is the effort to rebuild external economic relations in order to overcome the external bottleneck and the very severe contraction of the economy. It should be noted here that the dramatic turnaround in foreign trade seriously affected the very heart of the Cuban economy. In 1997, exports and imports were still below their 1989 levels, and the recovery of the terms of trade still seems far off.

In order to combat these tendencies, the government has eased many of the previous regulations; in particular, it has broken the State monopoly on external trade by giving management autonomy to the public enterprises and allowing them to operate side-by-side with private establishments. Export firms are now permitted to acquire inputs directly abroad and to finance Cuban producers who compete with external suppliers. In addition, the encouragement of the

inflow of foreign capital and know-how has led to substantial changes in the rules on foreign investment and ownership, as well as the establishment of favourable fiscal and customs treatment.

Promotion of exports and deliberate reduction of external purchases have been the main elements in the balance of payments adjustment. The current account deficit was reduced from US\$ 3 billion to US\$ 428 million between 1989 and 1997. This is a fragile and incomplete adaptation process, however, as is shown by the acute dependence with regard to the supply of capital goods, energy products and other strategic inputs, as well as basic consumer goods. Nevertheless, there are achievements to show: as well as doubling exports between 1993 and 1997, transactions with the West have grown from less than 20% to around two-thirds of foreign trade.

a) *Foreign investment*

In 1988 it was agreed to establish the first mixed enterprise in the island, to build and operate the "Sol Palmeras" hotel at Varadero. The organization of commercial associations with foreign capital speeded up as from 1992, and at the beginning of 1998 there were 317 such associations. The capital came from over 50 countries, with Spain, Canada, Italy, Mexico and France accounting for particularly large shares. The sectors most favoured with such investment are tourism, mining and the oil industry.

In 1995 a new law was adopted to attract foreign investment and technology, and agreements have been signed with the governments of various countries for mutual protection of investments. The main features of this law represent a considerably more flexible approach compared with the previous system, but restrictive practices or controls still exist, especially the case-by-case approval of projects with foreign participation and the hiring of Cuban personnel through public bodies. The recent foreign investments have helped to create some 60,000 jobs in various activities and over 600 foreign companies and commercial firms have installed offices to represent them in the country.

b) *Tourism*

In 1994, the reorganization of tourism activities was initiated. The previous excessive concentration of decisions has been reversed, and economic and financial autonomy has been granted to the enterprises set up, in order to improve their competitive-

ness. Hotel chains are free to acquire their inputs on either the local or the external market and they are participating –through financing and technical assistance– in the development of a network of national suppliers.

The Ministry of Tourism undertakes institutional promotion programmes and defines investment policy, but the hotel chains negotiate directly with foreign investors, who come mainly from Argentina, Brazil, Canada, Italy, Mexico, Spain and the United Kingdom. It is estimated that tourism services provide direct employment for 65,000 people. In 1998, the installed capacity for international tourism came to almost 390,000 rooms. There is a programme for building 27,000 more rooms per year up to the year 2000, with the aid of foreign investment, which will make it possible to receive nearly two million more visitors.

2. Reform and modernization of the State

a) *Redimensioning the State apparatus*

Up to 1989, the size and functions of the public sector were closely linked with the State's participation in planning the national economy and running State enterprises. Likewise, the structure of the central government was functional to the needs of economic integration with the members of the former CMEA.

As from the 1990s, a new style of organization of the State began to take shape. In 1994, the number of ministries and central-level institutions was reduced from 50 to 32. The central government was made more compact, the new institutions were assigned functions in accordance with the economic reform process, and there was a considerable reduction in the central government payroll. In line with these new approaches, the State now plays less of a leading role in the economy, in accordance with the reforms and new objectives.

Gradual restructuring and redimensioning of the production sectors to adapt enterprises to the size of the market, the availability of inputs, and the use of technologies that allow them to be competitive has been undertaken, involving both the reconversion of production activities and the closure of non-viable enterprises and the modernization of activities and better use of the available resources. The government now tends to form small but more efficient central management bodies and to delegate or decentralize

functions and responsibilities to the provinces and municipalities, as well as giving increasing management autonomy to public enterprises. Without prejudice to the foregoing, an effort is also being made to share out the burdens of the crisis and maintain the social safety nets. However, the external bottleneck has caused the authorities to establish strict direct controls on the allocation of foreign exchange and strategic inputs.

At the same time, with the dual purpose of speeding up structural change and equitably sharing the benefits and costs of the adjustment, special incentive arrangements have been set up for over 1.4 million workers (as at the beginning of 1998), especially in export activities and those efficiently replacing exports.

b) *Financial reform*

The financial reform process is only just beginning to adapt this sector to the changes in the real sector of the economy, in economic relations with the exterior, and in individual and collective property rights. Institutional reforms are being made which are designed to create and strengthen financial markets and institutions in order to improve the mobilization of savings and channel them to investment and the recovery of production. Measures are thus being taken to create a financial system made up of banks, non-bank intermediaries and capital markets.

In 1993, as the first step in the reform of the financial system, it was made legal to possess foreign exchange and, subsequently, to open bank savings accounts in convertible currencies. Next, money changing offices and other financial intermediaries were set up. Among the latter, special mention may be made of the formation of banks or financial institutions specializing in serving and integrating the production circuits connected with the reconstruction of foreign trade and the development of instruments to provide support for trade with the West. Finally, foreign banks have been given the possibility of participating in the economy and already have a dozen offices representing them. The same has occurred in the case of other financial services, such as insurance.

The above-mentioned changes mark the beginning of more profound changes in financial institutions in order to adapt them to the results of the economic shifts taking shape in Cuba. Mention may be made, in this respect, of the publication in 1997 of

decrees setting up the Central Bank of Cuba and the commercial banking system and regulating the establishment and functioning of banks and non-bank financial institutions. Cuba has thus broken with the system of having only a single banking entity and has opened up the way for the tripartite system which prevails in the market economies: a Central Bank, a commercial banking system, and an investment banking system.

3. The labour market

In 1989 the employment situation was favourable, although the jobs available were not always of high productivity. In the 1990s, the crisis and structural changes have reduced employment in the public sector and increased the number of jobs in non-State activities. Private own-account employment has increased, but it is still subject to restrictions: own-account enterprises cannot hire paid staff and in practice are excluded from bank credit. Moreover, tax policy has become very severe with respect to these businesses, leading to discouragement and the closure of many of them, with the consequent loss of opportunities for creating income and jobs.

Although wage reforms are still pending and workers have lost purchasing power, efforts have been made to share the costs of the adjustment as equitably as possible. Thus, various measures have been taken to keep up employment in para-State enterprises and to maintain the incomes of workers who are technically redundant, in an effort to relieve the immediate social costs which are the inevitable counterpart of the long-term benefits of the production adjustment process. Workers who lose their jobs receive a State guarantee of 100% of their wages during the first month and subsequently benefits equivalent to 60% of their basic wages for a period which depends on their number of years of service. There are also enterprises which keep their workers standing by for technical or social reasons, continuing to pay them their full wages.

The economic duality of markets and prices is reflected in the duality of the net remuneration (but not the wages) of the labour force. The real wages of public employees in the central sector have deteriorated, but workers in high-priority activities (exports, energy products, foodstuffs) receive supplementary income in the form of incentives for raising productivity and generating or saving foreign exchange.

Thus, one of the dilemmas of the Cuban economy is how to generalize the incentives currently received by only part of the working population, which have led to a certain amount of migration of workers who do not enjoy such incentives towards areas of modern activities, such as tourist services.

4. Macroeconomic reforms

a) *Fiscal reforms*

The tax reform process is being applied only gradually because of the enormous administrative demands it poses and the lack of previous practical experience in taxing individual persons and enterprises. The previous taxes are being replaced by taxes similar to those used in the West and the tax on money circulation will be replaced by a sales tax. By mid-1998, all State enterprises had been incorporated into the new tax system.

Among the main purposes of the 1994 Tax System Act are those of protecting the lowest-income social strata, stimulating work and production, and helping to eliminate excess liquidity. Two direct taxes have been established: a 35% tax on company profits and a progressive tax on personal income. Revenue from the tax on profits increased five-fold between 1995 and 1998, while the second tax concentrated on own-account commercial activities and, since 1996, on the foreign exchange income of certain types of professionals.

In May 1997 it was made legal to rent real estate and a tax was established which is calculated on the basis of the characteristics of the property rented. It is estimated that 20% of tourists, excluding non-resident Cubans, stay in private houses.

The gradual application of this Act has resulted in an increase in the taxes paid by the non-State sector and the population in general. In 1995, these two sectors accounted for 6.7% of total tax revenue, but in the following year their contribution was 9%, and this increased to 9.4% in 1997. This figure is still below the potential contribution of the private sector, particularly because many of the non-State production activities are in the cooperative agricultural sector, which has not yet been incorporated into the new tax system.

b) *The monetary system*

In the monetary field, the parallel foreign exchange market was legalized, as was the opening of

foreign-currency savings accounts in Cuban banks. A system of "foreign exchange recovery shops" was also set up with the dual purpose of making up for shortcomings in national supply and syphoning-off excess liquidity. Thus, markets have been segmented and transactions are carried out in various currencies: Cuban pesos, U.S. dollars and, more recently, convertible pesos. The State-controlled formal market, which receives high State subsidies, has kept the prices of essential consumer goods and services stable in terms of Cuban pesos. In the free markets for agricultural, industrial and handicraft goods, prices are freely fixed (in the three circulating currencies: Cuban pesos, convertible pesos and U.S. dollars) according to the fluctuations of supply and demand. In the foreign exchange recovery shops, prices are set by the government and purchases can be made in convertible pesos or in U.S. dollars.

5. The planning system

The Cuban planning system has undergone substantial changes and adaptations due to the demands of the macroeconomic stabilization process and the structural changes associated with the rebuilding of economic links with the Western world.

Thus, the institutional frontiers separating the public and private sectors have been changing. Planning has given way to the market forces as a system of economic coordination. Even so, the system of centralized control still prevails and the public enterprises play a leading role in the allocation of resources and the supply of most goods and services. The market forces are on the rise, however, furthering the progressive decentralization of economic activities and decisions. Consequently, there is an uneasy coexistence between central planning and the market in more and more areas of the economy.

At the same time, the rebuilding of economic links with the West involves the transition from a broad-based growth model to another where considerations of competitiveness, technical excellence and flexibility in adapting to markets prevail, and although central planning may be appropriate for the first-named model, it has obvious shortcomings for the pursuit of intensive development, especially in economies which are only small and are more open to external trade.

The results of the structural adaptations of the Cuban economy naturally display a complex picture

of advances and setbacks. The domestic and external forces sometimes favour and on other occasions hinder the advance and rapidity of reform efforts.

The inevitable ups and downs of the "special period" affected the presentation of annual plans to the National Assembly between 1991 and 1995. At the same time that emergency measures were being implemented, new forms of macroeconomic and microeconomic management began to be introduced which emphasized market relations and pursued stricter criteria of competitiveness and efficiency. This led to the adoption of hitherto non-existent forms of planning which made up the so-called "strategic planning" approach.

No system of planning, or, to put it in more general terms, no economic coordination system, is independent of the legal and organizational framework within which it operates. In Cuba, the impact of new circumstances and urgent problems has led to the initiation of a period of reconstruction of institutions which is still under way. So far, the institutional reforms and those of the planning system have advanced side-by-side, and this explains the flexibility and much of the success of the economic stabilization process and some essential structural changes. Nevertheless, these two interdependent processes of change have not yet concluded and some tensions still persist, with no clear delineation of the division of labour between the State and the market in resource allocation or the coordination of economic activity.

6. Other reforms

a) *Legalization of dual markets and family remittances*

Since the measures taken in mid-1993 to legalize the possession of foreign exchange, family remittances have assumed growing importance in the external sector of the Cuban economy. They supplement family income and at the same time represent a purchasing power which helps to sustain and expand transactions in the free markets and the "foreign exchange recovery shops". Furthermore, the establishment of free markets has in itself encouraged production and facilitated the spread of new sources of income for the population.

From a macroeconomic standpoint, although the multiple nature of the price system or the monetary circuits may have disadvantages in the longer term, it

has made it possible to capture scarce foreign exchange and increase the available supply for families and enterprises.

b) *Changes in the agricultural sector*

Between 1959 and 1963, two agrarian reform laws were adopted which established a dominant State sector in Cuban agriculture, concentrating within it most of the land in the country. In 1993, however, it was decided to allow third parties to make use of the bulk of State-owned land, with the aim of promoting an increase in supply, decentralizing official functions and responsibilities, and reducing fiscal support.

For this purpose, basic cooperative production units (BCPUs) were established, opening up the way to smaller-scale and more autonomous forms of organization. The far-reaching nature of the reforms may be gathered from the fact that two-thirds of the total cultivable area is now operated by non-State entities. The BCPUs were entrusted with 42% of the cultivable land for exploitation and received loans equivalent to the value of the equipment and installations.

In 1994, "farmers' markets" in which prices are freely set were formally established. Markets of this type have been established in the 169 municipal areas of the country, with 29 in the city of Havana. This has thus given legal standing to the marketing of their own goods by individual peasants as well as by public enterprises and cooperatives, after fulfillment of their sales commitments to the State. In 1997, private enterprise provided 73% of all supplies, while the State and co-operative sectors provided 24% and 4%, respectively.

The immediate effects of the change in agricultural land use have been reflected in the encouragement of production, the creation of independent sources of employment, and the incipient formation of new entrepreneurs. The experiment has not yet reached maturity, and it faces the risks associated with every agrarian reform process, which are magnified in the case of Cuba by the crisis, the over-mechanization of agriculture in the previous period, the lack of management experience, shortcomings in the supply of essential inputs and spare parts, and forms of ownership which do not fully encourage reinvestment, technological innovation, or the care of natural resources (Demsetz, 1967; Coase (ed.), 1988).

III

Final comments

There are still major problems which affect the evolution of the Cuban economy and society and are likely to continue to do so. The microeconomic advances have been concentrated in the production of marketable goods, and the capital formation process has considerably declined, as have the standards of maintenance of enterprises and the infrastructure, just at the time when technical reconversion needs are at their highest. The reorganization schemes for agricultural producers and industry are far from consolidated (this is particularly so in the case of many of the agricultural cooperatives and the industrial plants which have not redimensioned their operations or corrected overmanning); as occurred in 1996 with the overheating of the economy, the external bottleneck, which has only partly been solved, imposes strict limits on the attainable growth rates, and the gap between social security income and expenditure has widened since 1989, as benefits are granted independently of the payroll-based revenue collected.

Demographic phenomena (such as population ageing and the high proportion of pensioners compared with the active labour force), together with the financial needs referred to in the previous paragraph, reduce the budgetary funds available for investment and modernization of production to a level below that which is advisable, and this is why it is so important to review the whole set of pension systems and social safety nets.

Now that the stabilization phase of the "special period" has been completed, the country is facing a parting of the ways with regard to its future evolution, which is so intrinsically complex that only a broad sketch of a general nature can be attempted. One option would be to limit the liberalization of the "second economy" and halt the strengthening of private property rights, which would make it possible to prevent the subsequent segmentation of society or the dispersion of political and economic power. The drawbacks of this approach are equally clear, however: lower rates of development, a reduction in the innovative impulses for growth, and a dangerous prolongation of the period of inevitable economic and social changes.

The other option would be to press on with the reforms and gradually eliminate the obstacles to the development of the "second economy". From the Cuban standpoint, this option would not be free from problems either. To begin with, it would be necessary to accept the gradual separation of powers between the State and the market, which would amount to changing the socialist paradigm followed so far. At the same time, it would be necessary to compensate for the tendencies towards income stratification, by extending the incentives currently given to the "second economy" to other segments of the labour market in order to preserve the legitimizing objectives of the Cuban Welfare State.

Contrary to what is often assumed, profound changes in production systems cannot be achieved instantaneously, nor can they be prevented from affecting the social body as a whole: first of all it is necessary to travel the little-known and risky paths of the institutional transition. To make matters worse, Cuba does not have much room for maneuvering. Apart from domestic tensions, the present international economic isolation imposes extraordinary limits on the attainable rate of national reconstruction. For these reasons, in order to carry through the reform effort this must be carried out gradually, without trying to follow a straight line but instead following a zigzag path. The recent increase in the tax burden on private own-account activities shows that there are domestic tensions, while the United States embargo illustrates those of foreign origin.

A distinction must be made here between radical strategies of structural change which can be put into effect immediately and the slower rate of evolution of institutional changes. It is perfectly possible to deregulate external trade or unify exchange markets overnight, but this might be incompatible with the more gradual process of reorganization and reconversion of production at the microeconomic level or the acceptance by society of new values or greater sacrifices in the short term.

As already noted, the reform drive in Cuba has arisen mainly in response to disturbances of external origin which called for curative strategies imposed

from above after a period of consultations with popular-level organizations. It therefore displays the ambiguity typical of profound reform processes, many of whose objectives will only be attained as progress is made in the solution of the inevitable political tensions and rigidities.

This is not to deny the need for the gradual elimination of flagrant economic distortions and the adoption of a new set of reforms; it merely emphasizes the need to choose the short- and long-term priorities very carefully and to appraise with caution the rate at which institutional changes can reasonably be applied.

At all events, the future of Cuba is not confined within the classical dichotomies of capitalism or socialism. There are many different paths open, as is shown by the different balances be-

tween efficiency, equity and growth reached in Northern Europe, the Pacific Rim countries, or Costa Rica in Latin America.

So far, we have mainly reviewed the domestic options and conditioning factors for the economic transition and the reinsertion of Cuba into Western markets. In an interdependent world, however, national decisions are affected by increasingly important outside influences. For this reason, the rate of the Cuban reform process and some of its features will be subject to the reactions and responses of the international community, expressed either in the form of closer relations and the settlement of differences, or in greater separation and even mutual hostility.

(Original: Spanish)

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Education in Latin America: *demand and distribution* are factors that matter

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Although the governments of the region have increased their spending on health and education, the results have been unsatisfactory. Expenditure on these services has traditionally been considered as a transfer rather than an investment. The accumulation of human capital has been relatively slow, with negative effects on economic growth, and it has been distributed unevenly among the different income groups, thereby further increasing inequality. This article analyses the causes of these results. First it describes the nature of the problem, presenting data which confirm the scanty and inequitable accumulation of social capital in the region, which has further accentuated the inequitable distribution of wealth and income. It then discusses the causes of these results, emphasizing the effect of the weak demand for education among the poor, due, among other reasons, to income constraints and the old policy of economic protection. Among its conclusions, it lays emphasis on the fact that the economic reforms have increased the demand for social capital, thus raising the private returns on investment in human capital and giving rise to renewed interest within the private sector in improving the public educational system. The public sector also has new incentives to embark on the reform of the health and education sectors. This could set up a virtuous circle of better accumulation and distribution of human capital, linked with more equitable economic growth.

I

Introduction

The early postwar development model emphasized a strong role for the State. The challenge of coordination, of ensuring the complementary public and private investment in industry, transport and communications needed to jump-start an economy, seemed to justify the State not only assuming a leading role as planner, but also taking the commanding heights of the economy and managing production. In this early development model, spending on such "non-productive sectors" as health and education was seen as a drain on the accumulation of productive assets, and thus as a cost in terms of growth. Early demographic models, for example, emphasized that rapid population growth in developing countries was draining away public resources on schooling and health services, thus reducing the availability of productive physical capital per capita.

The newer growth models introduced the concept of "human capital" as a productive investment. In the new classical growth models, human capital accumulation is as critical to the growth process as the previous narrow concept of physical capital: growth is stimulated by increasing savings and investment in education. The recent endogenous growth models attribute an even stronger role to human capital. In these models, sustainable growth is a result, in part, of the positive externalities generated by education, an important form of human capital; new ideas and new technologies are critical to high sustained growth, and their generation, in turn, depends on high levels of human capital.

The newer growth models provide an elegant and compelling justification for human capital investments as efficient and growth-enhancing. In their simplest form, however (as reflected in the well-known empirical studies of growth by Barro, Sala-i-Martin, Romer and others), they embody assumptions which are poor guides to policy choices.

First, and most fundamental for this article, the distribution of human capital across individuals is ignored. The implicit assumption is that the accumulation process will "trickle-down" and benefit members of all income groups proportionately.

Second, and reinforcing the first shortcoming, demand is ignored. Human capital accumulation is treated as exogenous. The determinants of the accumulation process—household decisions to invest in human capital, and public policy decisions about the size and allocation of similar investments—are not modelled. The initial distribution of adult education across households, which is critical to investments in children's education (Schultz, 1988), and the macroeconomic, trade and other economy-wide policies that also affect household demand by different income groups for education, are not explicitly considered. This ignores the fact that parents who are poorer and less educated are likely to invest less in their children's education.

And third, the problem of delivery—the efficient and equitable production of social services—is also ignored. A major role for the State in the delivery of health and education services is implicitly endorsed. The emphasis on the positive externalities of human capital in new growth models is based on the logic of a market failure, particularly in capital markets, which inhibits optimal private investment. Because human capital cannot be appropriated, borrowers cannot use future human capital as collateral; even when agents recognize high returns to private investments in health and schooling, they cannot borrow and their investments are therefore liquidity-constrained. Thus in these models the role of the State is critical, reinforcing the traditional view of government as the major financier, producer and provider of all social services.¹

This lack of emphasis on the distribution, demand for, and delivery of social programmes has reinforced the long-standing assumption that Latin America's developing societies face an inevitable tradeoff between efficiency and fairness. In the tradition of Kuznets, analysts have tended to view the high and growing income inequality of the region as

¹ Of course, the State can play a strong role in the selective financing of social programmes, apart from their provision. On this particular issue, the new growth models are silent.

an inevitable consequence of economic development. Past efforts of governments to rectify unfairness using populist transfers –with disastrous fiscal results– have reinforced the pessimistic view that Latin America cannot enjoy growth with equity. Given that pessimism, the range of recommended policy responses has been comparatively unambitious: a remedial and marginal social policy designed to cushion the impact of increasing poverty, without any emphasis on investment in the human capital of the poor.

In challenging the assumptions of the new growth models and of the tradeoff pessimists, the present article focusses on the social sectors –education and health– in Latin America. The process of investment in these sectors –that is to say, investment in human capital– has not worked well in the region. Though governments have committed as many or more resources to health and education services as have other developing countries, the region has a poor record, given its income. Spending on these services, particularly for the poor, has historically been viewed as a transfer rather than an investment. Human capital accumulation has been relatively slow, with negative effects on growth, and it has been highly unequal across income groups, exacerbating income inequality.

This article examines why. The discussion is based on a broader consideration of the points made above, focussing on the interrelated issues of demand (for education, for example) and distribution. A thorough discussion of the third point (the transformation of social service delivery) may be found in Birdsall and Londoño (1998).

First, with regard to demand, the low accumulation of human capital in Latin America reflects low household demand for education, particularly among the poor. Second, with regard to distribution, this low household demand for human capital reflects the high proportion of poor households in Latin America and the depth of their poverty. The historically unequal access of the poor to income-producing assets (land as well as human capital) in the region helps to explain the vicious cycle of low accumulation of human capital and widespread poverty. Moreover, low accumulation of human capital by the poor has been exacerbated by regressive patterns of public spending on social programmes –the poor have not benefitted much from public spending on education and health services– and by economic policies that have penal-

ized labour and discouraged household investment in education.

In short, the trickle-down approach to human capital accumulation in Latin America has failed. If the region's economies are to exploit the efficiency and growth-enhancing effects of more rapid human capital accumulation, there will need to be more emphasis on equity in the distribution of the services that generate such capital.²

Section II of this article describes the nature of the challenge, summarizing evidence which shows that, despite adequate public spending, accumulation of human capital in Latin America has been low and inequitable –the distribution of education has hardly improved over time. Empirical analysis shows that low and unequal human capital accumulation in Latin America goes a long way towards explaining not only Latin America's high level of income disparity and poverty but also its sluggish capital formation and lack of economic growth, and that, in a vicious circle, the insufficiency and inequality of the region's human capital has reflected, and at the same time reinforced, the high degree of asset and income inequality throughout Latin America.

In section III, the underlying reasons for low and unequal human capital accumulation are discussed, emphasizing the effect of weak demand for education among the poor due to liquidity constraints and the likelihood of low returns to human capital investment in economies biased against labour. On the one hand, history suggests a discouraging vicious circle, in which initial poverty and income inequality have led to slow and unequal human capital accumulation, which has in turn reduced growth and exacerbated inequality. On the other hand, there is a positive implication: more rapid accumulation, with greater emphasis on equal access to education, can both speed economic growth and reduce income inequality. More and more equal education can enhance both efficiency and equity.

The article ends on a note of optimism. Recent economy-wide reforms are increasing the demand for skilled labour in the region. This is raising the private return to human capital investment, and generating a

² In Birdsall and Londoño (1998) we address the challenge of more equitable social service delivery by advocating a new "horizontal" approach to the provision of social services: one which relies on greater targeting of public spending to the poor, more competitive supply of services, and an emphasis on demand that empowers consumers, including poor consumers.

new round of interest in the business sector for an improved public system of education. At the same time, success on the macroeconomic front has created a readiness in the public sector to address the challenges of reforming the education and health sectors—education was a major focus of attention for the Heads of State at the 1998 Summit of the Americas in Santiago, Chile. Throughout the region, there are a growing number of efforts to test new approaches to the delivery of social services that combine centrally

determined rules of the game with market-led competitive supply and consumer empowerment. These efforts show the potential for greater internal efficiency in the delivery of social programmes and more responsiveness and accountability of public systems to the needs of the poor. More access by the poor to good education and health services can set in motion a new, virtuous circle that includes fairer distribution of assets and opportunities, faster economic growth and wider distribution of its benefits.

II

Low and unequal human capital accumulation in Latin America

First the facts. After taking account of its per capita income, Latin America's performance in human capital accumulation is weak compared to other regions. This is particularly true for education: average schooling attainment is two years below what would be expected from the level of per capita income: a record barely better than that of sub-Saharan Africa and well below that of East and Southeast Asia. At the beginning of the 1990s, workers had an average of 5.2 years of education—nearly a third less than would be expected for countries with the region's level of development—and more than a third of the children entering primary school were not finishing it: over twice the rate of other regions in the world.

The education gap has worsened over the last three decades. At the start of the 1970s, Latin America had a low level of education, lower than the countries of Europe and Southeast Asia with comparable income levels but no different from the rest of the developing world, once adjusted on a per capita basis. Since then, however, education in Latin America (led by Brazil, Mexico, Venezuela and Central America) has grown at a positive but slow rate, well below the growth achieved by the Asian countries and the rest of the developing world. In 1980, the region's work force lagged behind the average for the developing world, in terms of number of years of education, by an average of one year, and by the mid-1990s this figure had doubled. Compared to East and Southeast Asia, Latin America's lag in education has increased from less than one year in 1970 to about 4 years in 1995 (figure 1).

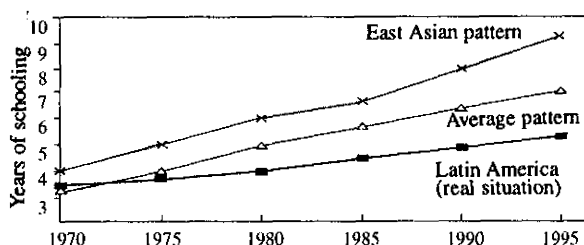
The shortfall in health compared with other regions is not so marked. Average life expectancy is about two years below the level that should be expected, given the region's income (figure 2). This result is perhaps due to a smaller gender gap in education than elsewhere, the positive effect of mothers' educational levels on infant mortality, and relatively greater spending and innovation in the health sector in Latin America (IDB, 1996).

The primary problem is not one of low public expenditure on health and education; such expenditure is similar to that of other developing regions, at 6.6% of GDP (table 1).³ Rather, the problem has been the inefficient use of public expenditure and the unequal incidence of public spending on these services: that is to say, the relatively low proportion of public spending that has benefitted the poor.⁴ Compared to

³ Consistent with performance, spending is relatively greater on health than on education, compared to other regions. In this article, education is emphasized as the measure of human capital accumulation. Health and other measures also reflect investment in human capital, of course, but in a less linear manner and thus with less easily measured and differentiated effects on productivity and income growth.

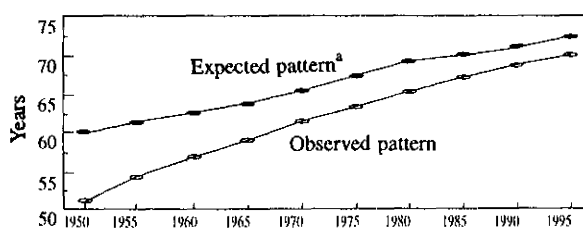
⁴ Compared with East Asia, low economic growth and the later decline in fertility also translated into lower spending per child in Latin America, especially in the 1980s. Now, however, Latin America is beginning to benefit from a reduction in the growth of school-age populations and from the higher absolute spending per capita that is associated with higher rates of economic growth, even without increases in the proportion of GDP going to social spending. In addition, many countries are in fact increasing that proportion.

FIGURE 1
Latin America and East Asia:
The educational deficit



Source: Inter-American Development Bank, *Economic and social progress in Latin America*, Washington, D. C., 1996.

FIGURE 2
Latin America: The life expectancy deficit



Source: Inter-American Development Bank, *Economic and social progress in Latin America*, Washington, D. C., 1996.

^a Calculated from the equation $e(\ln(y), \text{time})$.

TABLE 1
Social expenditure in the 1990s
(% of GDP)

	Public expenditure			Private expenditure
	Total	Education	Health	Health
Latin America	6.6	3.6	3.0	3.1
Other developing countries	6.4	4.2	2.2	1.9
All developing countries	6.5	4.1	2.4	2.2
Worldwide	9.9	5.1	4.8	3.2

Source: Inter-American Development Bank (IDB), *Economic and Social Progress in Latin America*, Washington, D. C., 1996.

East Asia and the industrialized countries, Latin America displays high inequality of human capital (its inequality in the distribution of land, another critical productive asset, is the highest of any region –see figures 3 and 4).⁵ Thus, the low rate of overall accumulation –the average between the sizeable increases in the number of years of schooling completed for a small number of the people and very limited increases for the great majority– is due in part to the unequal nature of the accumulation.⁶

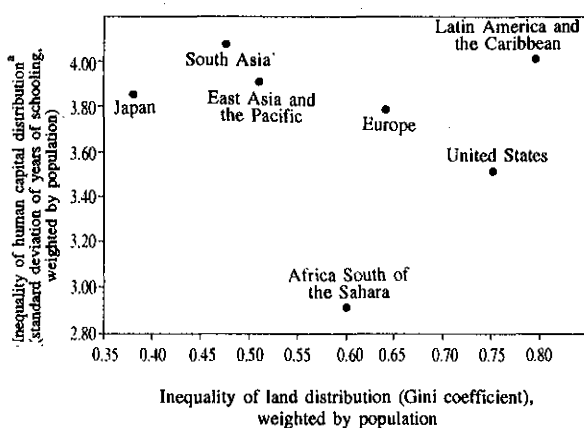
Moreover, contrary to what might be expected, the increase in average years of schooling in Latin America over the last three decades has not been associated with an improvement in the distribution of education. Figure 5 contrasts the virtually unchanged distribution of education in Latin America to the improvement in East Asia over this period.⁷

⁵ In figures 3 and 4, years of schooling are estimated using Barro-Lee's frequency distribution for the population 25 years and over within categories of education: i.e., no schooling, incomplete primary schooling, completed primary schooling, incomplete secondary schooling, completed secondary schooling, incomplete higher education, and completed higher education). There is some evidence that inequality of education is beginning to decline in Latin America: in 1990, inequality was lower for young adults (aged 20-30) than for older groups (Elizabeth King, personal correspondence, June 1997). However, the experience of countries like Indonesia shows that even starting from a low level, rapid accumulation can be accompanied by improved distribution.

⁶ Low accumulation in Latin America is strongly associated with the low quality of public primary and secondary schools, as described and discussed in Schiefelbein, 1995 and Birdsall, 1998. Among a multitude of systemic problems in highly centralized systems is the difficulty of recruiting and retaining the best possible teachers. In many countries, teachers are poorly paid; moreover, teachers (including those with the least training) are poorly supported, but nevertheless automatically advance through the system, often persisting in unsatisfactory working conditions in order to benefit from guaranteed pensions and retirement as early as at age 50. Many countries' budgets are burdened with non-working teachers, some actually retired or even "phantom" teachers, straining the resources available for genuine working teachers. The challenge remains for governments in the region to create mechanisms to bring teachers' unions, some of which are politicized and resist change, into a relationship of collaboration and cooperation.

⁷ It is normal that existing disparities in human capital of the population will widen as educational systems initially expand, until average schooling reaches five to six years (Londoño and Székely, 1997).

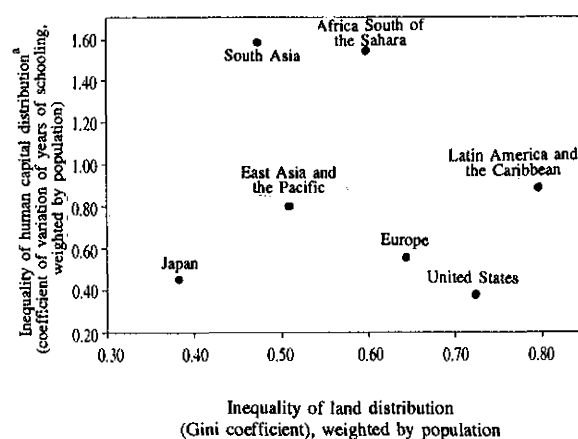
FIGURE 3
Inequality of asset distribution, circa 1990



Source: The inequality of human capital distribution was calculated on the basis of figures for education taken from R.J. Barro and J. Lee, *International Comparison of Educational Attainment*, Washington, D. C., World Bank, 1993. The Gini coefficients for land distribution were obtained from K. Deininger and L. Squire (personal correspondence).

^a The measure of inequality of human capital distribution is the standard deviation of the number of years of schooling of the population aged 25 or more (see footnote 5).

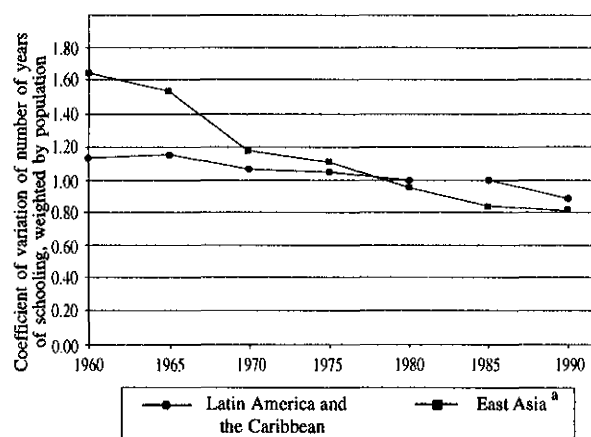
FIGURE 4
Inequality of asset distribution, circa 1990



Source: The inequality of human capital distribution was calculated on the basis of figures for education taken from R. J. Barro and J. Lee, *International Comparison of Educational Attainment*, Washington, D. C., World Bank, 1993. The Gini coefficients for land distribution were obtained from K. Deininger and L. Squire (personal correspondence).

^a In this figure, the measure of inequality of human capital distribution is the coefficient of variation: i.e., the quotient of the standard deviation and the mean. This measure takes account of the effect of changes in the average number of years of schooling on the distribution (see footnote 5). It may be noted that in this figure the high inequality of human capital in Latin America (see figure 3) goes down compared with other regions when the standard deviation of the number of years of schooling of adults is divided by the mean schooling of adults. The relatively high level of schooling in Latin America compared with other developing countries is not sufficient, however, to make up for the high standard deviation for a given mean compared with East Asia and the developed regions.

FIGURE 5
Latin America and the Caribbean and East Asia:
Inequality of human capital distribution
(regional comparison) ^a



Source: The inequality of human capital distribution was calculated on the basis of information taken from R. J. Barro and J. Lee, *International Comparisons in Educational Attainment*, Washington, D. C., World Bank, 1993.

^a East Asia comprises Hong Kong, Indonesia, South Korea, Malaysia, Singapore, Taiwan and Thailand. In this figure, the inequality of distribution of human capital is measured by the coefficient of variation of the number of years of schooling.

1. Effects of low and unequal accumulation on growth

What have been the effects of low and unequal human capital accumulation on the growth rate in Latin America over the last three decades? Table 2 shows the results of estimating a traditional growth equation across countries, using the best recently available data on the distribution of income (Deininger and Squire, 1996). For these estimates, the countries selected were those for which Lorenz curves were available for two periods of time separated by at least five years, with income estimates per capita in international purchasing power prices, and with data on physical capital investment, the education of the la-

TABLE 2

Explaining Growth

A. Explaining aggregate growth			
Independent variable	(1)	(2)	(3)
Constant	0.01	0.04 ^a	0.03
Capital accumulation	0.53 ^a	0.57 ^a	0.54 ^a
Initial conditions:			
Income level	-0.88	-0.41	-0.42
Education level	0.17	0.28 ^b	0.30 ^b
Income inequality	-0.05 ^b	-0.03	-0.002
Land inequality		-0.02 ^b	-0.01
Educational inequality		-0.09 ^b	-0.09 ^b
Natural resources			-0.01
Changes in:			
Income inequality			
Trade openness			0.02
Manufacturing trade			
Primary trade			
Dummy for Latin America and the Caribbean			0.004
R ²	0.61	0.70	0.76
B. Explaining income growth of the poorest			
Independent variable	(4)	(5)	(6)
Constant	0.00	0.05 ^c	0.04 ^c
Aggregate growth	1.31 ^a		
Capital accumulation		0.72 ^a	0.77 ^a
Initial conditions:			
Income level			
Education level		0.41 ^c	0.51 ^c
Income inequality		0.05	0.02
Land inequality		-0.07 ^b	-0.02
Educational inequality		-0.20 ^b	-0.18 ^b
Natural resources			
Changes in:			
Income inequality			-0.27 ^a
Trade openness			
Manufacturing trade			0.05 ^c
Primary trade			-0.01
Dummy variable for Latin America and the Caribbean			-0.01
R ²	0.51	0.42	0.63

Source: N. Birdsall and J. L. Londoño, Asset inequality matters: an assessment of the World Bank's approach to poverty reduction, *The American Economic Review*, vol. 87, No. 2, Nashville, TN, American Economic Association, 1997.

^a Statistically significant at the 1-percent level.

^b Statistically significant at the 5-percent level.

^c Values statistically significant at the 10-percent level.

bour force (which was used to construct the measure of human capital distribution), land distribution and trade indicators.

The findings (reported originally in Birdsall and Londoño, 1997) are straightforward with respect to the effect on growth of education and of the distribution of education: education accumulation, along with capital accumulation, is good for growth—a result now taken for granted (columns 2 and 3). The strong positive effect exerted on growth by human

capital accumulation, as reflected in the average years of education of the labour force, is consistent with the theory referred to in the introduction, as well as with microeconomic evidence that better-educated workers earn higher incomes and, particularly in the case of women, are more effective in household production of children's good health and schooling. The positive effect of a country's level of education at the beginning of a period on growth during the subsequent period is now a commonplace and highly

robust result in virtually all cross-country studies of growth (Barro and Sala-i-Martin, 1995; Levine and Renelt, 1992). Lora and Barrera (1997) estimate that Latin America as a region could increase its growth rate by 2 percentage points a year over the next decade if, in addition to deepening structural reforms, the region were able to increase the pace of human capital accumulation for the labour force as a whole by one year over the expected level. Viewed from another angle, Birdsall, Ross and Sabot (1995) estimate that if Korea had had Brazil's level of primary and secondary education in 1960, it would have grown by 0.56 percentage points *less* per year over the next 25 years, and Korea's resulting per capita GDP for 1985 would have been 12% lower than it actually was.

In addition, and controlling for the level of education, the degree of inequality in the distribution of education has a strong and robust negative effect on growth (columns 2 and 3). The variable measuring the distribution of education is highly robust;⁸ its negative effect operates independently not only of the education level variable, but also of the positive effect of trade openness and the negative effect of natural resource endowment.

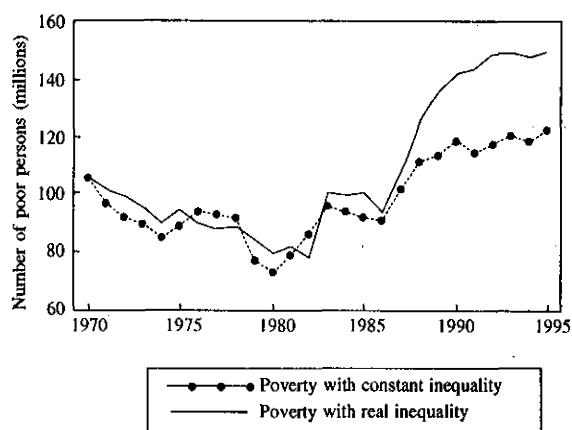
It should be noted that when the asset distribution variables are included, the negative effect of income inequality on growth loses statistical significance (columns 2 and 3 versus column 1); the widely reported negative effect (Birdsall, Ross and Sabot, 1995; Alesina and Rodrik, 1994; Persson and Tabellini, 1994) apparently reflects differences in a fundamental element of economic structure, namely the access of different groups to productive assets.

In columns 4 to 6 of table 2, the effect of the initial distributions of income and assets on the income growth of the poor is assessed. The elasticity of income growth of the poor with respect to overall growth is well above one (column 1), confirming the logic of the argument that economic growth is a key to poverty reduction. Income growth of the poor also depends heavily upon capital accumulation (columns 2 and 3). Most interestingly, initial inequalities in the distribution of land and of human capital have a clear negative effect on the income growth of the poor, by magnitudes twice those of their effects on average

⁸ In these regressions, the standard deviation of years of education of adults aged 25 years and older is used as a measure of the distribution of education.

FIGURE 6

Latin America: Impact of inequality on poverty, 1970-1995

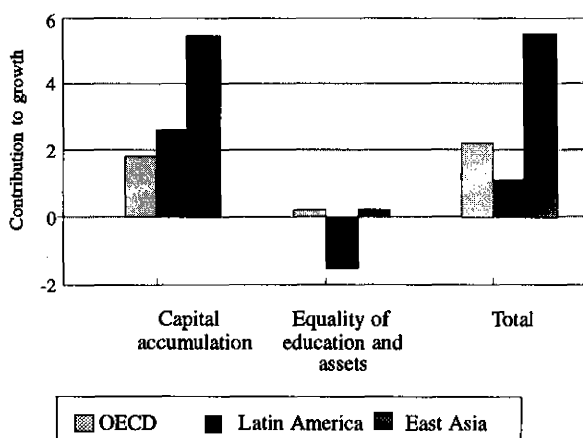


Source: N. Birdsall and J. L. Londoño, *Asset inequality matters: An assessment of the World Bank's approach to poverty reduction*, *The American Economic Review*, vol. 87, No. 2, Nashville, TN, American Economic Association, 1997.

income growth (column 2). An unequal distribution of assets, especially of human capital, affects income growth of the poor disproportionately; better distribution of assets would reduce poverty both directly and indirectly, by enhancing average growth.

Making this point with aggregate economic indicators, Birdsall and Londoño (1997) show that, if the economies of Latin America had maintained the same income distribution throughout the 1980s as in 1970, the increase in poverty over the years 1983 to 1995 would have been smaller by almost half (figure 6). But the low growth and macroeconomic instability of the 1980s harmed the poor more than others and exacerbated an already poor distribution of assets and income. These results are consistent with a view of the world in which opportunities matter. The poor, without assets, cannot take advantage of opportunities to be productive. In economies where a substantial portion of the population is without human capital, and thus without a critical productive asset, only a part of the population can exploit the growth process. The engine of growth is small, and may be periodically stalled by populist turnarounds. Driven by the increasing productivity of the initially poor, the East Asian countries, which began the postwar period with relatively low asset inequality, were able to grow at high and sustained rates over more than three decades. In contrast, most countries of Latin

FIGURE 7
Selected regions: Global growth factors
(Contribution to variations in GDP, percentages)



Source: Inter-American Development Bank.

America, with greater inequality of assets and presumably fewer opportunities for the poor, grew less (figure 7). The results of table 2 and the aggregate indicators summarized above point to a straightforward if disturbing conclusion: low and unequal accumulation of human capital in Latin America has slowed aggregate economic growth and has inhibited poverty reduction.

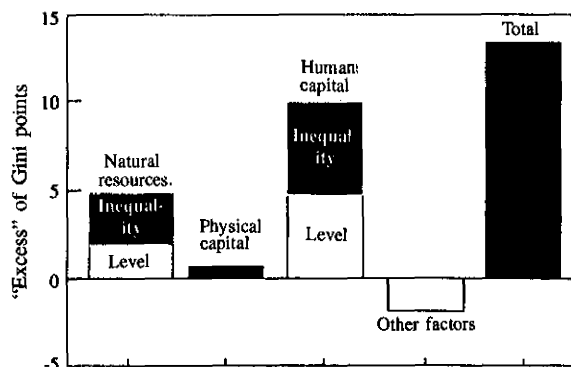
2. Effects on income inequality

A second effect of low and unequal accumulation is Latin America's persistently high income inequality.

Latin America has a Gini coefficient (about 0.50 for the region as a whole) which is approximately 15 points above the average for the rest of the world; in 1995, the wealthiest 20% of the population was receiving 58% of the total income: i.e., 12 times the income of the poorest 40% and 19 times that of the poorest 20% of the people. The income of the poorest 40% of the population is some 20% lower than it would be with a typical pattern of income distribution. And the number of poor people, which currently stands at between 140 and 150 million individuals with daily earnings of less than US\$ 2, could be a third lower than it is (Londoño and Székely, 1997).

Londoño and Székely (1997) show that in the world as a whole, intra-country income inequality

FIGURE 8
Latin America: Explanation of excessive inequality of this region compared with world average
(Broken down by composition, level and distribution of assets)



Source: J. L. Londoño and M. Székely, *Distributional surprises after a decade of reforms: Latin America in the nineties*, in R. Hausman and E. Lora (eds.), *Latin America after a Decade of Reforms: What comes next?*, Washington, D. C., IDB, 1997.

can be reasonably explained by the relative abundance of factors of production such as land and physical and human capital, and by their distribution. As figure 8 shows, lower physical capital accumulation is not the culprit in the case of Latin America. Rather, the relative abundance of natural resources and a concentration of land ownership which is the highest in the world account for a substantial portion of Latin America's excessive inequality, and the low level of education (human capital) of Latin American workers and the enormous inequality in educational assets play an even larger role in explaining this.

The effect of low and unequal education on income inequality does not come as a surprise. Where a relatively small proportion of the total population completes secondary or higher education, public investment in education has generally been viewed as a mechanism to reduce poverty and inequality, given the strong evidence at the individual level that the educated earn more. At the aggregate level, however, the effect of education on poverty and inequality obviously depends on the distribution of education itself, how rapidly it spreads, and how much different groups benefit. In Latin America, only a relatively small proportion of the total population has completed secondary or higher education. These relatively few skilled workers earn a substantial wage premium due to their limited supply, thus contribut-

ing to the overall high income inequality (Birdsall, Ross and Sabot, 1997).

The Latin American experience stands in marked contrast to that of East Asia, where education policy has produced a large supply of skilled workers, eroding any substantial premium they might have earned above the wages of the unskilled. Kuznets's theory (that income distribu-

tion will initially worsen as some workers in under-developed economies shift to high productivity sectors) seems to have been borne out in Latin America, partly because the limited and slow spread of educational opportunities has created a large productivity gap between a small skilled group and the rest of the population (Stallings, Birdsall and Clugage (forthcoming)).

III

The reasons for Latin America's low and unequal accumulation

The above analysis demonstrates that low and unequal accumulation of human capital has limited Latin America's growth, particularly in the income of the poor, and has exacerbated the region's high income inequality. We argue now that, in fact, there is a vicious circle: the region's low and unequal accumulation of human capital is not only a cause of current poverty and income inequality, but also an outcome of past income inequality. Low and unequal accumulation can be explained by factors of demand and supply in the market for education.⁹

First, on the demand side, Latin America's large endowment of natural resources historically has limited society's demand for education. The socioeconomic arrangements which accompany large-scale agricultural production and natural resource extraction tend to be characterized by a situation where there are relatively few owners of capital and many unskilled workers (Engerman and Sokoloff, 1997). There is little demand for skilled workers, partly because natural resources tend to be complementary to capital, rather than skilled labour, in production. Perhaps as a result, governments and families in Latin America have invested little in education, seeing relatively higher returns to physical capital. A rich natural resource base in the region also minimized the need for the development of competitive non-traditional exports in the early post-war period, thus perpetuating traditional production arrangements.

Second, high income inequality in Latin America has implied that more households are liquidity-constrained, unable to borrow and without the resources needed to keep their children in school. Flug, Spilimbergo and Wachtenheim (1996) show that financial factors explain much of the differences in secondary schooling across countries. As shown in table 3, in 1989 Brazil and Malaysia had similar levels of per capita income. But the poorest quintile in Brazil had only about one-half the absolute income level of the poorest quintile in Malaysia. Given an income elasticity of demand for secondary education of 0.50 (a conservative figure), then if the distribution of income had been as equal in Brazil as in Malaysia, secondary enrollments among poor Brazilian children would have been more than 40% higher. There is some evidence that, among the poor, the income elasticity of demand for basic schooling exceeds 1.0, in which case secondary enrollments among poor Brazilian children would have been more than 80% higher. One quantitative study of the effect of income inequality on schooling suggests that, of the 27 percentage point secondary school enrollment rate gap between Brazil and Korea in the 1970s, more than 20 percentage points can be attributed to Brazil's greater income inequality and resultant lower enrollment of poor children (Williamson, 1993).

Third, household demand for education is not only a function of household income and household access to borrowing. It is also a function of expected returns to the family from schooling, in the form of higher future income for educated children. Two different public policies have systematically reduced

⁹ The discussion in this section and the data referred to are largely from Birdsall, Bruns and Sabot (1996).

TABLE 3

Absolute income share of lowest quintile

Country	GNP per capita (US \$, PPP adjusted)	Income share of bottom 20% of households (%)	Per capita income of bottom 20% of households (US \$)
Malaysia, 1989	4 674	4.6	1 075
Brazil, 1989	4 271	2.4	513

Source: For GNP: R. Summers and A. Heston, *The Penn World Tables, Mark 5.6*, Philadelphia, PA, University of Pennsylvania, Department of Economics, 1995; for income share data: K. Deininger and L. Squire, A new data set measuring income inequality, *The World Bank Economic Review*, vol. 10, No. 3, Washington, D. C., World Bank, 1996.

the demand for basic education among the poor by reducing its expected returns.

First, economic strategies have consistently penalized labour, reducing its return and discouraging investment in education. Post-war Latin American governments pursued import substitution industrialization (ISI) policies in an attempt to shift away from the export of primary commodities and to promote local manufacturing. These ISI policies resulted in large subsidies and protection for the owners of capital but did not promote the demand for labour (Schiff and Valdés, 1992). The result was that increased profits accrued to the owners of capital, while the real wages of the unskilled workforce grew much less. Relatively low wage growth among workers, combined with high returns to capital, did nothing to encourage demand for basic education among the poor. In the last decade, most countries of the region have dismantled these policies in pursuit of open market growth strategies. In some cases, however, a justifiable concern with reducing inflation has meant that high interest rates were needed to sustain exchange rates; this has penalized job creation in the small and medium-sized enterprise sector, and has diminished exports that are often labour-intensive.

Additionally, in parts of Latin America there has been labour market discrimination against certain ethnic, linguistic or racial groups who also tend to be poor. This discrimination has reduced the expected returns to education among these groups and thus reduced the demand for education among the poor even further.

The second problem has been educational policy itself. The low and declining quality of basic education in Latin America—an outcome of inefficient public spending—has reduced returns to basic schooling in the region, especially for poor households whose children are most likely to attend the lowest-quality schools. The high repetition and dropout rates in Latin America, especially among the poor, are a sad testimony to parents' initial efforts to enroll children

and to their subsequent growing discouragement as low quality and low achievement produce limited learning and thus limited expected economic returns.¹⁰

In short, expected returns to education are a function of parents' assessment of the future labour market for their children. Where demand for labour is low (and capital is subsidized directly or indirectly), where schooling is of poor quality, and where there may be discrimination in the labour market against some groups who also tend to be poor, low expected returns to schooling will reduce the household demand for education.

At the same time, the supply of education in Latin America has itself been affected by the region's high income inequality.¹¹ When the distribution of income is highly unequal, provision of subsidized basic education to a large segment of the school-age population implies a relatively large tax burden on the rich, which high-income families are likely to resist. One result can be the underfunding of education—and the decline in quality described above. A second result can be the channeling of public subsidies to higher education, where the children of the rich are more likely to be the beneficiaries. In fact, as shown in table 4, the share of public spending on education in Latin America that is allocated to higher education has tended to be high: more than 20% on average, compared with 15% on average in East Asia. Venezuela and Korea are extreme examples in this respect.

¹⁰ The roots of low-quality basic education and its effects on the poor are discussed fully for Brazil in Birdsall, Bruns and Sabot (1996) and for Latin America in Birdsall and Sabot (eds.), (1996).

¹¹ Latin America spends as much on education, as a percentage of GNP, as other developing regions with similar levels of per capita income. But the fact that growth has lagged in Latin America means that education budgets have been smaller in absolute terms. In addition, higher birth rates in Latin America mean that the same percentage of GNP spending translates into lower spending per child (Birdsall and Sabot (eds.), 1996).

While in the early 1990s Venezuela allocated 35% of its public education budget to higher education, Korea allocated just 8% of its budget to post-secondary schooling. Public expenditure on education as a percentage of GNP was actually higher in Venezuela (5.1%) than in Korea (4.5%). However, after subtracting the share going to higher education, public expenditure available for basic education, as a percentage of GNP, was considerably higher in Korea (3.6%) than in Venezuela (1.3%) (UNDP, 1997).

By giving priority to expanding the quantity of education and improving the quality at the base of the educational pyramid, East Asian governments have stimulated the demand for higher education, while relying to a large extent on the private sector to satisfy that demand. In Latin America, government subsidies have disproportionately benefited high-income families whose children are much more likely to attend university. At the same time, low public funding of secondary education has resulted in poorly qualified children from low-income backgrounds being forced into private universities or entirely out of the education system at higher levels. Underfunding of education has meant that the guarantees of universal primary education in Latin America have become false entitlements for the poor: the education available to them has been of such poor quality as to make it of little real benefit.

In summary, the relatively poor growth performance of Latin America, the persistence of income inequality, and the difficulties of reducing poverty cannot be separated from the region's troubling record of limited and unequal access to education. In a series of vicious cycles, historically high levels of asset and income inequality have generated an economic and political environment that severely limits

TABLE 4
Budget allocated to higher education,
1990-1994

	Percentage of overall education budget
East Asia	
Malaysia	17
Thailand	17
Indonesia	18
South Korea	8
<i>Average (simple)</i>	15
Latin America	
Argentina	17
Brazil	26
Chile	20
Colombia	17
Costa Rica	31
Dominican Republic	11
Ecuador	23
Honduras	20
Mexico	14
Uruguay	25
Venezuela	35
<i>Average (simple)</i>	22

Source: United Nations Development Programme (UNDP), *Human Development Report 1997*, Santafé de Bogotá, Tercer Mundo Editores, 1997.

the opportunities of the poor. With few opportunities for education despite reasonable government spending, and without other productive assets, the poor are condemned to low-productivity work, low household income, and a new round of limited access to education. The region's societies also suffer as a whole, since educational progress and the accumulation of assets are limited to the non-poor, reducing average growth levels and perpetuating inequality.

IV

Conclusions and reflections

This article began with a critique, at least in terms of policy guidance, of current endogenous growth models—which emphasize education but fail to consider the relevance of household demand for education, the effects of the distribution of education, and the institutional problem of delivering education, especially to the poor. The discussion highlights the relevance in Latin America of the demand of the poor for schooling,

inhibited for many decades by economic policies biased against labour, and the distribution of human capital, with unequal access of the poor to schooling slowing the accumulation process. It also emphasizes that Latin America's resulting poor record of limited and unequal access to human capital is linked to the region's poor growth performance, the persistence of high income inequality, and the difficulties of reduc-

ing poverty. Of particular concern are data which suggest that the distribution of education has seen little if any improvement over the last three decades.

The opening section of this article provides evidence that low and unequal accumulation of human capital has not only slowed aggregate growth in Latin America but has also hindered poverty reduction and has contributed to the persistence of the world's highest levels of income inequality. The implication is clear –that there is great untapped potential for faster growth in the region. The growth process could benefit from major productivity increases among the poor, if they are provided with access to education. More education, and in particular education that is more equal (i.e., that reaches the poor), could accelerate the growth process and simultaneously reduce inequality.

The article then goes on to argue that, in Latin America, the low accumulation of human capital and its unequal distribution are partly rooted in longstanding inequality in terms of assets (including human capital itself) and income. Such a historic legacy is difficult to alter in the short run. But low and unequal accumulation can also be explained by the economic policies that dominated the region for decades. Closed economies that protected capital and relied heavily on natural resource exports discouraged demand for education in the poor households of Latin America, by discouraging demand for labour, the poor's major asset, and for skilled labour, where lies the poor's greatest potential for income growth.

The fact is that inequality of access has been embedded in an approach to social service delivery that encourages exclusion, segmentation and inefficiencies. Traditional vertical, bureaucratic systems

for organizing schooling and other services have been inefficient and have failed to serve the poor. The alternative model of private, market-led delivery has performed no better: the competition it provides in a few countries has simply left out all those unable to pay.

However, there are grounds for optimism. Economic reforms of the last decade in most countries of the region are eliminating the biases against labour typical of protected economies, and they are bringing the macroeconomic stability that is vital for private sector investment. This is setting the stage for increased household demand for schooling and increased interest of the business sector in a skilled labour force necessary to maintain competitiveness in open economies. These forces have created an impetus for education reform in the region and renewed interest among policy-makers in new approaches to the delivery of education, as well as of health and other public services. In some countries, alternative designs of social service delivery have begun to be applied that promote competition among both private and public suppliers, enhance consumer voice and choice, and ensure that the poor, via fair rules of access, vouchers and other demand subsidies, are fully integrated as consumers into the system. These reforms are showing that efficiency and fairness can be achieved simultaneously.¹²

Trade-offs are not inevitable in the development process: many are the outcome of poor policy decisions and weak institutions. A focus on equal access for the poor to the services that generate human capital –in other words, a reversal of the trickle-down approach– can bring more growth and improved equity to Latin America's economies and peoples.

(Original: English)

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¹² See Birdsall and Londoño, 1998, for a discussion of alternative approaches to social service delivery.

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Determinants of *inequality among* urban households

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This article summarizes the results of an analysis of the long-term factors affecting income distribution in five countries of the region (Argentina, Brazil, Chile, Colombia and Mexico), on the basis of household surveys made in those countries between 1979 and 1992. After a brief introduction (section I), the article describes the methodology applied (section II) and then details the main findings (section III). These include in particular the lower labour remuneration received by the first income deciles, associated among other things with inequalities in the educational levels attained. It is also observed that those deciles have below-average employment rates and above-average rates of inactivity. This latter phenomenon appears to be connected with household composition: the first deciles register a relatively greater presence of minors in the household, so that the burden of looking after children is greater and the cost of participating in the labour market is higher, thus leading to lower participation in it and reducing income generation. The article concludes with some suggestions for a redistribution policy (section IV). Such a policy should seek to advance simultaneously in at least four fields: generation of productive employment, improvement of the income of the poorest households, lowering of the barriers hindering such households' access to the labour market and, finally, aspects related with population dynamics.

I

Introduction

This article was motivated by three main considerations. Firstly, achieving a higher degree of equity has been an important part of the objectives of the development strategies pursued by the governments of the region, expressed through their efforts to promote greater equality of opportunities and to reduce the incidence of poverty. Secondly, as already shown by other studies published in this Review, the distributive picture in the early 1990s, after the adjustment processes and structural reforms of the 1980s, displays a disquieting deterioration (Altimir, 1994), and securing its recovery from this situation represents an important challenge for governments and their policies. Thirdly, the evolution of income distribution in the region in the first half of the 1990s continues to be discouraging in general terms, although there has been some progress in a few isolated cases (ECLAC, 1994a and 1995). Furthermore, the low economic growth rates registered in some cases and the consequent increase in unemployment rates (ILO, 1996) give grounds for expecting that income distribution could deteriorate still further in some countries.

Consequently, policies aimed at overcoming this situation take on renewed importance in view of both the long-term nature of certain factors affecting income distribution¹ and the urgent need to take measures which will make it possible to improve the situation of the poorest groups in the medium term, given the seriousness of their current circumstances.

This article addresses one of the dimensions of equity, analysing factors which help to give an idea of the differences in per capita household income in

five countries of the region. Various studies on income distribution have examined factors which could explain inequalities between income recipients. In the present study, however, the unit of analysis is the household, including both people who receive income and those who do not do so. The analysis is centered, then, on determining how per capita household income is made up. The variables considered include levels of remuneration, the incorporation in employment and rates of participation of the members of the household, and demographic aspects which affect the size of households. The study also examines aspects related with inequalities in factor remuneration, not only as they relate to the characteristics of the income recipients but also, and particularly, in terms of their effect on per capita household income.

It should be borne in mind that, although a common methodology is used, the analysis is not designed to establish distributional comparisons between countries; the aim is rather to identify regularities in the behaviour of certain variables which can help to explain the income distribution in a particular country. At the same time, with the aim of obtaining conclusions which will have a certain degree of general validity, this synthesis is based on the results obtained for the main urban centres of the five countries studied. As the coverage of the surveys varies greatly from one country to another,² it was decided to restrict the analysis to those centres when comparing the results, in order to establish conclusions applicable to other cases.

□ This document summarizes the results of studies made under the Netherlands Government/ECLAC project on "Income distribution and poverty in recent cases of stabilization and adjustment in Latin American and Caribbean countries". The individual studies for Argentina, Brazil, Chile, Colombia and Mexico were published separately (Jiménez and Ruedi, 1997a, b, c, d and e). In carrying out these studies, the authors enjoyed the support of the ECLAC Division of Statistics and Economic Projections. The authors wish to express their gratitude to Oscar Altimir, Juan Carlos Feres and Carlos Howes for their valuable comments and collaboration.

¹ With regard to the influence of short-term factors and policies on income distribution, see Jiménez (1997).

² For example, the results for Argentina refer to Buenos Aires, whereas the surveys for Brazil and Chile include rural areas as well as the metropolitan areas.

II

The method of analysis used

In order to strengthen the comparability of this study, a methodology was used which had previously been employed by Pollack and Uthoff (1990) in their study of income distribution in Greater Santiago, Chile. In the present case, the methodology was applied to the household surveys available for the period 1979-1992 in Argentina, Brazil, Chile, Colombia and Mexico. This approach is based on a set of common indicators which is simple but has the merit of identifying some key factors which affect the level of household income. The methodology is basically descriptive and seeks to detect regularities in the behaviour of certain variables associated with income distribution. It does not, therefore, involve the application of a theoretical approach which assumes *a priori* the existence of a certain order of causality, although the interpretation of the results, based on the identification of systematic differences of behaviour between deciles, does depend on explanatory hypotheses of the origins of inequality and changes in it.

Per capita household income may be expressed in simplified form through the following equation:

$$Y_{pc} = \frac{YT}{N} = \frac{YP}{L} \times \frac{L}{L+D} \times \frac{L+D}{PET} \times \frac{PET}{N} \times \frac{OY}{N}$$

where:

Y_{pc}	= per capita household income
YT	= total disposable household income
N	= number of persons in household
YP	= primary income of the employed persons in the household
L	= number of employed persons in the household
D	= number of non-employed persons in the household
PET	= number of persons of working age in the household
OY	= other household income.

Thus, the per capita household income is expressed as a function of economic and demographic variables. The first term on the right-hand side, YP/L ,

corresponds to the average remuneration received by the employed persons in the household. This primary income is composed in turn of labour income (wages, salaries and own-account labour income). It thus corresponds to a concept of average factor remuneration per employed person.

The second term on the right-hand side, $L/(L+D)$, is the rate of employment of the household, its complementary indicator being the rate of unemployment. The third term, $(L+D)/PET$, is the rate of participation. The fourth term is the ratio of the number of persons of working age in the household to the size of the household, PET/N . The inverse to this factor is an approximation to the rate of dependence of the household, in the sense discussed in the following paragraph. The higher this ratio, the greater the number of persons of an age capable of giving economic support to the household, thus giving a lower rate of dependence.

This concept of the rate of dependence has a demographic connotation, in contrast with other uses which emphasize different aspects. Thus, this rate is often referred to as the ratio between the number of employed persons and the number of persons who do not work in a given group, thus highlighting the economic effort that the employed persons have to make to support the rest of the household. The relevant variables in this respect will be the rates of employment and wages, which are already included in the first two factors of the equation. In the present case, the ratio between the number of persons of working age and the size of the household represents the proportion of the household potentially capable of supporting it, with the age structure and the size of the household being the relevant variables in this respect.

Finally, the last factor corresponds to income received from sources other than labour, i.e., income from ownership of property and from transfers, both in per capita terms. The transfers correspond to subsidies received and income from pensions.

The differences by deciles in the levels of per capita family income are thus expressed as a function of the behaviour of the rates of factor remuneration, employment and participation in the labour force, of

a variable relating to the demographic structure of the household, and of an "other income" component. Changes in income distribution are thus linked with the evolution of these components over time. Consequently, households were ordered according to their per capita income and the factors making up this equation were calculated. Since these factors reflect the influence of many variables, however, additional indicators were calculated which help to explain the differences in the primary income levels, rates of participation and structure of the households.

For a better understanding of the differences in primary income by deciles (with the households ordered by their per capita income), the components of such income were calculated, i.e., the average wages and salaries of the wage-earning members of the households and the average income of own-account workers. The average income from ownership of property was also calculated, thus completing the sources of income by factors.

Other theoretical and applied approaches have been aimed at explaining the differences in income among recipients in the light of characteristics connected with the educational level of workers. In the present study, in order to explore how this factor could help to explain differences in per capita income between household deciles, the structure of the households in each decile was examined in the light of the educational level of the head of household.

Furthermore, in order to seek variables which could cause differences in rates of employment and participation, the behaviour of the households in each decile was examined according to the type of activity of the head of household and his or her spouse. In the latter case, the calculations were restricted to spouses of employed heads of household, in order to analyse the capacity of the couple to provide economic support for the household.

Finally, with the aim of investigating the possible influence of household structure on other variables, calculations were made, by household deciles,

of the proportion of children to adults and the average number of persons in the household.

Some observations are called for on the concept of income used here. Firstly, the figures used here include the adjustments made by ECLAC with the aim of making this information compatible with that taken from the national accounts. In general terms, the procedure consists of imputing income as necessary in order to correct the discrepancies which arise when the items in the household account of the system of national accounts are compared with those obtained from household surveys (Feres, 1995; ECLAC, 1991 and 1996b).

Secondly, the surveys record income after deduction of taxes and social security contributions, but include transfers and donations received. Thirdly, imputed rent has been excluded, since the imputation is effected at the level of the households, whereas the selected indicators refer mainly to average characteristics of the members of the household as regards their capacity for generating income.

Finally, the income recorded in the surveys includes that attributable to ownership of property. Experience shows, however, that the surveys reflect the income from ownership of property to a considerably smaller extent than in the case of the other components of income. As the difficulties of measurement in this respect are made worse by situations of serious inflation, such as those which affected countries in the region during the period studied, it would be risky to generalize on the basis of such data. Consequently, the analysis concentrates on the other components of household income.

In view of the interest aroused by income distribution and the factors accounting for it, the statistical tables present relative indexes, using the average value of each variable for the entire sample as the reference pattern. This makes it possible to show how much the average variable for each decile differs with respect to the overall sample.

III

Main comparative results

Table 1 briefly presents some features of income distribution between 1980 and 1992 in the main urban centres³ of the five countries studied. As may be seen from the table, during this period –much of which was marked by considerable macroeconomic fluctuations associated with the external indebtedness crisis affecting the countries of the region– there were significant changes in income distribution. According to the Gini coefficient, income concentration in the main urban centres went down in Colombia, increased in Argentina, Brazil and Mexico, and tended to remain unchanged, with some oscillations, in Chile.

The changes in the shares of the top and bottom deciles in total income are more enlightening.⁴ If we look at the case of Colombia –a country which registered a reduction in income concentration during this period– we see that there was a redistribution of around 7% of income from the top decile, mainly to the upper middle deciles, with the share of the lower deciles increasing only slightly (see Jiménez and Ruedi, 1997b). It should be noted, however, that redistributions of this size are highly significant; when applied to a growing GDP, they represent a substantial transfer of income to the upper middle sectors. Other indicators reflect a somewhat more positive evolution. Thus, the average per capita income of the first decile increased from 8.9% of the average for the whole to 12%. At the same time, the real income of this segment increased by 68.2%, while the total rose by only 24.8%. Probably because of the low initial level of the per capita income of the lower strata, however, the increase in income was not sufficient to reduce the incidence of poverty in urban households. In short, a process of redistribution was observed in Colombia, but it did not reach the poorer strata to a significant extent.⁵

In the countries where there was an increase in concentration in this period (Argentina, Brazil and Mexico), there were reductions in the share of the bottom decile (and, in certain cases, significant redistributions in favour of the top decile), increases in the differences in per capita income between the bottom decile and the top decile with respect to the mean, real losses of income in the first decile, and increases in the incidence of poverty.

In Chile, for its part, there were variations in distribution which are not fully expressed by changes in the Gini coefficient. Thus, the share of the bottom decile increased slightly, but less than the increases in the share of the top decile. Moreover, although the per capita income of the first decile increased as a percentage of the mean, that of the top stratum also rose, so that it drew still further away from the rest. In the context of growth registered at the time, the real per capita income of the first stratum rose faster than the average and at the same time there was a reduction in the percentage of households in a state of poverty. The top decile also registered increases greater than the mean, however, thus ruling out any possible improvement in distribution. In short, as other studies have also noted (ECLAC, 1997), the Chilean experience may be considered as a process of growth with reduction of poverty but little redistributive content. Hypotheses will be established later in this article which help to explain the low degree of social dissemination of growth observed in some countries of the region.

In short, except in the case of Colombia, there was an increase in the differences in income between the two extremes of the distribution scale during the period studied. In all cases, however, the share of the first deciles remained at a very low level. Once again with the exception of Colombia, the redistributions of income which took place consisted of very significant increases in the share of the top decile, equivalent in some cases to between two and three times the total share of the bottom decile. The low shares of the poorest groups in total income also persisted strongly over time: a phenomenon which was repeated in all the countries and caused income distribution to display great inertia. Finally, during the period in ques-

³ In the case of Mexico, the areas selected were those of high population density.

⁴ Purely for illustrative purposes, it may be noted that most of the tables in this article present information on the top and bottom deciles, although the conclusions are based on the observation of distribution as a whole, as it appears in the national case studies summarized here.

⁵ Ocampo, Pérez, Tovar and Lasso (1998) note that although income distribution improved in the urban sectors, there was a deterioration in rural areas.

TABLE 1

Latin America (five countries): Indicators of income distribution

	Gini coefficient	Share in total income		Ratio of average per capita income to the overall average		Index of average real per capita income			Percentage of households under the poverty line ^a (total, urban areas)	
		First decile	Top decile	First decile	Top decile	Total sample	First decile	Top decile		
Argentina (Buenos Aires)										
	1980	0.365	3.0	30.6	22.0	360.0	100.0	100.0	100.0	5 ^b
	1986	0.393	2.0	34.0	19.2	407.2	104.6	91.2	118.3	9 ^b
	1990	0.422	2.3	34.2	15.4	411.9	92.3	64.5	105.6	16 ^b
	1992	0.408	2.3	31.6	15.6	399.5	89.1	63.3	98.9	10 ^b
Brazil (São Paulo and Rio de Janeiro)										
	1979	0.448	2.1	36.1	12.9	432.3	100.0	100.0	100.0	30
	1987	0.526	1.4	44.0	9.7	529.1	115.0	86.8	140.8	34
	1990	0.503	1.5	37.6	9.7	467.2	99.7	75.2	107.7	37
Chile (Greater Santiago)										
	1987	0.507	1.4	40.0	9.9	471.9	100.0	100.0	100.0	38
	1990	0.487	1.7	39.6	12.3	440.5	110.6	138.2	103.3	33
	1992	0.512	1.7	44.4	12.4	489.3	136.0	170.3	141.1	28
Colombia (Bogotá)										
	1980	0.520	1.3	40.8	8.9	489.2	100.0	100.0	100.0	36 ^c
	1986	0.457	1.5	36.2	10.5	443.6	121.4	142.5	110.0	36 ^c
	1990	0.478	1.4	36.0	10.3	437.1	120.9	139.2	108.0	35 ^c
	1992	0.448	1.8	34.0	12.0	433.8	124.8	168.2	110.7	38 ^d
Mexico (high density areas)										
	1984	0.324	3.1	26.7	18.2	358.3	100.0	100.0	100.0	28
	1989	0.432	2.4	37.6	14.7	460.8	101.4	82.0	130.4	34
	1992	0.426	2.4	36.2	15.4	424.4	114.1	96.4	135.1	30

Source: ECLAC, on the basis of special tabulations of household surveys.

^a ECLAC, 1997.

^b Metropolitan areas.

^c Seven main cities.

^d Eight main cities.

tion only Chile registered a reduction in urban poverty, whereas in the other countries this increased still further or remained unchanged.

1. Stylized features of the relative levels of income

a) Components of primary income

Table 2 presents details of the components of primary income and transfers. It confirms the influence of remuneration for wage labour on income distribution. Thus, in the countries where the relative differences in this variable are smaller (Argentina and Mexico), the share of the first decile in total income tends to be greater. At the same time, from a time perspective, in the countries where distribution deteriorated (Argentina, Brazil and Mexico) there was a further increase in the relative differences in wage remuneration per employed person.

The average income from own-account labour displays relative differences between the deciles which are even more pronounced than in the preced-

ing case and have generally tended to grow still larger over time (table 2). Such income typically represents a growing proportion of the total by deciles, probably due to the greater heterogeneity of the type of work which gives rise to this source of income. Thus, among the upper strata, this class of income usually includes income from independent professional activities and rents of employers, while among the lower strata it mostly corresponds to relatively unskilled own-account workers.

In short, the inequality of household per capita income corresponds largely to disparities in the remuneration to labour, although this is not the only determining factor, as we shall see later in this article. In turn, changes in the differences in relative remunerations are reflected in fluctuations in distribution, with such fluctuations being smaller when the poorest deciles have a larger share in total income.

The factors influencing differences in remuneration are of various types and have been dealt with in a number of studies. Firstly, the most robust results refer to the influence of the educational

TABLE 2

Latin America (five countries): Relative indexes of the factors making up household income^a

		Average primary income/average total income		Average wage income/average total income		Average own-account income/average total income		Average income from transfers/average total income	
		First decile	Top decile	First decile	Top decile	First decile	Top decile	First decile	Top decile
Argentina (Buenos Aires)									
	1980	40.1	241.3	60.9	202.5	9.4	350.8	61.7	172.2
	1986	32.0	303.2	38.6	199.0	14.2	467.0	87.1	153.7
	1990	25.9	321.8	39.8	202.0	6.8	452.3	86.9	119.9
	1992	25.3	291.4	41.0	181.2	4.1	397.4	83.3	185.4
Brazil (São Paulo and Rio de Janeiro)									
	1979	26.9	323.1	32.1	289.9	9.0	471.3	21.3	362.4
	1987	14.8	385.7	23.6	323.4	7.5	478.3	20.2	462.9
	1990	19.9	342.9	22.7	305.5	10.1	452.3	19.3	435.2
Chile (Greater Santiago)									
	1987	16.4	422.4	21.0	325.5	9.3	655.3	22.8	287.6
	1990	23.4	401.3	28.5	321.5	9.4	551.3	30.4	224.5
	1992	23.2	448.9	32.8	320.1	7.0	602.3	21.3	301.7
Colombia (Bogotá)									
	1980	18.1	391.6	24.1	302.9	9.1	465.3	42.2	315.1
	1986	22.6	327.1	29.1	271.4	8.7	421.6	17.0	374.0
	1990	23.0	317.7	25.5	239.5	9.6	384.5	10.4	392.9
	1992	31.1	308.0	37.3	254.5	14.6	371.7	6.7	398.8
Mexico (high density areas)									
	1984	35.4	262.3	42.7	188.2	16.3	372.4	42.0	259.1
	1989	29.8	377.5	45.3	210.8	7.5	573.7	23.0	318.5
	1992	27.6	411.3	41.6	243.9	7.7	614.7	25.9	242.6

Source: ECLAC, on the basis of special tabulations of household surveys.

^a These indexes are ratios between the average value of the variable for the decile in question and the corresponding overall average.

variable.⁶ Table 3 shows income distribution in Brazil, Chile and Colombia according to the educational level of the heads of household, by deciles.⁷ As may be seen from the table, there is a systematic association between the levels of education attained and the income decile that the head of household belongs to: the higher his level of education, the greater the possibilities his household will have of belonging to a decile with higher per capita income.

Secondly, in the context of segmented markets, the remuneration to human capital also differs according to the segment of the labour market in which the worker operates. Thus, for a given level of skills, the remuneration will depend on the type of occupation and the size and the ownership of the enterprise

(Altimir and Piñera, 1977). There is also ample evidence that the lower income groups are located to a greater extent in sectors of low productivity and growth, thus giving rise to lower remuneration for a given level of skills. In fact, between 40% and 60% of the employed urban population works in low-productivity segments, especially micro-enterprises and unskilled own-account work (ECLAC, 1996a).

In short, the differences in household per capita income are partly the result of inequalities in remuneration of labour, which originate in turn in differences in levels of skills and location in the less dynamic segments of the labour market.

b) *The relative level of transfers*

Table 2 also provides information on average transfers per recipient (pensions and other income) in the top and bottom deciles, as well as showing their relative evolution over the period studied. The results for Argentina, which showed smaller relative differences, are noteworthy in this respect; indeed, in this case these transfers would appear to have helped

⁶ See, for example, Altimir and Piñera (1977) and also Psacharopoulos, Morley, Fiszbein, Lee and Wood (1992).

⁷ The information for Argentina and Mexico is based on a classification by educational levels which is different from that used in this table, so that this information is not comparable. Nevertheless, the results still hold good. See the case studies for these countries in this same series.

TABLE 3

**Latin America (three countries): Distribution of households
by years of schooling of head of household, by deciles
(Percentages)**

	Brazil, 1990 ^a				Colombia, 1992 ^b				Chile, 1992 ^a			
	0-3 years	4-9 years	10-12 years	13 or more	0-3 years	4-9 years	10-12 years	13 or more	0-3 years	4-9 years	10-12 years	13 or more
<i>Total</i>	100	100	100	100	100	100	100	100	100	100	100	100
1	17.9	5.3	1.2	0.1	18.3	12.7	4.7	1.0	14.5	13.3	6.8	2.1
2	16.5	6.7	1.7	0.3	15.6	12.7	6.5	1.1	12.5	12.5	9.0	2.2
3	14.2	9.0	3.0	0.4	15.2	12.3	7.2	1.7	12.5	11.6	9.9	3.1
4	12.7	10.3	4.4	0.6	14.5	12.5	6.6	2.0	14.1	11.1	9.6	3.4
5	11.3	11.4	6.1	0.9	14.0	11.6	8.7	3.4	12.5	10.9	9.5	5.9
6	9.5	12.8	7.8	1.9	8.8	11.9	11.0	5.0	11.7	10.7	10.3	5.6
7	7.8	13.2	11.3	3.9	6.2	10.0	12.8	9.5	8.5	10.1	11.2	9.2
8	5.4	13.5	18.2	8.2	3.8	8.1	15.7	13.9	7.0	8.9	12.0	12.5
9	3.2	11.5	23.2	23.2	2.7	5.4	15.2	24.3	4.9	7.3	11.8	19.7
10	1.4	6.4	23.0	60.5	0.8	2.9	11.7	38.2	1.8	3.8	9.9	36.3

Source: ECLAC, on the basis of special tabulations of household surveys.

^a National total.

^b Eight main cities.

avoid a greater deterioration in distribution over the period, since they tended to reduce the distances between the top and bottom deciles. Even so, Argentina shows the same systematic behaviour as other countries: the average transfers per recipient in the households tended to increase with the level of income, giving rise to differences which are very significant in some cases. These inequalities would appear to be explained by the interaction of a number of factors. Firstly, the coverage of social security systems is generally smaller among the lower-income segments. Secondly, the pensions received tend to reflect the income inequalities existing at the time when the recipients became eligible to receive them. Thirdly, as social welfare pensions are a public charge, they have often been eroded by inflationary processes. Finally, the higher degree of informal activity among the lower-income groups makes it more difficult for public social protection and assistance bodies to reach them and provide them with coverage. We thus see that transfers are generally not sufficient to offset the inequalities in primary distribution.

2. Rates of employment, participation and household structure

The influence of disparities in rates of employment on income distribution is clear both from cross-sectional analyses and from a dynamic perspective. As may be seen from table 4, the lowest income strata

display rates of employment which are consistently lower than the average, but these rates increase as one moves up the income scale. Likewise, where an increase in income concentration was observed (Argentina, Brazil and Mexico), the relative levels of employment in the first decile deteriorated, while those in the top decile improved. In the case of Colombia (Bogotá), however, the improvement in distribution observed is associated with an increase in the relative level of employment of the first strata, thus reducing the distance with respect to the top stratum.

Rates of participation behave in a similar manner, except that, for each particular year, their dispersion is greater than that of the corresponding rates of employment. As may be seen from table 4, the rates of participation are persistently and substantially below the average among the poorer households. Only in the case of Colombia (Bogotá) are reductions in the disparities in rates of participation observed over time, this being the only case where income concentration went down. Where concentration increased (Argentina, Brazil and Mexico), the differences in this variable persist. In Chile—a country which does not display improvements in distribution in spite of its sustained growth and the increases in rates of employment—the inequality in rates of participation increased in relative terms.⁸ Thus, despite an increase

⁸ For more details of the evolution of this variable in Chile, see the corresponding case study.

TABLE 4

**Latin America (five countries): Relative indexes of factors
reflecting participation in the labour market^a**

	Year	Average rate of employment/ overall average		Average rate of participation/ overall average		Population of working age/ overall average		Average size of household/ overall average	
		First decile	Top decile	First decile	Top decile	First decile	Top decile	First decile	Top decile
Argentina (Buenos Aires)									
	1980	85.6	114.7	61.9	143.4	84.8	107.4	125.7	80.0
	1986	68.4	115.8	56.7	139.8	88.4	107.0	122.9	77.1
	1990	66.5	124.9	63.0	152.6	85.0	108.5	135.3	76.5
	1992	62.4	119.6	60.1	145.1	88.4	107.8	128.6	71.4
Brazil (São Paulo and Rio de Janeiro)									
	1979	100.8	98.1	71.7	132.5	79.3	111.6	133.3	74.4
	1987	88.1	99.9	81.5	113.8	83.5	111.6	119.4	72.2
	1990	86.3	105.9	78.2	120.7	85.8	109.9	124.3	73.0
Chile (Greater Santiago)									
	1987	82.6	109.8	81.6	126.2	83.7	108.0	121.4	76.2
	1990	81.8	108.0	78.1	121.8	83.7	107.3	122.5	85.0
	1992	86.4	101.3	75.8	111.1	83.4	110.5	117.9	82.1
Colombia (Bogotá)									
	1980	91.2	107.7	79.9	122.5	82.3	115.4	117.0	74.2
	1986	92.2	107.7	93.0	117.6	78.9	119.5	116.8	77.0
	1990	97.1	105.1	88.8	119.8	83.7	113.7	114.3	73.8
	1992	96.3	103.6	86.1	118.7	80.2	112.6	119.5	73.2
Mexico (high density areas)									
	1984	100.4	96.1	90.4	114.8	76.2	117.8	136.0	66.0
	1989	101.1	101.1	77.7	126.9	84.3	113.9	138.3	68.1
	1992	98.6	102.0	77.6	118.4	83.4	110.2	128.9	73.3

Source: ECLAC, on the basis of special tabulations of household surveys.

^a These indexes are ratios between the average value of the variable for the decile in question and the corresponding overall average.

in absolute terms, the rate of participation of the first decile went down with respect to the mean in relative terms because of a bigger increase in the participation of the upper middle strata. Growth was thus not proportionately reflected in distributional gains.

The preceding paragraph refers to the participation in the labour market of those members of the household belonging to the population of working age. The relative size of this population also varies according to the deciles, however; in the households of the first strata there are relatively fewer persons who are of working age and can thus provide economic support. Thus, even if the rates of wages, employment and participation were the same, the first strata would continue to be less well off in relative terms. As we shall see in the following section, this reflects the greater relative presence of minors in the poorer households.

In short, among the lower income groups there is a smaller proportion of persons of working age who effectively participate in the labour market, either as employed persons or as persons seeking work. This

limits the well-being of the household, since even if wages were the same as in higher strata the lower level of incorporation in the labour market reduces the total income generated by the household. As we shall see later on, this reflects the higher rates of inactivity observed in the lower-income strata, particularly among spouses.

3. Size and structure of households and their influence on incorporation in the labour market

The last two columns in table 4, together with figure 1, provide details of the size of households, which are seen to have more members in the first deciles. It is also noted that the upper deciles tend to be similar from one country to another. In the lower deciles, in contrast, the differences between countries are greater. With some variations, on average the size of the households in the poorest strata is 50% to 60% greater than in the upper deciles. This is a first indication that the differences between countries in terms

FIGURE 1
Latin America (five countries): Average number of persons in household, by deciles

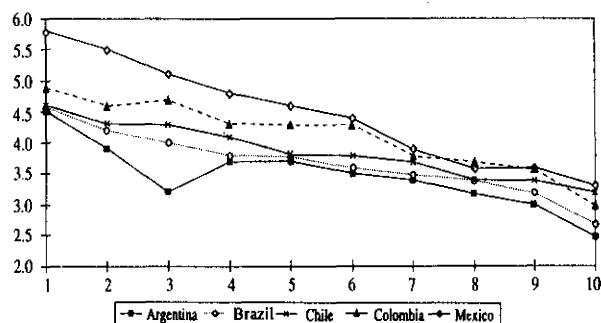


FIGURE 2
Latin America (five countries): Number of minors per adult in household, by deciles

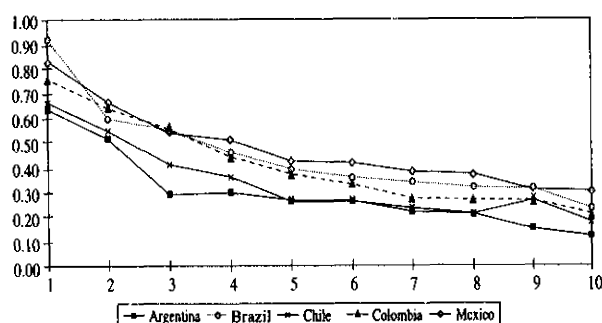
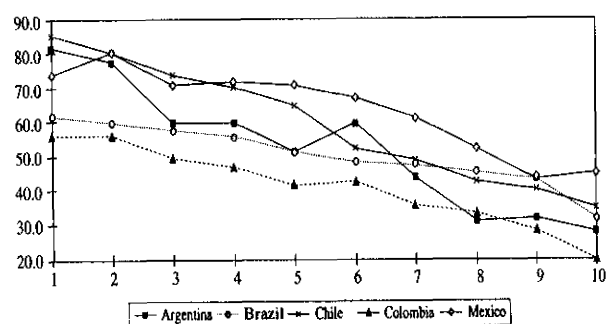


FIGURE 3
Latin America (five countries): Proportion of households in each decile where the spouse is not economically active (Percentages)



of population dynamics would appear to depend largely on the extent to which the lower income strata have reduced their fertility rates. In contrast, the upper income groups in the different countries appear to be at similar stages of progress in the demographic transition.

Because of this, poor households have a larger proportion of minors, as shown by figure 2, which shows the proportion of children up to 11 years of age per adult in the household. The considerable difference between the first deciles and the upper strata is noteworthy. Even for countries at an advanced stage in the demographic transition, such as Argentina and Chile,⁹ there are differences of the order of 1:4 between the first decile and the top decile in terms of average number of children per adult in the household. This means that the burden of looking after minors is considerably greater among the poorer households: a factor which is reflected in turn in a high incidence of inactivity and low participation in the labour market among the spouses in those strata, as shown by figure 3.

As may be seen from the figures, in some cases the percentage of spouses (of employed heads of household) who are not economically active in the first deciles is twice that of the top decile, reflecting serious inequality between strata as regards effective access to the labour market. Thus, the lower income groups face higher opportunity costs and lower benefits when seeking to enter that market. On the one hand, the greater burden of having to look after minors compared with households in higher deciles increases the opportunity cost both of seeking employment and of taking a formal job. This problem is frequently aggravated by insufficient availability or coverage of public and/or private services, especially day nurseries, kindergartens and schools. Secondly, the remunerations associated with the low educational levels reached by these segments do not adequately cover the costs incurred. This set of factors probably accounts for the lower level of incorporation into the labour market (especially the formal-sector labour market) by spouses, which is reflected in high incidences of inactivity and low levels of employment among spouses in the first strata.

This situation has persisted over time and in general has tended to get worse, with an increase in the

⁹ For a ranking of countries in the region according to their progress in the demographic transition, see CELADE/IDB, 1996.

TABLE 5

Latin America (five countries): Number of households in each decile where the head of household and his/her spouse are employed, as a proportion of the number of households where both are present (Percentages)

	Argentina ^a		Brazil ^b		Chile ^b		Colombia		Mexico ^b	
	1980	1992	1979	1990	1987	1992	1980 ^c	1992 ^d	1984	1992
Total	18.5	24.4	22.2	30.0	13.5	19.9	22.5	32.3	16.9	21.4
1	2.9	3.1	21.5	20.9	2.0	2.8	10.1	14.6	10.1	15.1
2	7.6	5.7	19.8	20.6	2.8	6.0	11.8	17.5	10.4	11.3
3	10.1	10.2	18.2	24.8	4.5	9.8	12.6	25.7	14.9	18.4
4	12.5	16.9	19.9	26.5	7.1	13.2	19.0	25.6	13.7	15.1
5	13.0	22.8	18.3	28.1	10.0	16.8	19.5	32.7	13.1	17.0
6	18.7	19.9	19.7	31.8	12.1	22.5	29.3	31.8	17.9	18.0
7	25.1	33.8	21.6	33.1	16.5	27.4	28.0	35.9	18.8	23.6
8	28.4	47.2	24.9	34.2	20.5	30.7	27.7	41.2	21.6	27.2
9	35.5	49.6	27.7	37.7	27.5	34.4	31.9	45.2	22.5	36.4
10	39.3	49.6	30.9	45.7	36.5	42.0	38.7	58.0	27.4	35.7

Source: ECLAC, on the basis of special tabulations of household surveys.

^a Buenos Aires.

^b National total.

^c Seven main cities.

^d Eight main cities.

relative differences. Table 5 shows, for two points in time, the percentage of households¹⁰ where both heads are employed. As may be seen from the table, substantial differences persist over time. The table shows firstly that the proportion of households where both heads are employed rises with the level of income in all cases. Secondly, it shows that on average this percentage has been increasing. Thirdly, in all the countries the increase in the percentage of households with both heads employed among the 30% poorest households is less than the average increase. Fourthly, the top 30% of the income distribution scale registers an above-average increase in this variable in all the countries. In short, the extent to which the spouses in the lower strata enter the labour market and take jobs is disproportionately low, while the opposite is the case in the upper strata.¹¹ As a result, the benefits of economic growth, employment, productivity gains and the consequent increases in remuneration are limited to the upper deciles of the income distribution scale, while the remainder progress only very slowly.

The larger relative size of the poorer households and the greater relative presence of minors in them

affect not only their levels of participation in the labour market but also the direct and opportunity costs that these households incur if young people of working age remain in the educational system. This results in lower educational levels for these young people and ultimately lower future remuneration, thus reproducing a concentrated form of income distribution in following generations.

In short, the interaction of demographic characteristics and educational levels and their associated effect on remuneration give rise to a situation which, through differentiated access to the labour market, tends to bias the benefits of economic growth in favour of the upper deciles. The inertia caused by this is reflected in the low rate of progress in the improvement of income distribution.

4. Conclusions

There are of course other determining factors of income distribution which have not been analysed here, because of the approach adopted, the limitations of space and information, and the desire to center the analysis on certain factors with regard to which it is possible to formulate policies. The approach used highlights the way that household income is made up, unlike other studies which seek to explain how the income received is affected by some individual characteristics (education, sex, experience, type of employment, etc.) and the sectors to which the recipients belong. Some of these aspects have been dealt with

¹⁰ In each decile, the universe refers to households where both heads are present.

¹¹ In order to prove this hypothesis it is necessary to use longitudinal-section surveys, which have only recently begun to be applied in countries of the region.

here, but the analysis has concentrated on the characteristics of the households and their members as these relate to the formation of per capita household income. No analysis was made here of the different access that the various income strata have to capital stocks, housing and health services, among other items, which significantly condition the level of well-being of present and future generations.

Outstanding among the aspects dealt with here are the differences in terms of labour remuneration, education, rates of employment, access to the labour market and demographic factors, which determine significant inequalities. The main results are given briefly below.

Firstly, the mean factor incomes of the lower per capita income groups are substantially below those of the upper strata: a phenomenon which is associated, in the case of labour income, with significant differences in educational levels. Moreover, as other statistics indicate, the lower income sectors are located in low-productivity segments of the labour market. This confirms the results obtained in earlier studies on inequalities of income between recipients.

Secondly, the rates of employment of the poorest groups are systematically below the average. Changes in distribution are largely associated with variations

in levels of employment, and reductions in the relative differences in rates of employment have tended to be associated with a lower degree of income concentration.

Thirdly, there are big differences between the deciles in their degree of participation in the labour force. There is a systematic tendency for the poorest groups to register lower rates of participation. This is reflected in higher rates of inactivity, especially among spouses and, to a considerably lesser extent, among heads of household.

Fourthly, the foregoing is related with the age structure of the households in different deciles. Thus, according to various indicators the population of working age is considerably smaller in the poorest households. The proportion of children per adult is higher in them, so that they bear a heavier burden of caring for minors, and for women this raises the opportunity cost of participating in the labour market.¹² This higher cost is compounded by lower benefits of participating in that market: a factor related with the levels of education attained.

Finally, it is important to bear in mind that no factor, when considered in isolation, can fully account for the prevailing distribution and the changes in it; the effects are multiplicative rather than additive.

IV

Policy suggestions

It may be gathered from the foregoing that strategies designed to influence income distribution should act jointly in four areas: i) generation of productive employment and increased demand for less-skilled labour; ii) policies to increase and maintain the income of the poorer strata; iii) reduction of the barriers facing the members of these strata when seeking to enter the labour market, and iv) aspects connected with the demographic dynamics of those segments.

The intensity of the actions to be taken in each of these fields will depend, of course, on the initial situation of each country. It must be emphasized, however, that improved distribution cannot be achieved through action on only one of the above aspects. In other words, the objective of achieving greater equity of income distribution goes beyond the limits of growth, labour and population policies and is rather

the result of joint progress in all of them. In the following sections, policies are suggested for modifying income distribution in a progressive manner. The evolution of certain variables which make it possible to anticipate the evolution of income distribution in the medium term is also discussed.

1. Medium and long-term policies in favour of better income distribution

a) *Generation of productive employment and increased demand for less-skilled labour*

ECLAC has developed a proposal which addresses the main aspects connected with income distribution

¹² Although the statistical analysis refers to "spouses" as, in principle, the second largest source of potential income of a household, the great majority of these spouses are women.

in a consistent manner (ECLAC, 1992 and 1997). In the short term, this proposal emphasizes the importance of achieving high levels of employment and macroeconomic stability and thus avoiding the regressive consequences caused by fluctuations in the level of activity due to adjustment processes like those undergone by countries of the region in the 1980s.¹³ In a medium- and long-term perspective, this approach emphasizes, among other aspects, the creation of productive employment through sustained economic growth as one of the basic conditions for achieving greater equity over time. In line with this approach, policies are proposed for stimulating saving and investment and securing efficient resource allocation in the context of greater integration of national economies into world trade. Among these policies, an important place is occupied by the strengthening of the public finances with the aim of generating public saving for the non-inflationary financing of investment programmes. This public effort should be complemented with the development of agents of institutional saving, especially pension systems, and the establishment of a regulatory framework which will ensure a sound financial system that operates efficiently and effectively and channels saving to real investments. Maintaining a moderately high and stable real exchange rate is of crucial importance, not only as one of the main instruments for promoting the export sectors and import-substitution activities but also, in conjunction with positive real interest rates in line with those prevailing in world markets, for keeping financial saving within the country and thus avoiding speculative capital flight. In this way it is possible to forestall fluctuations in levels of activity, with their consequent negative impact on investment, which are usually due to adjustment measures designed to cope with situations of external imbalance. In short, what is proposed is the establishment of a growth-oriented policy framework on the basis of greater linkages with the exterior and the recovery of levels of investment, mainly through the generation of national saving.

This approach recognizes, however, that because of the type of work offered to the low-income strata, higher growth is not necessarily reflected in rapid expansion of demand and hence in distributional pro-

gress. Because of this, policies are also outlined for the promotion of small and medium-sized enterprises, which are the main sources of formal-sector employment for the lower-income strata. One of the factors seriously limiting the development of these enterprises is the existence of segmented financial markets which restrict their access to credit. As a result, the investment possibilities of such enterprises depend to a large extent on the generation of internal surpluses, which reduces their growth and hence also the expansion of demand for less-skilled labour. New financial instruments are needed to overcome the inability of these enterprises to provide real guarantees, together with technical cooperation programmes and public support to improve their management capacity and ability to adopt technological advances, in order to free up the growth potential of small and medium-sized enterprises and, with it, the demand for labour (Held, 1995).

Unfortunately, the region's evolution in terms of saving, investment and growth between 1990 and 1996 was not enough to bring about significant increases in the generation of employment (ECLAC, 1997). Between 1991 and 1996, only four countries in the region achieved stable average annual growth rates over 4%. Other countries occasionally achieved higher rates but were not able to sustain them. In short, as well as being only modest (3.1% on average between 1991 and 1996), the region's growth has also been unstable, and this has been an important factor in the low growth of employment and the increases in unemployment (ECLAC, 1997). Using an indicator made up of five variables (unemployment, informal sector employment, wages in industry, minimum wages and productivity), the International Labour Organisation (ILO) reports that, out of a sample of 16 countries of the region, only five (Bolivia, Chile, Panama, Paraguay and Peru) registered ongoing positive progress in labour matters between 1990 and 1996, and only Chile registered advances in all the variables, including productivity; the remaining 11 countries, including the biggest and most populous economies of Latin America and the Caribbean, registered setbacks or failed to make progress in their indexes of labour progress over the period (ILO, 1996). In view of the foregoing, except in a few cases it is not possible to anticipate any significant improvements in income distribution in the region. On the contrary, because of the influence of the employment variable on distribution and the higher inci-

¹³ For an analysis of the distributive effects of shocks and short-term policies, see Jiménez, 1997, which summarizes the results obtained by simulations, using general equilibrium models, for Argentina, Brazil and Colombia.

dence of unemployment in the poorer strata, income concentration will most probably increase in a substantial number of countries.

b) *Increasing and maintaining the income of the poorest households: education and transfers*

As already noted, the level of education significantly affects the remuneration of those who do manage to obtain employment, so that measures to promote expansion of the coverage of the educational system, increased rates of retention in the educational system and improvements in the quality of education must form a part of any policy designed to improve income distribution in the long term. In terms of income distribution, however, the results of these efforts will only materialize in the long run, as successive cohorts with higher levels of education begin to work and become more numerous. Training programmes designed to raise the level of skills of the poorest workers will probably show results more quickly, in the medium term. In addition, these programmes can heighten the efficacy of long-term policies, since there are inter-generational complementarities. For example, actual increases in household income as a result of improved wages thanks to training programmes would increase the tendency of the children to stay in school, thus avoiding their premature incorporation into poorly paid jobs and thereby giving them some hope of obtaining better incomes in the future.

There are also important complementarities with policies in other areas, as in the case of the provision of health services for the poor population. The improvement of such services strengthens the effects of education policy, since it makes possible greater continuity of presence in the school system and better use of the educational system by children and young people. Likewise, as a number of studies have shown, higher levels of education of mothers are reflected, among other things, in lower rates of infant morbidity and mortality (CELADE/IDB, 1996). In both cases, the results in terms of distribution take a considerable time to materialize. The continued application of these policies and the maintenance of economic growth are therefore of crucial importance, since transitory reductions in the resources earmarked for these policies have permanent effects. For example, those who lose the opportunity to stay in the educational system today because of a transitory reduction in household income will find it difficult to re-enter

the system in the future, so that their skills and hence their income could be permanently lower. Negative fluctuations in the resources for social policies thus tend to strengthen the inter-generational mechanisms for the transmission of poverty.

The region's past experience in this field unfortunately does not provide any grounds, except in a few cases, for anticipating progressive developments in income distribution. As various studies have pointed out, the resources earmarked for social policies have often been those which have suffered the biggest real reductions through public budget adjustments (ECLAC, 1994b; Cominetti, 1994), thus further aggravating the regressive distributive effects deriving from the recession. The lack of distributional progress in the 1990s can therefore be partly attributed to the macroeconomic adjustment phases undergone by most of the countries of the region in the 1980s.

The foregoing analysis refers to policies which seek, indirectly but nevertheless decisively, to affect the levels of income of those who obtain employment and also to improve income distribution too. Other policies, involving direct intervention, are also important however. The fixing of minimum wages is one of the most widespread practices, although there are divergent views on its efficacy and desirability.

In general terms, there is some degree of consensus that wage increases which exceed increases in productivity have distributional effects whose implications for levels of activity are not very clear but are generally negative.¹⁴ With regard to minimum wages, there are grounds for believing that real losses in them are associated with increases in the incidence of poverty and vice versa, even though the effects in terms of the Gini coefficient may not be readily discernible. Consequently, as long as the real growth of minimum wages is not higher than that of the average productivity of the economy,¹⁵ it may be anticipated that such growth would reduce the incidence of poverty, so that it continues to be an important policy tool (Jiménez, 1996; Morley, 1997).

Unfortunately, during the first half of the 1990s real urban minimum wages evolved in such a way that no improvements in terms of distribution are to

¹⁴ See Chisari and Romero (1996), Urani, Moreira and Willcox (1997), Lora and Fernández (1996) and Jiménez (1997).

¹⁵ It should be borne in mind that the increase in the productivity of small enterprises and the informal sectors, which are important users of less skilled labour, is usually below that of the rest of the economy.

be expected by this means. Thus, as the ILO (1996) reports in respect of a sample of 18 countries of the region, in only four of them (Colombia, Costa Rica, Panama and Paraguay) did real urban minimum wages in 1995 exceed the 1980 level, and moreover, only in Costa Rica was the real growth of this variable in any way significant, so that on average in the region the real level of these minimum wages in 1995 was only equal to 72% that of 1980, since they grew at a rate of almost zero (0.8% per year) between 1990 and 1995.

A second alternative for modifying income distribution consists of direct transfers (mainly pensions and subsidies). The following brief analysis does not attempt to cover all the options for transfer mechanisms and their redistributive content, but merely to point out that, in view of the indirect and long-term nature of policies designed to modify income generation at its source, some actions have important potential for achieving progressive distribution in a shorter term and should therefore be taken into account. There have been numerous examples in the region of action seeking to transfer income and subsidies with the aim of alleviating the effects of certain factors responsible for poverty and regressive income distribution, and some brief comments are in order on the efficiency and efficacy of some of the main forms of transfers in this connection.

Reference is often made to the possibilities of redistributing income through the use of pension and retirement systems. An important digression is called for here. Firstly, as national case studies have amply shown, one of the main factors responsible for the precarious situation of these systems in some countries has been the lack of correspondence between contributions and benefits, which has resulted in a low degree of identification with the purposes of the systems and has encouraged under-declaration and evasion.¹⁶ An outstanding feature of the recent pension system reforms is the tendency to link contributions more closely with benefits, as a means of promoting the systems' solvency. This implicitly acknowledges that the introduction of redistributive criteria into pension systems can have a serious negative influence on their efficiency, solvency and financial stability. In short, such systems would appear to be an inefficient means of redistribution.

¹⁶ See Iglesias and Acuña (1991); Uthoff and Szalachman (eds.) (1991, 1992 and 1994); Schulthess and Demarco (1993), and Uthoff (1995).

Secondly, in the experience of the region the coverage of pension systems is usually insufficient, so that if an attempt is made to carry out redistributive actions through them this will probably exclude a major part of the poorer strata. In other words, the efficacy of these systems as progressive redistribution mechanisms would appear to be far below what was expected, since their scope is less than that needed in order to reach the desired groups. Nevertheless, pension systems which include a solidarity-oriented financing component do have some redistributive potential for the middle and lower segments which come within their coverage, and this could be used provided that the problems of solvency are duly addressed.

Indeed, the current line followed in pension system reforms does not rule out policies of a redistributive nature, such as granting a minimum pension to those who, in spite of their contributions to the system, do not attain a certain level of income when they retire: in effect, poverty profiles indicate a greater incidence of such poverty among pensioners. Consequently, an important distributive and poverty-reducing function is played by measures to provide minimum pensions or pensions of a social welfare nature (in connection with accidents, sickness and widowhood, for example), along with the expansion of the coverage of pension systems and of social protection networks in general.

A second type of transfer which has aroused some interest recently is that connected with the greater incidence of unemployment in poor households. Table 6 shows the distribution of unemployed persons by deciles.

As may be seen from this table, there is a disproportionate concentration of unemployed persons in the first income deciles, even though the countries studied were going through different phases of the economic cycle in the years in question. Two unemployment situations which call for different policies must be taken into account when seeking to explain this. Firstly, the considerably higher incidence of unemployment in the first decile is considered to be due partly to the causal factors of chronic unemployment, which neither recovery of growth nor the maintenance of growth over time can significantly reduce. In this case, it is a question of hard-core poverty. Reducing the incidence of such unemployment would require, among other things, minimum employment programmes which would last longer than emergency

TABLE 6

Latin America (five countries): Distribution of unemployed, by deciles
(Percentages)

	Argentina, 1992 ^a	Brazil, 1990 ^b	Colombia, 1992 ^c	Chile, 1992 ^d	Mexico, 1992 ^e
<i>Total</i>	100	100	100	100	100
1	33.6	25.6	18.6	29.0	13.8
2	19.2	13.1	15.4	15.3	17.0
3	9.8	12.2	11.9	14.4	15.2
4	14.0	13.0	11.0	9.2	10.2
5	7.8	9.6	10.6	9.7	11.3
6	5.1	6.7	11.0	5.6	7.4
7	5.2	7.1	6.2	5.8	10.8
8	0.9	5.6	7.0	3.9	2.5
9	2.1	3.4	5.4	4.9	7.5
10	2.4	3.5	2.7	2.2	4.2

Source: ECLAC, on the basis of special tabulations of household surveys.

^a Buenos Aires.

^b São Paulo and Rio de Janeiro.

^c Bogotá.

^d Greater Santiago.

^e High-density areas.

programmes and would provide a basic level of remuneration, although they should not be allowed to become a disincentive to the incorporation of the unemployed persons in question into the labour market in search of jobs with higher productivity and wage levels. The second type of unemployment is more closely associated with the economic cycle, but it too registers a higher incidence in the poorer groups. Transfers, or else emergency employment programmes, designed to replace income in transitory situations of unemployment would help to prevent income concentration from increasing in periods of recession.

The efficacy and efficiency of these schemes are greatly influenced by the forms of financing (unemployment insurance with individual contributions, use of public funds, etc.), the criteria for selecting the beneficiaries, the duration of the benefits and the extent to which they replace lost income. As it is not possible to make a detailed analysis here, we merely wish to emphasize that such tools are important because they would make it possible to prevent, at least in part, the further intensification of poverty and income concentration which periods of macroeconomic adjustment usually bring with them.

These tools, which are mainly of a compensatory or palliative nature, can usefully be incorporated in a global policy designed to guarantee a minimum level of family income, which would make it possible to overcome some shortcomings that such tools display when used alone (ECLAC, 1992). Thus, as noted, minimum wage policies have only partial scope, since they are restricted mainly to the urban formal sectors, while their impact on company profitability

is greater in the case of small enterprises, which are the main users of less-skilled labour. Moreover, they have only a limited degree of efficacy in the event of recessions due to insufficient domestic demand. Consequently, they cannot be set at a very high level, nor can they be the only tool used. Similar problems of coverage are displayed by minimum and social welfare pensions and schemes for unemployment insurance and unemployment benefits. This means that it would be wise to think of using a set of tools designed to achieve a certain minimum level of family income through a combination of minimum wages and pensions, unemployment benefits and/or insurance, more family allowances and/or direct subsidies or transfers, or the provision of benefits in kind, as for example through the public school system. If the stipulated minimum level of family income were still not attained, these measures could be supplemented with transfers allocated in line with the incidence of the factors determining the severity of poverty and income concentration. Naturally, in order to do this it is necessary to establish methods of evaluating the situation of each family as regards income and/or needs through special registers, as a number of countries in the region have already done.¹⁷

Finally, a general comment may be made at this point on the question of the financing of transfers designed to promote redistribution or to relieve the effect of the factors affecting the severity of poverty.

¹⁷ An example of this is the operation of the Single Family Subsidy in Chile, based on the "economic and social profile card", which takes into account a number of factors in order to determine the eligibility of a family group to receive this subsidy.

TABLE 7

Latin America (five countries): Distribution of children under 5, by deciles
(Percentages)

	Argentina, 1992 ^a	Brazil, 1990 ^b	Colombia, 1992 ^c	Chile, 1992 ^d	Mexico, 1992 ^e
<i>Total</i>	100	100	100	100	100
1	22.6	20.4	18.4	19.3	17.2
2	18.7	14.6	15.4	17.0	12.5
3	10.9	12.6	14.7	12.6	13.2
4	10.5	10.8	10.8	10.5	11.2
5	7.9	8.9	8.9	8.0	11.2
6	7.8	7.9	7.7	9.0	8.8
7	6.9	7.7	6.3	6.4	7.5
8	7.0	7.4	7.3	5.7	6.4
9	4.0	5.7	5.6	6.5	5.9
10	3.7	4.0	4.8	5.0	6.2

Source: ECLAC, on the basis of special tabulations of household surveys.

^a Buenos Aires.

^b São Paulo and Rio de Janeiro.

^c Bogotá.

^d Greater Santiago.

^e High-density areas.

The final effect these have on income distribution also depends on the effects of the method of financing the public expenditure involved. Many of the tax reforms introduced recently in the region have been aimed at increasing revenue collection and also improving the efficiency of the tax system by expanding participation or introducing indirect taxes such as the value added tax. Although there are many reasons for adopting this approach, the regressive nature of this method of financing must be borne in mind, for as a number of case studies show, financing increases in public expenditure through indirect taxes is the least desirable option from the strictly distributive point of view,¹⁸ because there are more possibilities of a shift in its incidence than in the case of direct taxes. Consequently, from this point of view it is desirable that future reforms should raise the direct rather than the indirect tax burden.

c) *Reducing the barriers faced by the poorest sectors in seeking to participate in the labour market*

As already noted, the opportunity cost for poorer households of participating in the labour market is very high, because of the greater relative presence of minors in the household. As may be seen from table 7, the poorest 30% of households account for a major proportion—in some cases as much as 50%—of the total number of children under 5.¹⁹ Consequently, a

policy for the development of public or private institutional arrangements for the care of minors would help the incorporation of spouses into the labour market by reducing one of the factors responsible for concentrated income distribution, namely, the lower relative rate of participation and the considerably higher rates of inactivity among spouses in poor households.

It is important to bear in mind some factors which condition the success of the above proposals. Firstly, not only is the opportunity cost of participating in the labour market higher for spouses from poor households but also, because of the low wages due to their low levels of skills, there is also less incentive for them to seek greater participation. Consequently, as well as taking measures to reduce the barriers which impede access to the labour market by spouses from lower-income households, it is necessary to establish training programmes specifically aimed at these persons. Secondly, the above considerations and measures are mainly on the supply side, and their results depend on an increase in the demand for labour due to economic growth and the provision of incentives for sectors which require less-skilled labour, such as small and medium-sized enterprises. In this connection, it was already noted earlier that only through joint action in the areas in question is it possible to achieve lasting improvements in distribution.

A second segment of the labour market which has problems of access is that made up of young people, among whom the incidence of unemployment is typically higher. In this case, lack of skills is one of the most important factors. A number of attempts are

¹⁸ See Chisari and Romero (1996), Lora and Fernández (1996), Urani, Moreira and Willcox (1997), and Jiménez (1997).

¹⁹ This also means that transfers of cash, services or kind based on an allocation criterion which takes account of the presence of children in the household can have a high distributive content.

currently being made in the region to promote greater participation by organizations of private producers in the design and execution of training programmes, in order to secure a greater correspondence between the demand for particular skills and the content of such programmes (ECLAC/UNESCO, 1996). The aim is to help the graduates of training institutions to find jobs more quickly, to which end efforts are being made to get away from the passive scheme whereby training institutions provide instruction on the basis of their traditional capacities, which may not correspond with actual demand, and leave the problem of gaining access to employment entirely to those who attend these programmes.

While lack of skills among young people is an obstacle to their access to the labour market, it must at the same time be borne in mind that the poorest strata often have serious difficulties in keeping their young people in the school system, including secondary education, and subsequently in training institutions. For this reason, more flexible training curricula should also be considered as a means of providing technical or professional training at an earlier age to persons who do not wish or are not in a position to enter higher education.

d) *Aspects connected with population dynamics*

As noted earlier, demographic aspects have a significant influence on the distributive situation, even in countries like Argentina and Chile which have already made progress in the demographic transition towards lower levels of fertility. The poorer strata tend to have households with a larger number of members and a greater relative presence of minors, with the result that they contain relatively fewer members of working age.

A number of studies show that progress in the demographic transition has been more pronounced in the higher income strata; the poorer groups, in contrast, still register high rates of fertility, considerably above the average (CELADE/IDB, 1996). The poorer strata also regulate their fertility less effectively, with smaller intervals between pregnancies, and both these facts –without mentioning other negative consequences– are reflected in greater instability of women's participation in the labour market.

Moreover, as many studies have shown, the poorest groups register a higher level of unwanted fertility; in other words, a larger proportion of them would have preferred to have fewer children than in

groups enjoying a higher level of well-being.²⁰ The educational level of mothers has been shown to be a variable that exerts a great deal of influence in this situation; the lower their level of instruction, the higher is their observed level of fertility and the greater is the proportion of unwanted pregnancies. In contrast, mothers with higher levels of instruction register lower rates of fertility and a lower proportion of pregnancies are unwanted. This highlights the considerable differences that exist in the access of different economic and social strata to family planning, which is reflected in inequality as regards exercising effective control over decisions that affect fertility. Thus, as special studies have shown, mothers with a lower level of instruction make greater use of traditional methods of birth control or simply do not use any birth control methods at all, whereas mothers with a higher level of instruction make more use of modern methods (CELADE/IDB, 1996). Consequently, policies which facilitate access to family planning and emphasize in advance the need for responsible parenthood are a necessary part of strategies designed to secure greater equity and better income distribution.

Secondly, as already noted, the efficacy of long-term policies such as those in the field of education depends largely on the health conditions of those entering the educational system. Determining factors in this respect are the health of the mother during the period of gestation and the health and nutritional state of the children in their early years. From this point of view, mother and child health and nutrition programmes also represent key elements in any distribution strategy, since although this may not be the main objective of the strategy it helps to create suitable conditions to enable the poorer groups to raise their skills and income in the long term. The level of instruction of mothers is also a variable which has a significant incidence with regard to infant mortality. The CELADE/IDB study already referred to clearly shows that rates of infant mortality and morbidity are lower among the children of mothers with a higher level of education. Once again, this shows that an income redistribution policy must act on various fronts at once, thus acknowledging the multiple factors that determine income distribution.

²⁰ See ECLAC (1992), CELADE/IDB (1996) and ECLAC/CELADE (1998).

The policies mentioned above contain elements of both equity and income redistribution. They help to strengthen over time the effect of measures designed to increase the generation of income among the poorest sectors. If these policies also manage to reduce fertility in the most under-privileged strata, thus reducing the distance between the number of children wanted and the number actually born, this will tend to reduce the greater relative burden of looking after minors in these strata. This would make possible greater participation by spouses in the labour market, and if suitable training programmes are also carried out their income could also be improved.

Furthermore, the fewer the number of children, the smaller the amounts of resources needed to keep

them in the school system and the lower the pressure to leave them unattended in order to look for work to help support the family. Both these factors help to keep minors in the school system so that they can hope to earn better incomes in the future.

In order for these demographic changes to take place, however, deliberate action is needed to promote greater access to family planning, and effective measures are required to strengthen the generation of income among the poorest sectors. If this is done, the changes will also be the result of the deliberate will of the poorer strata, who will take a different attitude to their fertility because they feel that this will contribute to their own future well-being.

(Original: Spanish)

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Health management *contracts in* Costa Rica from a *comparative perspective*

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This article analyses the recent establishment of quasi-markets in the field of public health in Costa Rica through the internal separation within the Costa Rican Social Security Fund of the functions of revenue collection, financing, purchasing and provision of services; the application of a new financing model; and the introduction of management contracts with hospitals and health areas as a key instrument for allocating and transferring resources in accordance with performance and fulfillment of goals. The context and bases of the management reform are examined, and a description is given of both the new financing model and the institutional and organizational implications of the 1997 contracts. These contracts are described in the light of their main thrusts, in which special emphasis is placed on innovations in terms of processes and the development of reliable records of activities, costs and quality, going beyond the mere use of indicators of efficiency and efficacy. The performance of hospitals and health areas in the context of these contracts is described, and finally some views are expressed on the strengths and weaknesses of the relevant institutions and the means of optimizing resource allocation. Throughout the analysis comparisons are made with the experience of Chile.

I

Introduction

"Contracts not only provide an explicit framework within which empirical evidence may be derived on forms of organization (so that they are the basic empirical source for proving hypotheses on organization): they also provide clues and pointers on the way in which the parties to an exchange will structure more complex forms of organization". (Douglass North)

Since 1996, the Costa Rican Social Security Fund (CCSS) has been promoting the formation of quasi-markets in public health. Without resorting to the establishment of exogenous bodies for this purpose, the new organizational scheme of the CCSS is designed to separate the functions of revenue collection, financing, purchasing and provision of services at the internal level and to establish a new financing model. The relation between financing, purchasing and the provision of services is seen as a contractual one: management contracts are the key instrument for the allocation and transfer of resources as a function of performance and fulfillment of goals, specifying health objectives and establishing agreed production targets for each centre, at all three levels of attention.

In the following sections, the ambitious management reforms undertaken by the CCSS will be analysed first, in the light of their context and bases, after which a description will be given both of the financing model underlying the management contracts and the institutional and organizational implications of the contracts for the year 1997.

The main aspects of the 1997 contracts are described and highlighted, with special emphasis on the fact that the performance measurement which guides them goes beyond the mere use of indicators of efficiency and efficacy, since it assigns an important role to the innovation of processes which should make it possible to systematize the provision of services, shed light on specific aspects of their efficacy, and contribute both to organizational restructuring and to changes in management culture. The importance assigned to the preparation of reliable records on activities, costs and quality and the establishment of information systems which can strengthen management capacity is also highlighted. The contracts also promote the development of an adequate system of referrals and counter-referrals.

An account is given of the performance of the hospitals and health areas under the 1997 contracts in terms of the improvements achieved, the organizational learning process and the main obstacles. In the light of the evaluations made by the CCSS and other elements, some opinions are presented on institutional strengths and weaknesses and on the means of optimizing resource allocation. Finally, some elements which could stand in the way of the process of innovation are mentioned.

Official documentation and interviews and exchanges of ideas with the health authorities and officials who have been involved in the institutional innovation process were the main source for this analysis,¹ which provides a detailed overview of this particular aspect of the reform process.²

In Latin America,³ the public health systems of Chile and Costa Rica are the only ones which have established management contracts with public suppliers, thereby progressing through this process of negotiation towards the formation of quasi-markets. This is the reason for the constant comparisons made with the Chilean experience in some aspects.⁴

¹ Among the factors of the greatest importance for the execution of this study were the interest shown by Alvaro Salas, then Executive President of the CCSS, his willing collaboration, and that of the authorities and officials who granted us interviews and facilitated our free access to the documentation (see list of interviewees at the end of this article). The author, however, bears sole responsibility for the processing and interpretation of the information provided.

² No complete analysis exists in this respect. For an updated overview of the reform of the Costa Rican health sector in the last four years, in terms of both its direction and execution, see Costa Rica, MIDEPLAN, 1998, pp. 190-220.

³ In the Caribbean, Trinidad and Tobago has also established separation of functions and annual service agreements.

⁴ With regard to the context and initial thrust of the introduction of management contracts in Chile, see Sojo (1996b and 1996c). We wish to express our thanks to the Chilean authorities for the interviews granted and the access provided to the documentation on these matters (see list of interviewees).

II

The context and opportuneness of the reforms

In the 1980s there was an administrative restructuring on the CCSS and an adjustment in its financial base. Although the conflictive delineation of areas of competence between the Ministry of Health and the CCSS became a stumbling block for the reform of the Costa Rican health system at that time (Sojo, 1993; Güendel and Trejos, 1994), growing agreement about the morphology of the system made it possible to clarify their respective areas competence in the mid-1990s.

In 1993, the restructuring of the Ministry of Health was approved and it was made responsible for the functions of general guidance (which need to be further strengthened) and promotion, while the CCSS was made responsible for operational activities in the field of health in the areas of promotion, prevention, recovery and rehabilitation.

Since 1994, primary attention and preventive activities have been strengthened through Basic Integral Health Attention Teams (EBAIS). The primary health attention activities carried out by the Ministry of Health since the 1970s were gradually transferred to the CCSS and became part of the model based on those teams,⁵ while the Ministry retained control of three programmes: health promotion and protection, protection and improvement of the human environment, and child nutrition and development. The signing of the management contracts resulted in the transfer of Ministry of Health staff to the CCSS, since the health areas had difficulties in fulfilling their management contracts when the latter were not given effective backing: in one year, from January 1997, 1027 staff members were transferred.

The present reforms in the management of the CCSS are taking place at a time when the financial resources of this institution have been placed on a sounder basis at two levels. The CCSS provides health services for the population under a system financed

from compulsory tripartite contributions, with a scheme of universal benefits. The total contribution amounts to 7.5% of the payroll: the employer pays 4.75%, the worker 2.5% and the State the remaining 0.25%. The heavy outstanding debt built up by the State with the CCSS during decades was negotiated and paid off in 1997. The financial consolidation of the CCSS was further strengthened by the 1995 pension reforms, which introduced a pension system run by the CCSS as the exclusive system of pensions payable from the national budget. Within this process, the finances of the health system were also placed on a sounder basis (Sojo, 1997b).

The present reforms in the management of the CCSS are an *ad hoc* initiative designed in the light of a searching self-critical diagnosis⁶ on the characteristics of the CCSS as compared with its objectives, and do not form part of a broad exercise on the part of the Costa Rican State in the field of management. Within this area, the most far-reaching policy in this period is the implementation, through some pilot agreements, of the National Evaluation System (SINE), designed and coordinated by MIDEPLAN. The SINE is based on the signing of annual performance agreements –commitments to achieve certain results– between the President of the Republic and the corresponding authorities, endorsed by MIDEPLAN and the Ministry of Finance. The institutional performance matrix specifies the priority programmes and projects, the evaluation indicators, the ranking of each programme, and the institutional commitments entered into in each case (Mora, 1998). The institutions which have fulfilled their targets best have received public praise, but the system has not yet entered on a stage of individual evaluation or rewards.

Other specific initiatives in the area of management have also been carried out, such as the reform of the Customs Service and the coordination and in-

⁵ For a description of the global thrust of the reforms, see Salas (1996) and Weinstock (1995). For an analysis of the changes made in the health sector in the last four years, see Costa Rica, MIDEPLAN, 1998, pp. 190-211.

⁶ The arguments underlying the CCSS's diagnosis of the structural problems of the institution with regard to management and financing are analysed in section III.

tegration of the programmes against poverty under the National Anti-poverty Plan.

Unlike anti-State management reform proposals, which see the State as a problem but not as part of the solution (Ferlie, Ashburner, Fitzgerald and Pettigrew, 1996, p. 11), the CCSS management reform seeks to maintain and consolidate social and public responsibility for the enjoyment of health as one of the rights of the citizen and to increase its contribution to the systemic competitiveness of the country through better use of resources and greater attention to quality.

These aims are reflected in the guiding principles of the new financing model—solidarity, universality and equity—which became the backbone of the reform of the CCSS as from 1996.⁷

The authorities of the CCSS saw that there were clear shortcomings in terms of management, but when trying to decide the best timing for the introduction of management contracts they were faced with a dilemma: whether first of all to build up the management capacity needed in order to assign resources in line with performance and then bring in the management contracts (a longer process which might not be practical in political terms) or whether to adopt the system of contracts and learn by experience. This second approach was finally adopted.⁸ Within a short space of time, the central authorities of the CCSS formulated an alternative financing model and worked out the features of the contracts, in order to make progress in that direction, with repercussions on the global management of the CCSS. The execution of a pilot plan was begun, and an intensive training programme was put into effect.⁹

It is interesting to reflect on the political factors which have made possible the realization of the reforms in this sector. A reasonable degree of continu-

ity has been achieved because the modernization project was begun in the Calderón Fournier administration and was adopted with the unanimous vote of the majority political parties.¹⁰ This continuity was also aided by the fact that the technical team then responsible for designing the reform of the CCSS subsequently occupied strategic posts in the Figueres Olsen administration, including the post of Executive President.

The management reform was preceded by discussions on how to improve the use of resources in the field of health; in 1994, for example, a high-level hospital commission was set up. From October to December 1996, meetings and negotiations were held at the behest of the central authorities of the CCSS to decide on the path to be followed in the organization of management contracts. At the start, a number of the actors had negative reactions: for example, the trade unions complained that the idea was to save resources or open up the way for privatization.¹¹ Even at the central level of the CCSS itself there was and continues to be some doubt about the management contracts, which are seen as a weakening of central action. The hospital directors, who were mostly skeptical to begin with, gradually became more interested, as the expansion of their autonomy would give them more instruments for tackling their problems, and the hospitals which were in a better position to begin the process began to act as leaders. The innovation was actively supported by the Executive, which even took part in a meeting with hospital directors¹² on "queues" and waiting lists.¹³

⁷ Equity in the distribution of resources is defined as "equal opportunities of access to health services by all users with equal needs" (CCSS, Proyecto de Modernización, 1997a, p. 36).

⁸ Statements by Alvaro Salas at the interview of 5 February 1998.

⁹ We were told that during six months, the authorities and those responsible for the contracts of the bodies providing services had to leave their jobs for this purpose for three or four days a week (interview with Manrique Soto Pacheco, Director of the San Juan de Dios hospital, 5 February 1998). Paradoxically, in some cases the training conflicted with the objectives pursued: according to the 1997 evaluation of hospitals, the fact that those responsible for organizing the process had to leave their work for training activities gave rise to difficulties in following up the contracts.

¹⁰ Statements by Dr. Elías Jiménez, Director of the National Children's Hospital and Executive President of the CCSS from 1990 to 1994, in an interview of 5 February 1998.

¹¹ The difficulties in the dialogue about the reforms and some prejudices about them are clearly evident in the analysis and comment session described in GTSS (1997), pp. 41-70.

¹² The proposals made at this meeting cover very varied areas: equipment, systems of giving appointments, more flexible hours of attention, new hiring schemes, decentralization of management, more flexible budgets, expansion of the decision-making capacity of general physicians, purchase of services, improvements in the system of referrals, coordination of services, and absenteeism.

¹³ In seeking to understand this political process, the meeting with health authorities called by the Executive President of the CCSS on 26 August 1997 was extremely useful. This meeting was attended by Herman Weinstock, Minister of Health; Alvaro Salas, Executive President of the CCSS; Fernando Marín, Deputy Minister of Health; Julieta Rodríguez, Chief of the Medical Division of the CCSS, and Luis Bernardo Sáenz, Director of the CCSS modernization project.

An important role was played by the consultancy contract signed with Andersen Consulting and the Hospital Consortium of Catalonia in December 1995 to formulate proposals for prospective budgetary allocation, separation of functions and improvement of quality. At the same time, the CCSS modernization team studied and analysed the experiences of the Basque Country, Catalonia, England and Sweden, where the systems are of an eminently public nature in terms of indicators and evaluation schemes

As an illustration of the lessons learned from the analysis of other situations, special mention may be made of the "cultural change" which took place in the Basque Country as a result of management contracts, even though these were not linked with the budget: this experience was incorporated when the Costa Rican initiative was launched in 1997 and is reflected in the relative looseness of the contract requirements.

Awareness of the positive and negative aspects of these experiences also affected three areas of concern in the design of the model: the system of payments should be such as to avoid over-supply of services, or manipulation in conditions of low output; the indicators should not be focused solely on the results, while overlooking the processes, since this would adversely affect commitment and credibility; and the evaluation must be seen as a strong, consistent and constant process.¹⁴

The Chilean management contracts, however, form part of a context which is very different from that of Costa Rica: i.e., a health system whose solidarity had been deeply undermined. Although they were introduced in a period of expansion of expendi-

ture in which improvements in efficiency and equity were sought, their framework is a dual health system, both in terms of ownership and of the rationale behind its design. Privatization of the financing and supply of health services, which was introduced under the military regime, promotes the transfer of those with higher incomes from the public to the private system.

So far, this health system is made up of two subsystems which are governed by different rationales and do not compete with each other: the public health insurance is of an unfunded nature and seeks solidarity, whereas the private system operates through individual accounts and risks; consequently, the first system is made up of poor people, and those with high health risks tend to migrate to it, while the second system consists of those with higher incomes and low levels of risk.

This duality inhibits universal coverage of the population and efficient use of resources, militates against a complementary relationship between public and private attention, and significantly limits the capacity for regulation, with serious repercussions in the management area because of the leakage of resources between the two subsystems.¹⁵ The inequalities in health and the cases of inefficiency inherent in the dual model have currently given rise in Chile to a complex discussion on the establishment of a basic, solidary compulsory health insurance scheme of universal coverage which will ensure effective freedom to choose the type of health insurance and supplier of attention in the public and private fields, without any possibility of rejection of patients by the insurance institutions.¹⁶

III

A form of resource allocation which makes it possible to overcome negative incentives

Better use of resources, which is the central element in the CCSS management reform, is an urgent issue:¹⁷

it is maintained that the sustainability of the system is at stake, as expenditure on health has been growing

¹⁴ These details regarding the initial phase of the process were collected on 29 August 1997 at a joint interview with James Cercone, Norma Ayala, Rodrigo Bartels and Mario León, staff members of the CCSS modernization project who were responsible for preparing the contracts and have participated in their evaluation.

¹⁵ With regard to the Chilean case, see Sojo (1996b and 1996c).

¹⁶ For details of the proposals made in this field in a study commissioned by the Ministry of Health, see University of Chile, Department of Economics, 1997.

¹⁷ Unless otherwise specified, the main source of this diagnosis is CCSS, Proyecto de Modernización, 1997a.

TABLE 1
Costa Rica: Selected social indicators

Indicator	Value
Gross mortality rate (1996)	4.12
Infant mortality rate (1996)	11.83/1000
Life expectancy (1995)	74.8
Total number of deaths	13 993
Main causes of death (1996):	
Diseases of the vaso-circulatory system	4 308
Tumours	2 902
Injuries or poisoning	1 570
Percentage of babies with low weight at birth	7.33
Position in the Human Development Index (1997)	33

Source: CCSS.

in recent years but its productivity has remained the same or gone down, and the ageing of the population will exert growing pressure on it (table 1). Users are not satisfied, and this leads to double spending on health care when beneficiaries pay extra to obtain private health attention; this phenomenon entails costs in terms of social efficiency and also encourages evasion. It is therefore necessary to control costs and increase efficiency in order to make an effective contribution to the solidarity, equity and competitiveness that the country seeks.

The diagnosis on the management of the CCSS finds that control of the CCSS budget has been of a primarily administrative nature: the costs of the services provided are not fully known, and systems of billing for services have not yet been developed. It is necessary to change the system of organization and

financing based on past allocations in order, instead, to provide resources as a function of efficiency, fulfillment of objectives, and the results and performance achieved in the areas of health attention, finance and quality. Good clinical practices, proper attention to users, and effective coordination among the different levels of health care are considered as criteria of quality.

Within a framework of rigid rules, staff remunerations are determined by seniority, and no account is taken of performance. Although the organization of work is subject to detailed regulations and standard procedures, in the area of clinical activities the professionals act practically without limitations, while the high levels of absenteeism, substitution and "sick leave" exceed the average levels of the country.

Medical specialities form a kind of "captive market" in the hands of the specialists concerned, giving rise to access barriers and long waiting lists, even though there are cases of an obvious shortage of specialists, as for example in ophthalmology, ear, nose and throat specialities and oncology.¹⁸

It is therefore proposed to establish group or individual incentives to reward merit and the fulfillment of goals and results. However, the use of incentives is seen as a necessary but not of itself sufficient condition for improving the performance of the health system: a further requisite is to develop a new institutional culture guided by costs, output and results, understood as improved levels of health, efficiency and user satisfaction.

IV

The financing model

1. The general concept

The quasi-market which it is aimed to establish¹⁹ is based on a new organizational design of the CCSS in which the functions of revenue collection, financing,

purchasing and provision of health services are separated at the internal level, and on a new financing model.²⁰ The relation between financing, purchasing and provision of services is seen as a contractual one: within this framework, management contracts are the

¹⁸ Interview with Luis Bernardo Sáenz, 26 February 1998.

¹⁹ In a quasi-market determined by a contract between a purchaser and suppliers, prices are not set by the interaction of supply and demand and are therefore not free market prices but rather negotiated or managed prices. With regard to demand, the final consumers do not influence the price, which has been regulated by a government agency. The budgetary limit of that

agency, which determines the level of prices that it can offer, is fixed by the government. With regard to supply, in order for the quasi-market to be efficient it is essential that the corresponding suppliers should also be subject to budgetary limits (Bartlett and Le Grand, 1993, pp. 23-24).

²⁰ The main source for the description of the proposed model is CCSS, Proyecto de Modernización, 1997a.

instruments which make it possible to specify health objectives and fix production agreements with each supplier centre, in order to allocate and transfer resources as a function of the latter's performance and fulfillment of goals. In view of this, it was decided that the objectives must be realistic and that the instrument used to achieve them must be adaptable to changing needs and institutional development.

In order to move the central consideration of the management culture from expenditure to cost, it is essential to identify every type of assistance provided to users, both as regards the financier-purchaser relation with the hospital and as regards the exchange of services among the various supplier centers of the CCSS. As we will see, this aspect is taken into account in the contracts.

The financing of hospitals and the primary health attention level through a budget based on output, which provides for a maximum amount of resources and a predetermined quantity of services, is reflected in the management contract, which lays down the amount and type of activities which must be carried out

The financing model lays down a variable budgetary component which makes it possible to penalize non-fulfillment of goals, as the availability of resources depends on the objectives and goals. This component amounts to 10% of the total budget and is divided equally into two funds:

i) the incentives fund, whose resources can be returned to the supplier in order to permit more flexible investment in items that will improve the quality of the services provided and to make it possible to finance monetary and non-monetary incentives for staff members, such as training, improvement and maintenance of physical plant, acquisition of minor equipment, maintenance of equipment, etc. This fund could be increased with the savings generated by management of the production budget, provided these do not run counter to the established objectives and that they do not exceed 80% of the total savings achieved; and

ii) the solidary compensation fund, which provides a margin of protection or compensation against unforeseen events in budgetary execution, such as output which exceeds the planned level or cost increases.

The introduction of management contracts is envisaged as a gradual process, in view of the limited management capacity of the various suppliers and of

the purchaser. In order to achieve greater management capacity, more use should be made of professionals specializing in these activities and of an approach based on the execution of hybrid tasks by doctors, combining a clinical and preventive view in the field of health with knowledge of resource management.

The need for graduality also fits in with the desire to secure a parallel improvement in information systems, since the shortcomings in this area are very great: at the beginning, there was a lack of basic data—such as those on the number of persons attended in each primary level centre and their breakdown by age and sex—both at the level of the local management staff of the centres and at the central level.

2. Specifications for the primary level of attention

The objectives set must be realistic and must be in keeping with the health needs of the population in each Health Area at three levels: the budgetary level, that of the health objectives, and that of user satisfaction.

The model provides for three phases of innovation in financial matters. In the first of these, the resources corresponding to expenditure on staff costs plus non-personal services are allocated in accordance with the past budget, but an amount of 10% for variable allocation is introduced.

The resources available from the incentives fund and the solidary compensation fund may be allocated to the following areas, subject to fulfillment of the established commitments: minor investments in machinery and equipment, improvements in buildings, training, scholarships, repair of existing equipment, and other expenditures which improve local problem-solving capacity.

In the second phase, the principle of payment per person attended is introduced: the scales of payment are obtained by dividing the past fixed allocation by the number of inhabitants covered by the services in question. A fund is also set up for improving local problem-solving capacity, to be financed from corresponding reductions in the budgets of the hospitals and to be allocated to primary attention in accordance with its capacity to attract clients and reduce use of the hospitals.

In the third phase, the principle of payment on a per capita basis will be adjusted by the relevant infant

TABLE 2
Costa Rica: Values of HPUs, 1997

Relative scale of value for hospitals, by type of activity	Equivalence in Hospital Production Units (HPUs)
1 stay in hospital	1
1 case of emergency attention	0.35
First visit to a specialist	0.40
First visit to other medical staff	0.25
Subsequent visit to a specialist	0.2
Subsequent visit to other medical staff	0.1
Visit to a dentist	0.1
Visit to non-medical staff	0.05

Source: CCSS.

mortality rates, breakdowns by age and sex, and the corresponding patterns of use of the services. In order to strengthen the system of referrals, the primary level will then receive the resources previously allocated for "first visits" to hospital outpatient departments, while the hospitals will bill the primary attention centres for the patients the latter refer to them.

3. Specifications for the secondary and tertiary levels of attention

Management contracts are an instrument which must make it possible to link activities with resources and lay down each hospital's objectives, responsibilities and incentives. In the case of the solidary compensation fund, the resources which are not used will be allocated to a technological renovation programme.

Hospital performance indicators are organized around three groups of objectives: i) those connected with organization, such as recording the referrals made by the primary sector or developing a centralized system for handling waiting lists; ii) those connected with medical matters or specific programmes, designed to solve problems such as reducing waiting lists or reducing the rate of caesareans, and iii) those connected with matters of quality, which are designed to improve the attention provided for users and their level of satisfaction.

In the first phase of financing by output, the overall activities of the hospital are broken down into four areas: hospitalization; ambulatory attention in specialized and non-specialized clinics; emergency attention; and special programmes connected with medical attention, teaching and research. A standard

unit of output is defined for the four types of activities. This standard coefficient of equivalence is termed the "hospital production unit" (HPU) and is very closely related with the length of time spent in hospital. The activities of the different areas are grouped together and weighted in a scale of relative values (table 2) which takes account of criteria of cost, planning and productivity and is made up of the values in HPUs.

In this first stage, standard average lengths of stay in hospital are established for each type of section or department, taking into account the seriousness of the cases or the case mix. This incentive rewards hospitals with shorter average lengths of stay than the standard level and serves in general to reduce the average length of stay.

The HPU values are paid in accordance with a scale which remains invariable for the duration of the contract. The production budget is equivalent to the number of HPUs for each activity covered by the contract, multiplied by the corresponding scale of payment. Payment for activities which exceed the agreed number of HPUs will be made in accordance with their marginal cost, and their source of financing—whether savings generated by the institution in question or the solidary compensation fund—varies according to the overall relation between the production budget and the budget actually executed.

It may be noted that the production function for the 1997 contracts was calculated on the basis of 1994 data, and as a level of hospital output greater than that expected was subsequently observed, the scale was modified for the 1998 contracts.

Measurement by HPUs is acknowledged to be an imperfect method, rather insensitive to cost variations and subject to corrections. It is therefore intended to progress towards a system of payment on the basis of the combination of pathologies treated. Consequently, in a second phase the case mix of each hospital will be taken into account in fixing service standards.

In the third phase, in order to establish scales which are in keeping with the complex conditions of the hospitals, financing by HPUs will increasingly give way to the use of the case mix or diagnosis-related groups (DRGs). Subsequently, the standard lengths of hospitalization will be defined by grouping the records of discharges and the scales will be established on the basis of HPUs for discharge groups with clearly identifiable hospitalization episodes.

V

Institutional and organizational aspects of the contracts

It would be useful to think of institutions as the rules which shape and limit human interaction by defining incentives applicable to political, social or economic exchanges (North, 1993, p. 13). Paraphrasing that author (*ibid.*, pp. 116, 117 and 125), the present period in the evolution of the CCSS may be described as a situation of imbalance, in which a new institutional limitation –represented by the management contracts– has altered the traditional structure of incentives, but within the context of rules and conventions which are concomitant with it and continue to be valid, both tendencies being rooted in the action of actors who shape the process of institutional change.

Various types of incentives are therefore conflicting with each other in this transition. And as the new incentives do not possess a satisfactory feedback of information, a suitable organizational structure or effective rules, various specific actions are necessary in order to advance in the desired direction. Some of these have already been described, and in the present section we will highlight those aspects connected with organization. As the market has been described as “a grab bag of institutions, some of which increase its efficiency while others reduce it” (North, 1993), the idea of a mixture is also appropriate when visualizing a quasi-market which is in the process of generation.

Various individual objectives in the CCSS innovation process combine to form another more global objective: to change the current supply of services, which has not arisen in response to any real strategy but rather in line with the capacity of each centre to exert pressure. Among these objectives are: to distribute the resources between primary attention and hospital services in a suitable and equitable manner; to consolidate a system of referrals which ensures that services are given at the level corresponding to their degree of complexity, in order to reduce costs; to improve the quality of attention in order to raise users' satisfaction; to reduce waiting lists; to promote efficiency and equity in hospital expenditure, and to expand the use of ambulatory procedures.

The main idea of the reform is that although the CCSS has fulfilled various functions –purchaser, financier and supplier– these are not delineated in

functional, structural and management terms. The central objective is therefore to separate and specialize these functions at the internal level. Management contracts are seen as the main instrument for achieving this separation and progressing towards the main objective of the financier-purchaser: namely, to maximize the amount and quality of health services provided to the population by making proper use of the available resources.

The CCSS currently has a pyramidal and centralized structure, in which the management of investments, maintenance and normative planning is determined at the central level. The regional structures are links between the supplier centers and the central level, carry out instructions received from the centre, and aid in the directorial and management functions of the health establishments in their territorial area.

It is considered that in order to transfer the risks to the suppliers, the supply function must be transferred from the central level of the CCSS to the hospitals and Health Areas, in pursuit of greater autonomy in the use of resources and greater responsibility for the results obtained. Such decentralization would mean that the hospitals and Health Areas would assume responsibilities with regard to expenditure, goals and objectives and that the benefits of greater efficiency would likewise be gained by the centres which increase their efficiency. At least initially, it is not planned to decentralize the purchasing function because of the related transaction costs, the low viability of this approach, and uncertainty about the institutional improvements which could be achieved in this way.

It may be noted that there is great interest in decentralization in some hospitals, where it is claimed that the centralization of hospitals has not been a suitable approach, that it has led to inefficient management²¹ and that it has had adverse repercussions in negotiations with pressure groups: whereas previously each hospital negotiated with a trade union which represented only its own staff, negotiations are now at the central level.²²

²¹ Interviews with Elías Jiménez and Manrique Soto already referred to earlier.

²² Interview with Elías Jiménez already referred to earlier.

The spheres of competence of the purchaser have been linking up in practice. In order to evaluate the contracts, a special evaluation commission made up of the three management areas of the CCSS was set up and has worked smoothly with the various competent bodies. It should be emphasized that the evaluation process has been closely linked with the execution of the other components of contract implementation; that the evaluation has combined smooth and effective informal coordination within the purchasing body with a highly formal relationship with the supplier units; and that the evaluators have had very direct and prompt access to the higher authorities of the CCSS. Another positive aspect which is worth emphasizing is that the various actors involved have made good use of various opportunities, such as meetings and workshops, to negotiate, lobby and settle details of the contracts.²³

In the administrative division of the CCSS a "purchasing group" has been set up and the negotiation and evaluation components have been strengthened. Guidance of the purchasing function in terms of planning is perhaps the weakest aspect; its development should be aided by the preparation of the Health Plan, with a high degree of participation by the Ministry. The data on output generated by the biomedical information section were considered as the official source of information in this respect after the first evaluation workshop of the evaluation unit.

It may be noted that the purchasing function has developed unevenly; more progress has been made in evaluation, whereas there are more lags in the financial aspect. For example the analysis of the contrast between the output-based budget and the historical budget, which should have been carried out during the first year, did not take place, and there are lags in providing methodologies for preparing the medical attention protocols. The hospitals have complained that they lack advisory assistance and support from the central level, especially in informatics, and that the purchasing unit is slow in settling problems or requests which prevent them from fulfilling the contracts. At the same time, however, they say that they have felt well represented in the contracts.²⁴

²³ Interview with Rodrigo Bartels and Norma Ayala, 6 February 1998.

²⁴ Opinion expressed by Manrique Soto Pacheco at the interview already referred to.

As the pilot experiment progressed, the internal legal basis for the reforms was also growing stronger. At its meeting No. 7133 on 10 June 1997, the Governing Board of the CCSS approved the conceptual framework of the organizational design (box 1) for the reform of the central level, which is to be carried out with the available human resources and which, in essence, provides for the separation of functions, contractual relations through management contracts, and objectives and general guidelines already contained in the diagnosis summarized earlier.

With regard to the new organizational structure of the CCSS, the Board approved option 2B, with certain observations by the members; as shown in figures 1 and 2, the Administrative Division and the Medical Division of the CCSS are given the essential attributions, but the financing function could be better coordinated. In May 1998, however, the reassignment of personnel and tasks needed to implement the purchasing function was still pending.

Every quasi-market is generated in a given institutional and historical context which affects its evolution (Ferlie, Ashburner, Fitzgerald and Pettigrew, 1996, p. 57). In the case of the CCSS, the distinction between functions was carried out by specializing them within the CCSS itself, without making outside bodies responsible for some of them. In this quasi-market, the degree of concentration of the purchasing function is monopsonic, since no micro- or meso-purchasers are established. Unlike this monopsonic power, the supply function is deconcentrated into a considerable number of bodies belonging to the CCSS, consisting in 1997 of seven of the 29 hospitals and five of the 46 Health Areas, representing altogether over half the CCSS budget. For 1998, management contracts were negotiated with 28 health service supply centres: 10 hospitals, 14 Health Areas and 4 co-operatives.

Place of residence is the deciding factor in the allocation of users to suppliers: a system which is also designed to optimize the system of referrals and counter-referrals. There is no question, therefore, of establishing a quasi-market which gives users the possibility of choosing the area or hospital where they wish to be treated, or choosing the doctor they wish to see in the allocated area or hospital.

The purchasing and supply functions, taken together, are concentrated in the CCSS, and the fundamental means of control is the contract; it is precisely this change from hierarchical management to man-

Box 1

MAIN LINES OF THE ORGANIZATIONAL DESIGN OF THE CCSS^a

The Costa Rican Social Security Fund is a single unitary organization responsible for providing health protection, treating illnesses and providing pensions under Social Security principles.

Separation of the functions of revenue collection, financing, purchasing and supply of services.

Establishment of a relationship between the financing/purchasing level and the provision of services, based on the fulfillment of management contracts.

Empowerment of units to assume their own management with due authority and responsibility.

Development of a form of organization oriented towards results, user satisfaction and accountability.

Coordinated management of the health service supply centres forming part of a network.

The process of organizational change will be carried out with the available human resources.

Evolution towards a culture of accountability.

Strengthening of the internal and external communication mechanisms, as a means of heightening awareness and publicizing the process of change.

Use of the information systems as key elements in management planning and control.

The new form of organization will facilitate social participation.

Participation of the CCSS staff in the process.

Incentives for productivity and quality.

^a Approved at meeting No. 7133 of the Governing Board, June 1997.

agement by contracts which forms the essence of this quasi-market and, in turn, gives rise to changes in, for example, the systems of information and costs. This quasi-market is inward-oriented and is highly regulated internally by the purchaser, since the central level has powers of regulation, establishment of rules, and appointment of staff to key posts.

Because of the staff recruitment conditions and the rules which exist on conditions of service and employment stability, the central purchasing authority and the supplier units themselves are still subject to many restrictions. The purchasing of goods and services has been deconcentrated, however, and some Health Areas are allowed to make purchases from third parties: a measure whose efficiency and efficacy has not yet been fully evaluated.

The process also affects the formal and informal power relations within the units supplying services. In the case of the hospitals, this occurs in a context where the traditional autonomy of the staff has even

led to problems of internal governance in some cases. In the national hospitals there are also some party political niches which impede joint organizational work.²⁵ In this context, the directors see the contracts as a means for pressuring the hospitals to raise their performance.²⁶ It is not easy, however, to transfer the responsibilities of the contract to the heads of medical departments, because of the rapidity of the changes, the limited existing management capacity, and the effect of resistance on the part of the staff. A task which is still outstanding in this respect is to strengthen the hospital directors *vis-à-vis* their departmental heads.²⁷

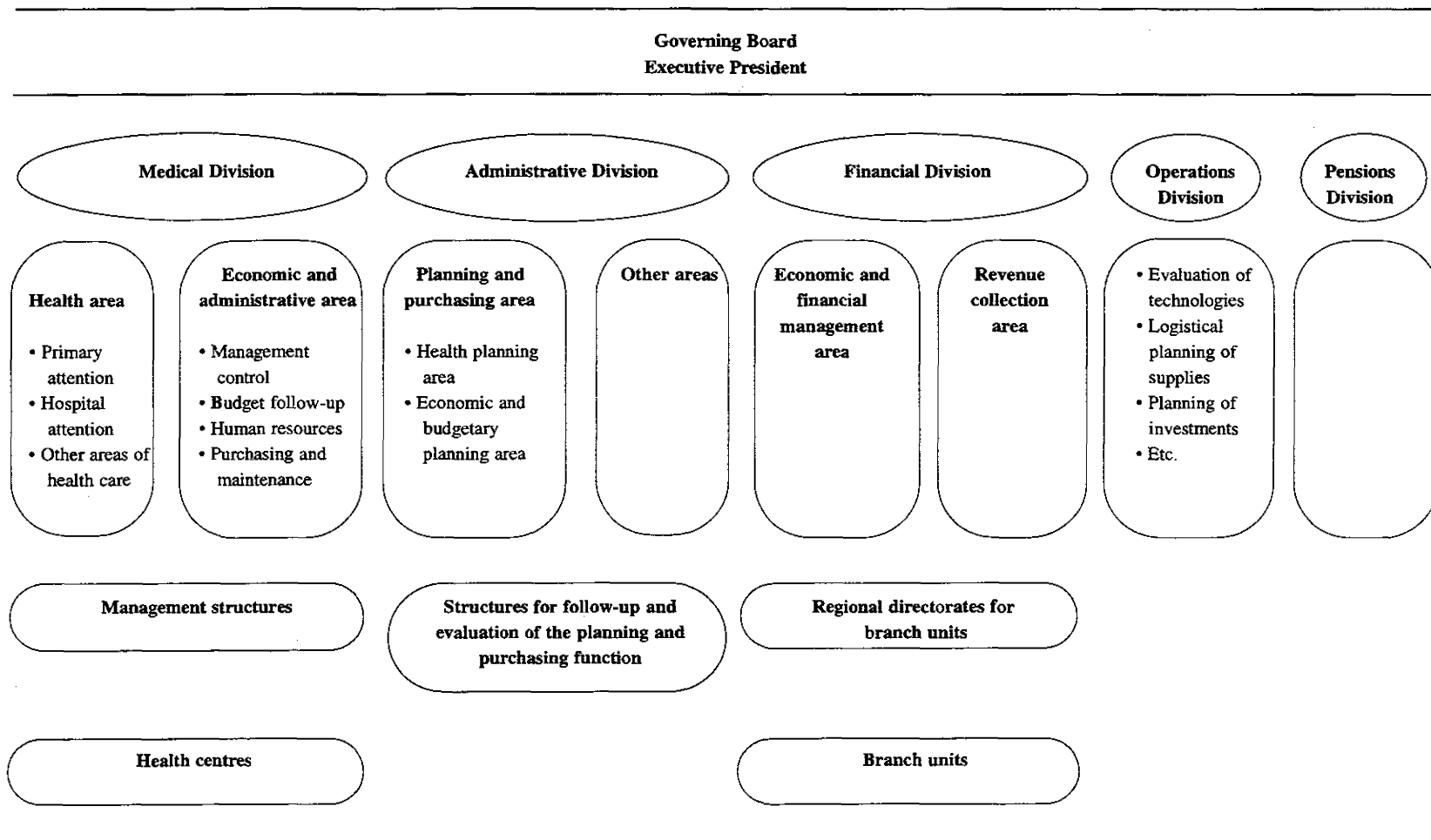
²⁵ A point raised in the joint interview with Cercone, Ayala, Bartels and León already mentioned earlier.

²⁶ Interview with Manrique Soto already mentioned earlier.

²⁷ Interview with L.B. Sáenz on 26 February 1998.

FIGURE 1

**Costa Rican Social Security Fund (CCSS):
Product-oriented joint functional organizational structure**



Source: Andersen Consulting/Consorcio Hospitalari de Catalunya, by courtesy of the Costa Rican Social Security Fund.

FIGURE 2

Costa Rican Social Security Fund (CCSS): Product-oriented joint functional organizational structure
(Basic areas of responsibility)

	Planning of health services	Purchase of health services	Management/administration of health service suppliers
Administrative Division (includes planning and purchasing area)	<ul style="list-style-type: none"> • Definition of health care models • Strategic planning by health objectives (detection and ranking of health needs) • Budget preparation • Evaluation of health results • Catalogue of health services and content of services provided • Institutional control of registration of population covered • Determination and distribution of economic resources by territorial areas, population, type of service and levels of health care • Planning of opening of new health centres, hospitals, etc. • Organizational development • Communication of process of change 	<ul style="list-style-type: none"> • Accreditation of suppliers • Services purchasing portfolio • Determination and distribution of economic resources by territorial areas, population, type of service and levels of health care • Preparation of contracts • Establishment of guidelines for budget follow-up • Control of flows of patients and waiting lists • Follow-up and evaluation of contracts and of degree of satisfaction with services • Management of economic and budgetary flows, both internal and with suppliers • Billing for services • Attention to users 	
Medical Division	<ul style="list-style-type: none"> • Strategic planning of suppliers • Evaluation and advisory assistance on policies for maintenance of centres • Evaluation of proposals for new technological investment • Formulation of policies for purchasing, storage and distribution of supplies • Planning of management of human resources of suppliers • Establishment of guidelines and training needs for health personnel, doctors and specialists • Planning of training of health personnel 		<ul style="list-style-type: none"> • Selection and termination of managers of supplier centres • Control of management of supplier centres • Periodical analysis, in conjunction with the responsible officials of the management structures, of the degree of fulfillment of the contracts and the necessary corrective policies • Coordination and management of health facilities • Technical support for the preparation of the strategic plans of the operational levels • Technical support for internal organization and administration of the centres • Technical support for the financial management of the centres • Human resources management • Management of purchases and maintenance • Management of clinical and administrative information systems • Organization and execution of training programmes
Operations Division	<ul style="list-style-type: none"> • Direction and technical coordination of investments • Establishment of standards of quality, services and health • Evaluation and authorization of health technologies and equipment • Planning of corporate information systems 		

Source: Andersen Consulting/Consorci Hospitalari de Catalunya, by courtesy of the Costa Rican Social Security Fund.

In Chile, too, efforts are being made to advance in the separation of functions with management contracts. In this respect, the special features of the Chilean health system and the management reforms have given the National Health Fund (FONASA) an important role which has expanded its functions from those of being only a health insurance fund to the assumption of purchasing functions within the Ministry of Health system.

In Chile, the aim is to concentrate the function of providing services in the area Health Services and in the hospitals and municipalities linked with them and to take away this function from the Ministry itself: indeed, the continued existence of the Ministry of Health's function as a supplier of services has been mentioned as a serious obstacle in the restructuring of the health system.²⁸ In the context that concerns us, this has led to an atomized structure of contracts and of their evaluation. Thus, at the beginning the management contracts were prepared on the basis of proposals by the various units of the Ministry, which also retained their authority in relation with those areas of the contract, so that the corresponding indicators were analysed separately and finally the analysis was integrated in a purely formal manner. For the same reason, the area Health Services had to negotiate the contracts with various organs of the Ministry, termed "special units", which were reduced in 1996 to two –one for the Ministry and one for FONASA– and since 1997 to only one, since when the analysis of the contracts is also carried out in a coordinated manner.²⁹

It is worth noting that various political decisions which affect the management contracts mean that they are not, of themselves, a guarantee of governance within the health system: a crucial requirement for such governance is to strengthen the incentives and regulations with regard to entry into and continued presence in the system. A notable example in the Chilean experience is the case of a director of a department who flatly refused to sign a contract: efforts were made to persuade him to do so, but there was never any question of his dismissal.³⁰

²⁸ Interview with César Oyarzo, former Director of FONASA, 22 August 1997.

²⁹ Interview with Pedro Croco, Director of the Management Unit of the Ministry of Health, 3 September 1997.

³⁰ Interview with César Oyarzo already referred to earlier.

It could be said that the management reforms in the Costa Rican and Chilean health systems have been carried out from the top down, since in both cases the initiative came from the central authorities: the central level of the CCSS, and the Ministry of Health and FONASA, respectively. In both cases, however, the evaluations of the results show the importance of negotiation: the results are better when the contracts are the result of strong rather than weak negotiation, that is to say, when the special local features and preferences are at least reflected in the negotiation of the targets.

The degree of autonomy in the management of resources by the agencies of the CCSS, whether they be hospitals or Health Areas, is still limited; strictly speaking, what has happened is that the past budgets have been adopted and production functions have been prepared on the basis of 1994 data. However, it is planned to relax controls on inputs, that is to say, to relax the restrictions on the use of resources and their allocation to specific areas of expenditure: the contracts contain a clause which simplifies the procedure required for making internal budgetary changes. Traditionally, such changes had to be approved by the Governing Board of the CCSS, subject to the authorization of the Comptroller-General of the Republic, which prevented any prompt response to needs.

The institutional morphology of the health sector in Costa Rica favours broad autonomy of suppliers in the use of resources, subject to measures to ensure efficiency and efficacy, because the resources do not come from some central body, such as the Ministry of Finance, but are in the hands of the institution itself and come from the tripartite payment of contributions. What is involved is essentially to decentralize the principal-agent relationship within the CCSS itself. In the case of Chile, this complexity is compounded by the rigidity of the centralized national budgetary system, in spite of some sectoral initiatives designed to facilitate the use of resources and bring in some flexibility by experimenting to some extent with diagnosis-related payments and with payment on a per capita basis (Sojo, 1996c, p. 144).

In Costa Rica, both in the Health Areas and in the hospitals, the level and degree of involvement of the officials engaged in the processes leading up to the preparation of the management contracts and their periodical evaluation have been extremely heterogeneous.

In the CCSS, various processes of negotiation have taken place. Thus, for example, meetings were

held with clinical groups to define the terminology, criteria, variables, categories and other aspects connected with hospital service production, such as the definition of the major ambulatory surgery programme, first visits by patients to specialists, special ambulatory procedures, treatment involving observation in emergency services, and the redefinition and relocation of the "day medicine" category and problems of standards in gynecology and obstetrics.

Subject to the corresponding limitations—since each body providing services has its own special features—the CCSS management contracts open up the way for the establishment of benchmarking of processes and results between Health Areas, on the one hand, and between hospitals on the other. In the areas where the contracts display continuity year by year,

obviously the different results obtained in the contracts should make it possible for individual suppliers to establish benchmarks among themselves (even though they will not be fully comparable), for modifying the measurements of performance and making individual goals and objectives more specific or stricter, according to the progress made. The inclusion of clinics run by cooperatives will also be interesting for judging their specific performance and comparing it with that of clinics which belong to the CCSS.

In the medium term, the experience with contracts should make it possible to draw lessons regarding better management practices which may usefully be applied on a more general scale for the reform of the State.

VI

The 1997 management contracts³¹

As we have seen, the change from hierarchical management to contract-based management is the main element in the construction of this quasi-market. Consequently, management contracts are suitable elements for reflecting the fundamental features of this reform, which must be considered in all its many dimensions. In the previous section we analysed some organizational aspects connected with the establishment of contracts; in the following paragraphs we will give a detailed description of some features of these instruments and the results of their first year of application.

1. An overview

In Chile, the management contracts are established between the central level and the area Health Services (tables 3,4 and 5). Because of the way the suppliers are made up, these bodies establish relationships with the public hospitals and the municipalities and promote the signing of contracts with them. Although the indicators of the Chilean management contracts cover all three levels of attention there is greater emphasis on primary and preventive attention.

In Costa Rica, the CCSS management contracts (tables 6 and 7) are specifically for the Health Areas and for the secondary and tertiary levels of attention.

The contracts (both with the Health Areas and with the hospitals) were initially established from 1 January 1997 to 30 June of the same year and were subsequently renewed up to 31 December 1997. The good level of fulfillment displayed by the Health Areas led to the establishment of new goals and objectives when their contracts were renewed for the second half year, whereas the delays of the hospitals in fulfilling their commitments (except in the case of the Children's Hospital) caused the deadline for fulfilling the initially agreed goals and objectives to be extended to 31 December.

Within the different varieties of the so-called new public management, a distinction may be drawn between models in which the processes are just as important as the organizational results, and others which are centered more closely on the tasks to be carried out (Ferlie, Ashburner, Fitzgerald and Pettigrew, 1996, p. 14). The measurement of the fulfillment of the CCSS contracts clearly takes the broader view, which goes beyond the mere use of indicators

³¹ The empirical bases for the analysis and interpretation presented in this section were the protocols of the CCSS management contracts and their six-monthly and yearly evaluations, and the protocols of the management contracts of the Ministry of Health of Chile and their annual evaluations.

TABLE 3

Chile: Management contracts with the area Health Services, 1995

Indicators	Emphasis on health objectives	Emphasis on management and quality
Formulation of a health plan for 1996	x	x
Coverage of preventive health examinations for the working population	x	
Perinatal mortality rate	x	
Number of communes with vaccination coverage under 90%	x	
Number of specific buco-dental preventive health activities carried out in the total for children of 0-5 and 6-9 years of age	x	
Incidence of malnutrition among the child population	x	
Instances of internal or community participation and intersectoral cooperation in functioning of Health Services and establishments as at the end of 1995		x
Operating theatre hours used/operating theatre hours available	x	x

Source: Official documents.

of efficiency or efficacy, although obviously these are used too.

Thus, in the broad range of components of the CCSS management contracts—including their so-called additional clauses—there are the aims of introducing or improving certain information systems, making processes which had not been functioning properly work and optimizing those which had not been working well, or developing new processes which make it possible to gain a fuller knowledge of the provision of services, put them on a systematic basis, and clarify specific aspects of their efficacy. An analysis of the indicators relating to these aspects shows their great importance both in the Health Areas and in the hospitals, at least in quantitative terms.

Some components, such as the clinical protocols, can help in themselves to further the institutional restructuring, since they involve corresponding changes in working processes. These complementary aspects of the contracts would therefore appear to be at least as important as increases in the indexes of activity and results in the field of health, which are aspects that are obviously also reflected, for example, in the objectives of reducing waiting lists.

Introducing clinical protocols involves technical requirements and agreements on how to record the procedures, with a view to their standardization. In political terms, this has been a complex task which has met with resistance on the part of doctors³² or has caused doctors to associate the protocols in their

minds with clinical training and progress towards excellence, rather than appreciating their importance for management. The central level has not yet established methodologies for the preparation of protocols, as was planned, but has embarked upon the study of this matter.³³

The organizational processes have not been given such an important role in the case of Chile, where the contracts do in fact display some weaknesses in terms of the integration of management aspects in the strict sense. In 1995, the indicators in the contracts which were of a strictly management-oriented nature were few in number. Although they were given greater prominence in the following two years, in 1997 the main emphasis was still on the execution of particular health actions connected with indexes of activity (tables 4, 5 and 6); in terms of management, the main items that were noteworthy in 1997 were the activities connected with the reduction of waiting lists. The improvement of records as a means of strengthening management capacity has not been taken into account in these contracts.

In Chile, progress has been made in improving the health indicators of the management contracts, which were very weak to start with, and in linking up with ministerial and governmental objectives, especially since 1998. In this respect, over the course of time the goals and objectives have gradually been made more precise and clearly structured. Their execution, however, which strictly speaking forms the

³² Interview with Manrique Soto, already referred to earlier.

³³ Interview with L.B. Sáenz, already referred to earlier.

TABLE 4

Chile: Management contracts with the area Health Services, 1996
(Indicators of activity, by areas)

Health management	Organizational development and management of service	Quality of attention
Coverage of immunization programme	Health plan	Quality management
Implementation of plan of action for attention to the integral psycho-social development of children under six	Diagnosis of efficiency of specialist clinics	Reduction of intra-hospital infections
Coverage of the preventive health examinations for adults	Efficiency in use of operating theatres	Index of cesareans as a proportion of deliveries in type I and II hospitals
Medico-social evaluation of the elderly	Budgetary management of investments	
Design and implementation of a plan of work to prevent adolescent pregnancies in the poorest communes	Operational results	
Coverage of Papanicolau tests for female beneficiaries between 25 and 64	Maintenance plan	
Detection of cases of tuberculosis	Use of equipment and infrastructure	
Perinatal mortality	Reduction of levels of absenteeism on account of sick leave Measurement of expenditure on remunerations Participative management: Support for municipal management Internal participation in regular organs Social participation	

Source: Official documents.

core of management, has basically been left to the free choice of the area Health Services, since this aspect has not been fully incorporated into the contracts and in the present conditions the monitoring of its progress might be viewed by the Directors of the Services as undue interference. Discussions on health in the country have fundamentally revolved around the policy lines and only marginally around the question of management; when certain adjustments are agreed with the Directors of the Services in order to solve financing problems (generally connected with remuneration), no effort is made to take advantage of the agreed adjustment to request measures at the management level whose fulfillment can actually be verified.³⁴

³⁴ This aspect of the contracts was noted by Rony Lenz, the Director of FONASA, in an interview on 26 May 1998. His references to the weakness of the contracts in terms of management was in response to our critical opinions on this matter, with which he fully agreed.

In Chile, the introduction of diagnosis-related payment has come up against some limitations. This form of financing has not taken the place of the traditional allocation by budget, but has been introduced in a parallel manner on an experimental basis. It was introduced with a high degree of participation at the hospital level, and was therefore not seen as a threat, but it collapsed when an attempt was made to apply it generally, because the diversity of initial conditions and information made it inviable. Its use has therefore been concentrated on specific items such as complex treatments and the timeliness of attention, but even so some progress has been made, because the idea of a "package" of services is no longer a concept that gives rise to resistance, and the authorities no longer think solely in terms of isolated services.³⁵ Experiences like this highlight the need to

³⁵ These developments with regard to diagnosis-related payments were mentioned to us by Rony Lenz at the interview referred to above.

TABLE 5

Chile: Lines of emphasis and indicators of management contracts with the area Health Services, 1997

Field of management	Indicators	Emphasis on health objectives	Emphasis on management and quality
Programme management	Promotion projects	x	
	Coverage of adult preventive health examinations	x	
	Preventive dental attention for children	x	
	Detection of tuberculosis cases	x	
	Coverage of Papanicolau testing	x	
	Chronic medication under primary health attention	x	
	High blood pressure	x	
	Pattern of accreditation of primary health attention	x	
User-oriented management	Monthly average number of hours contracted for heads of basic programmes	x	
	Modernization projects (article 10 of the protocol)		x
	Programme on timeliness of attention (article 11 of the protocol)		x
	Rights of beneficiaries under Law No. 18.469 (article 12 of the protocol)		x
	Reduction of waiting time		x
	Percentage of hospitals with daily visits		x
	Percentage of hospitals with parental care of hospitalized children		x
	Percentage of hospitals with facilities for care of terminal patients		x
Participative management	Percentage of hospitals where the father can be present at delivery		x
	Development Committee		x
	Billing of health services (article 13 of the protocol)		x
	Indebtedness		x
Human resources management	Operating results		x
	Absenteeism for sick leave		x
Hospital management	Performance as a function of expenditure on remunerations		x
	Management contracts between the area Health Services and the establishments under their jurisdiction (article 7 of the protocol)		x
Environmental management	Use of operating theatre		x
	Biological and environmental monitoring of enterprises subject to such control (implementation of D.S. 745)	x	
	Water quality	x	
	Food poisoning	x	

Source: Chile, Ministry of Health (1997b). The fields in question are defined in the contracts.

consolidate the management area in the modernization of the Chilean health sector, either through contracts with the area Health Services, or in other ways. In the area of diagnosis-related payments, progress could be made from the point of view of management with the support of processes such as the application of clinical protocols.

The CCSS contracts, for their part, establish information systems at a number of levels which should make it possible for both the financier-purchaser and the supplier to know how services are actually being provided and to have the necessary items of information to make a diagnosis on the efficiency and effi-

cacy of resource use, to modify the corresponding processes of management and services, and to prepare some indicators of efficiency and efficacy. This range of objectives is behind a number of the additional clauses in the CCSS contracts, in which the development of reliable records on activities, costs and quality occupies a leading place.

Outstanding examples in these terms are the attention and treatment protocols, which should make it possible to gain a knowledge of the processes involved in clinical management; this area has traditionally been a "black box" in which doctors acted without any restrictions. The protocols make it possi-

ble to modify this degree of autonomy in working practices and should make it possible to scrutinize the way services are provided in order to determine their technical, clinical and management efficiency; to individualize the processes involved in order to progress towards the establishment of cost centres for services provided and begin the application of a system of payment by diagnosis-related groups; to define the responsibilities of staff members and teams in the provision of services, in order to improve quality and verify performance, and finally, to make adjustments in clinical behaviour.

Mention has been made in this respect, for example, of the need to formalize operational guidelines and procedures through protocols, in order to ensure continuity of attention to individual patients, seen as entities who exist over time and have morbidity histories which do not consist of discrete episodes of sickness and should not be dealt with through occasional and fragmentary meetings with different professionals. The "organizational principle" is a form of management of sickness which improves the continuity of attention and reduces the use of unsuitable treatments: it is considered that every illness has a life cycle and an economic structure, and the use of protocols of attention is aimed at forestalling expensive episodes of specific diseases, such as diabetes, and improving the quality of the attention given by making the patient the centre of the process (Bengoa, 1997, pp. 37 and 38).

The CCSS contracts incorporate elements designed to improve the organization of the health system and the provision of services, particularly as regards the interaction of the three levels of attention in the system of referrals and counter-referrals: the system of referrals is strengthened by rewarding the capacity of the Health Areas to settle their own problems and reduce the number of referrals, while as regards the hospitals, the system of referrals is regulated and, in some cases, specific mention is made of a hospital network which needs to be consolidated. This would have positive effects on the efficacy and efficiency, coverage and quality of attention (for example, treating diabetic patients whose condition is now stable at less complex levels).

In the Health Areas, the contracts are designed to encourage preventive and health promotion actions at the primary level, which will make it possible in the medium and long term to reduce morbidity and mortality and consolidate desirable health conditions

through suitable pre-natal attention; by following up children's development; through early detection of illnesses such as cervical cancer, and through the detection and control of priority chronic diseases such as diabetes and high blood pressure. For the Health Areas, integral standards of attention were prepared for the primary level which form the frame of reference for evaluating its performance.

The consolidation of the system of referrals, with its beneficial effects in terms of the gradual reduction of waiting lines in outpatient and speciality clinics, also depends on advances in other areas of reform of the health sector: namely, the consolidation of the Basic Integral Health Attention Teams.³⁶

Interest has recently been displayed in Chile, too, in optimizing the system of the supply of services through the use of management contracts, since previously the links were only between the central level and the individual Health Services. To this end, FONASA has become an intermediary between the area Health Services, which have been reorganized into five zones each covering several such Services, in order to link together the network in the regions. Special "regional units" have been set up to follow up the contracts.³⁷

Improvement of the quality of attention, seen as an ongoing process, occupies an important place in the CCSS contracts. The measurement of quality is reflected in indicators concerning the efficacy of medical treatments (complications in patients' health, evolution and causes of mortality, etc.) or in procedures for ensuring proper use of medicines, improving individual health records or controlling intra-hospital infections (tables 6 and 7). The concern to raise the levels of quality is also behind measures connected with the timeliness of attention and access to it (reduction of waiting lists, solution of emergencies, and improvement of the efficiency of support services such as pharmacies). In the area of quality, the contracts include measures designed to identify staff processes and responsibilities, such as protocols for washing hands in hospitals. The underlying idea is that the achievement of higher quality can be detected and measured in the processes conditioning it.

³⁶ For a detailed analysis on these teams, see Costa Rica, MIDEPLAN, 1998, pp. 195-200.

³⁷ Interview with Rony Lenz, already referred to earlier.

TABLE 6

Costa Rica: Management contracts between the Costa Rican Social Security Fund (CCSS) and the hospitals, 1997

Fields	Indicators of information system and processes	Indicators of efficiency	Indicators of efficacy	Objectives	Related activities
External consultations	<p>Centralized system of appointments for admission (automated or manual)</p> <p>Centralized machinery for waiting lists for specialities (automated or manual)</p> <p>Records of diagnoses and treatments made by each service</p> <p>System of records of pathologies</p> <p>Records of procedures</p>	<p>Rate of occupation of external consultations</p> <p>Situation with regard to waiting lists</p>	<p>Mortality rate of patients treated in multidisciplinary clinics</p>	<p>Reduction of waiting lists, fixing a desired percentage and establishing maximum waiting times</p>	
Hospital services	<p>New hospital discharge sheet</p> <p>Records of readmissions</p> <p>Monthly records of rate of cancellation of planned surgical operations, with reasons</p> <p>Records of obstetric attention</p> <p>Records of activities</p> <p>Protocol for washing hands in all departments</p> <p>Protocol for detection and control of intra-hospital carriers of infectious diseases</p> <p>Records of obstetric and pediatric attention and complications in such attention</p>	<p>Waiting times for surgical operations and related tests, with indicators of delay</p> <p>Bed turnover (over 60)</p> <p>Lengths of stay in multidisciplinary clinics</p>	<p>Rate of readmissions, by pathologies and departments</p> <p>Mortality rate of children</p> <p>Complications in mother and child area</p> <p>Complications in different patients in multidisciplinary clinics</p> <p>Mortality rate of patients treated in multidisciplinary clinics</p> <p>Rate of cancellation of planned surgical operations</p> <p>Rate of post-delivery and post-cesarean complications</p>	<p>Prevention and control of intra-hospital infections</p> <p>Quantitative and qualitative analysis of complications in the mother and child health area, by pathology, age and period</p>	<p>Designation of staff to be responsible for coordination of the respective activities</p> <p>Training in prevention and control of intra-hospital infections</p> <p>Detection and control of intra-hospital carriers of infectious diseases</p>
System of referrals	<p>Records of referrals from the primary and secondary levels and areas of attraction, in order to identify patients. Records include territorial location, reasons, or diagnosis for the referrals</p> <p>Validity of systems of referrals and counter-referrals</p> <p>Tripartite report (by the "Grecia", "Monseñor Sanabria" and "México" hospitals) to the Financier-Purchaser on pathologies which must be dealt with at other levels of the system</p>				

TABLE 6 (concluded)

Fields	Indicators of information system and processes	Indicators of efficiency	Indicators of efficacy	Objectives	Related activities
Human Resources	Records of number of days of sick leave by CCSS staff and by the population in general			Introduction of a system of control and evaluation of amount of sick leave Reduction of number of days of sick leave (%) Percentage of upper management staff trained in management	
Quality and attention to users	Surveys of degree of satisfaction of outside users Receipt of written complaints made by users, with a maximum response time of 10 days			Qualitative analysis of users' complaints	Establishment of a user-oriented programme of continuous improvement of attention
Support services	Records of issue of medicines Report on use of medicines			Suitable times of issue Proper use of medicines	Programmes of instruction of patients Systems to avoid over-issue of medicines Consolidation of "satellite" pharmacies
Clinical attention	Protocols of attention Protocols of treatment				Establishment of committees on protocols of attention and treatment Preparation of reports on protocols of activities

Source: Prepared and classified by the author on the basis of official documents.

TABLE 7

Costa Rica: Management contracts between the Costa Rican Social Security Fund (CCSS) and the Health Areas, 1997

Field	Indicators of information system and processes	Indicators of efficacy	Related activities
Activities effected	<p>Coverage of consultation: first-time consultations/registered population</p> <p>Concentration of consultations: first-time consultations/total consultations in the period</p> <p>Emergency treatments per inhabitant: number of emergency treatments/total number of inhabitants</p> <p>Emergency ratio: total number of emergencies dealt with/total number of consultations</p> <p>Records of daily workload of vaccinations</p>		
Profile of beneficiaries	<p>Updated population pyramid</p> <p>Updated analysis of health situation</p> <p>Updated family profile of population</p> <p>Percentage of dwellings, by risk: number of dwellings by risk/total number of dwellings</p> <p>Concentration of home visits by risk: number of home visits by risk/number of dwellings by risk</p> <p>Nutritional state of children under 6, based on weight/age table</p> <p>Insured status, on the basis of family status card</p>		
Access of the registered population	<p>Plan for promotion of healthy lifestyles</p> <p>Plan for control and treatment of at least two prevalent transmissible disease problems: malaria and AIDS</p> <p>Objectives by programmes:</p> <p>a) Children</p> <p>Coverage of growth and development of children from 0 to 6 years of age</p> <p>Vaccination coverage (basic scheme)</p> <p>b) Adolescents</p> <p>Coverage of sexual and reproductive health counselling</p> <p>c) Women</p> <p>Coverage of prenatal attention in the period (includes controls outside the area of attraction)</p> <p>Registration of pregnant women, with or without controls</p> <p>Coverage of detection of cervical cancer, by age groups</p> <p>d) Adults</p> <p>Number of persons with high blood pressure identified in supplier unit</p> <p>Coverage of persons with high blood pressure identified in controls</p> <p>Number of diabetics identified</p> <p>Coverage of diabetics in controls</p> <p>e) The elderly</p> <p>Coverage of persons classified as being at risk</p>		

TABLE 7 (concluded)

Field	Indicators of information system and processes	Indicators of efficacy	Related activities
Strengthening of system of referrals	<p>Fulfillment of referrals to a given hospital</p> <p>Preparation of proposals on the interlinking of health establishments and levels of attention</p> <p>Coordination with other actors in the area in pursuit of integral attention</p> <p>Receipt of counter-referrals from the area</p> <p>Recording of cases referred to other levels of attention</p> <p>Activities generated by the Health Area at the following levels of attention:</p> <p>Records of requests for X-rays</p> <p>Records of requests for laboratory tests</p> <p>Records of prescriptions requested</p>	<p>Solution of emergencies:</p> <p>total number of emergencies referred to another level of attention/total number of emergencies attended</p> <p>Percentage of referrals:</p> <p>total number of referrals/total number of consultations</p>	
Clinical attention	<p>Individual health records</p> <p>Complete clinical history and physical examination, with identification sheet</p> <p>Records of attention given to patient (clinical records in health or other record)</p>		<p>A continuous quality improvement team which analyses and initiates a plan for providing solutions in at least two critical areas of health services</p> <p>A commission to analyse deaths of mothers or children and investigate each case</p> <p>A mechanism to control the quality of the individual health records, with at least the following requisites: existence of a responsible person or group and evaluation of at least one representative sample of health records during the period of the contract</p>
Quality and attention to users		<p>A system for receiving users' complaints and suggestions</p>	<p>A readily accessible place for the reception of complaints and suggestions; existence of a staff member or group to deal with, answer and settle complaints; generation of a list of leading problems and plans for solving them</p> <p>Application of the instrument on user satisfaction put forward by the financier-purchaser</p> <p>Information for users on the services provided by the centre</p>
Human resources	<p>Updated records of the staff, by categories</p> <p>Records of staff sick leave, by categories</p>		
Strengthening of cost centres	<p>Gradual development of accounting records different from those traditionally used, with the advisory assistance of the financier-purchaser</p> <p>Timely submission of financial and accounting data</p>		

Source: Prepared and classified by the author on the basis of official documents.

To paraphrase Hirschman, since this reform cannot be based on the danger that the client may "walk out of the shop", the "users' voice" is taken as the source of feedback. In order to secure this feedback, systems are established which make it possible to determine both the main faults observed in clinical attention and the degree of satisfaction of users, and procedures for dealing with complaints are laid down.

The concern to find out the opinions of users also led to the execution in 1997 of an "Opinion Survey on the CCSS Health Services" which examined the services provided by that organization in each region of the country (EYMSA, Statistics and Marketing, 1997). On a scale from 1 to 10, the services received an average rating of 8.2, which was considered good. The service with the best rating was hospitalization, with an average of 8.6, and second place was occupied by the Basic Integral Health Attention Teams, with an average of 8.4; both the medical and the para-medical staff were also given good ratings.

The survey brought out some common bottlenecks, however: the aspects considered to represent a serious situation in very varied areas of the country, with ratings of less than 7 points—issue of appointments, hours of attention, rapidity of attention, time needed for the supply of medicines—mainly concern the timeliness of attention, and the ratings are lowest with regard to support services. The survey did not include any questions providing indications of the efficacy of the services provided, such as complications in recovery from sickness.

The contracts in Chile and Costa Rica share some common objectives, such as the reduction of waiting lists for specialist attention, better use of installed capacity—for example, of operating theatres—and reduction of absenteeism among doctors. Significantly reducing such absenteeism is one of the most difficult objectives to achieve, however, if the means used is exclusively or primarily the management contracts, without any substantial changes in forms of hiring and remuneration of staff (Sojo, 1996c).

Thus, the reduction in rates of absenteeism for sick leave in Chile in 1996—the first year in which contracts were used—was only significant in some of the area Health Services; in other Services the rates even rose. The next year the same thing happened, and the reductions were only of a minor level, as was to be expected; furthermore, the reductions have not always been maintained in the individual services.

Finally, it is worth noting that in the 1997 contracts of the CCSS the Single Incentive Fund was al-

most inoperative in the case of hospitals, since no provision had been made for the necessary separation of funds; in 1998, however, this separation was effected, and as from January 0.5% of the budget was set aside for this purpose, in order to reach a total of 10% in the year. The Health Areas, in contrast, did receive between 2% and 4% from the incentives fund in 1997.³⁸

2. Performance of the Health Areas

The evaluation of the additional clauses of the contracts takes account of important contextual aspects of an organizational nature which help in understanding their results. Among these aspects are the nature of the staff assigned as counterparts and their attitude to change; the degree of knowledge of the heads of services and the evaluation team regarding the contracts; the forms of organization of work—for example, internal coordination of services or their atomization—and the use of information throughout the process. Big contrasts have been found in this respect: as in the case of the hospitals, there are shortcomings in the dissemination of the objectives and advances of the contracts and in the commitment of the staff to innovation. It has also been noted how important it is to appoint persons to be personally responsible for the execution of the procedures or tasks included in the contract.

With regard to organizational aspects, the evaluation notes a high degree of commitment and responsibility on the part of the support team and the members of the Basic Integral Health Attention Teams, both in the achievement of the objectives and in making proposals for their fulfillment. Progress was made in the course of the year in overcoming resistance to change, teams for ongoing quality improvement were formed and trained, all the directors and managers were trained in management matters, and healthy lifestyle programmes were implemented, aimed at the population of all the Health Areas. The evaluation considers that in order to motivate the doctors and secure their active participation there must be closer communication between the directors and the support team for the contracts.

An improvement was observed in the level of management over the year thanks to the training processes. Moreover, the strengthening of the evalu-

³⁸ Interview with Rodrigo Bartels.

ation process has enabled it to be used also as a management tool.

Naturally, some Health Areas show greater progress than others in fulfilling the contracts. However, the annual evaluation shows that all of them except one complied with the obligatory clauses. With regard to the quality clauses, their degree of fulfillment was satisfactory and this meant that there was partial compliance with the integral attention clause, whose coverage was linked with quality criteria. The records made it possible to collect and verify a great deal of information in the Health Areas, and the information system is gradually being consolidated.

The evaluation expresses some concern over the quality of the medical files, since a considerable number of shortcomings were/observed which seemed to indicate some lack of collaboration on the medical side. Even so, however, there has been progress at this level, and a noteworthy advance has been registered in the application of the established criteria and an improvement in the quality of the services provided by the Basic Integral Health Attention Teams, with the introduction of pre-consultations and an increase in preventive measures which has warranted congratulations from some communities.

With regard to quality, mechanisms have been established for the receipt of complaints and suggestions and groups responsible for investigating the cases and preparing replies have been set up; the local commissions to analyse infant mortality have continued the work already begun; the question of quality has been incorporated into the direct attention level through coverage evaluation criteria, and the recording and analysis of information has been promoted as an instrument for improving management. The teams say that they feel more consolidated as such, with common goals and concern for the quality of processes. The staff has been trained and educated in improvement of quality and attention to clients. At the same time, management weaknesses have been identified which require advisory assistance assigned by the central level.

In the same field, quality criteria were incorporated in the second half of 1997 in the services provided by the Health Areas, in accordance with the rules on integral attention for each one of the objectives of the contracts. Although it was decided not to take this aspect into account when evaluating fulfillment, very serious work was carried out on it and this made it possible to identify the weaknesses that

needed to be corrected and served as a basis for improving the 1998 contracts, which officially included criteria on service quality.³⁹

The Health Areas registered a positive response to the incentives applied during the first half of the year; this was so, for example, in the case of the Pacific Central region.

The system of record cards traditionally used at the primary level of attention in the country had not been very strictly applied in the past. As already noted, when the reform began there was a lack even of basic data such as the population attended in each primary level centre and its breakdown by age and sex. In this sense, the contracts with the Health Areas can also be useful in general for selective social policies of an individual and geographical nature, since the contracts require the individual identification of all the beneficiaries of the services provided by the Health Areas and the preparation of an economic and social profile which makes it possible to establish what the population at risk is. The cards contain information on the geographical location and characteristics of the dwelling, sanitation, and the sex, age, schooling, place of work, insurance status, vital facts, vaccination records and health situation of the persons making up the family nucleus.

3. The performance of the hospitals

In some hospitals the introduction of the contracts was preceded by administrative reform measures. With regard to the additional clauses of the contracts, the annual evaluation notes that the main achievements of the hospitals included the reduction of waiting time and waiting lists in all the centres, both in support services and in outpatient departments, emergency departments and hospitalization.

The evaluation also registers better performance as regards the provision of final services in these areas. The advances made in service to the client vary from one hospital to another, but they cover a broad spectrum: internal remodelling of waiting rooms for internal and external users; talks directed to internal users on matters related with the quality of attention to clients; re-ordering of the hours of attention for the public in laboratory and pharmacy services; improvements in the equipment of support services; introduc-

³⁹ Views expressed by Norma Ayala.

tion of new types of facilities to satisfy the needs of special population groups in the area of attraction, and optimization of the use of operating theatres and various services.

The achievements also vary from one hospital to another with regard to organizational aspects and working processes. The evaluation highlights the formation of working teams which have promoted the real participation of workers in the improvement of everyday processes; the formation of support teams for the reform process in all centres; the use of information analysis for taking decisions; the development of automated systems in some centres; the establishment of operational and technical rules and controls for evaluating working processes; better knowledge of the occupational profile of staff members; standardization of working processes, and improvement of records.

With regard to quality, user satisfaction surveys were carried out which made it possible to find out users' needs; teams were formed for the ongoing improvement of quality; medical protocols were designed in all hospitals; intra-hospital infections were controlled and reduced, and complaints and suggestions offices were set up, with special groups responsible for solving complaints and giving answers.

Also at the organizational level, plans and strategies have been prepared for internal and external communication; mass communication media have been used, such as notice boards, sound and newsletters for informing users about the prevention of infections and health education, and the communication between chiefs and subordinates has been improved.

The efforts to measure hospital output made under the terms of the 1997 contracts, however, showed that many unsatisfied requirements prevented satisfactory measurement, so that the output analysis model took on an experimental nature. The evaluation also noted that the model must be adjusted in order to attain the degree of reliability required in order to establish relations of an economic nature between production and financing and in order to make a proper comparison of the production of the different hospital centres. The annual evaluation report has therefore simply given a brief account of aggregate production by activities and has not sought to establish such relations or to effect comparisons between the hospitals concerned.⁴⁰

⁴⁰ The hospitals which took part were the Calderón Guardia, the México, the Monseñor Sanabria, the National Children's Hospital, the San Juan de Dios, the San Francisco de Asís and the William Allen.

The half-yearly report had already been categorical in these terms: "on the basis of the present production information it has not been possible to establish a budget based on production in any of the hospitals". The annual report is more cautious: the production data are presented as provisional and subject to revision at the request of the centres themselves or the central level.

The evaluation considers that the relative values of the model must be adapted, since their standards are strictly empirical and were assumed on the basis of past operations, which is precisely what the authorities are seeking to change. It also asserts that the methods of analysis must be improved and that the measurements do not therefore reflect the true activities of the centres.

With regard to the records of activities, the main obstacles detected for measuring production are: lack of verification, backing up and validation of the data; information which is not in line with the desired measurement of objectives because it was not provided in a timely manner; dissimilar criteria for the recording, consolidation and format of information, and differences between the reports prepared to provide information to the central level. As we can see, the shortcomings are related both with the quality of the information and traditional management practices, and with the fact that the contracts accepted the heterogeneity of the information and records. In order to overcome this heterogeneity, the authorities are working on a national information system which, using a common information processing platform, will make it possible to secure compatibility between the systems used in each of the hospitals.

The problems of information referred to clearly show, in the case of Costa Rica, a problem which has already been highlighted with respect to the development of quasi-markets in general: namely, the need to overcome asymmetries of information between the purchaser and the supplier and, ultimately, to establish incentives for suppliers to facilitate or provide the necessary information. The purchaser would thus be protected from possible opportunistic behaviour by suppliers and would have better background information for establishing the contracts (Bartlett and Le Grand, 1993, p. 209).

In the CCSS, the main safeguard adopted in this respect, both for the hospitals and the Health Areas, has been to establish that "anything that is not recorded will be assumed not to exist": in the 1998

contracts, information is deemed to be the key for obtaining funds. As the information can be manipulated, however, its veracity may be called into question. In 1997, for example, it was discovered that there was an excessive increase in "first consultations" compared with subsequent consultations, which was considered to be due to the greater weight given to such consultations in terms of HPUs.

The effort to measure production has brought to light veritable traditions in institutional culture. For example, only the recording of discharges from hospital, which is deeply rooted in established practice, is free from the shortcomings in question. In contrast, in the areas of outpatient attention or emergency attention, the information is neither validated nor verified. This confirms that "informal culturally derived limitations will not change immediately in response to changes in the formal rules" (North, 1993, p. 65).

The 1997 evaluation considers that there are problems connected with the failure of the measurement model to define some concepts properly, as in the vague definition and lack of precision of some categories such as special procedures (where the diversity of criteria led to serious discrepancies in measurement) or the final products.

In the discussion on hospital output and services, hospital directors have referred to the existence of technical difficulties for measuring, with the available information, the attention provided in respect of emergency cases, minor surgery and surgical procedures; the need to establish detailed rules regarding the respective systems of measurement and to follow

the international classification of diseases in the case of the clinical files; and the need to specify what is meant by readmittance to hospital and to state the possible causes.⁴¹ In other cases, it has been suggested that the measurement of hospital output is viable when a proper selection is made of a few actions which adequately reflect production, so that it would be desirable to take account of only a few special procedures.⁴²

Finally, the evaluation concludes that the measurement of hospital output does not permit suitable comparison of the results or provide the necessary information for prospective budgetary allocation. After having noted all these points, however, it states that "according to the agreed objectives, the established rules and the method applied, the hospitals with management contracts nevertheless fulfilled what was required of them". Indeed, taking the hospital production units as a whole, the unit with the highest degree of fulfillment achieved a level of 136% of its goal, while the unit with the lowest degree of fulfillment nevertheless registered 97%.

When we analysed the respective tables of our own accord, we noted that in most of the hospitals there are discrepancies between the agreed HPUs and those actually effected in specific activities, but the differences are very varied and, generally speaking, the deficits in some activities are offset by the surpluses in others. The relation between deficit and surplus activities varies from one unit to another, and comparison of the various units does not show any significant tendency in terms of activities which predominantly registered deficits or surpluses.

VII

Are the reforms in danger?

The "screen", a practice which combines medical corruption and a perverse form of medical selection by patients who are willing to pay for it or forced to do so, is an illegal action which consists of the doctor charging the CCSS beneficiary for the treatment (mainly surgical operations) given in public facilities. It is interesting to note, in this respect, that the contracts have provided indications that may help to reveal and quantify these practices. In 1997, for example, it was found in one hospital that 35% of the high-cost operations were supposed to have origi-

nated in the emergency department, where however they were not registered.

We have brought this matter up at this point because, at all events, the far-reaching measures required for doing away with the "screen" have implications for the rules of the game in more general terms. The permanent nature of staff members' contracts, regardless of their performance, a career

⁴¹ Interview with Dr. Manrique Soto, already referred to earlier.

⁴² Interview with Elías Jiménez, already referred to earlier.

structure which depends on seniority and not on merit, the stipulation that staff must attend 4 to 5 patients per hour, the tortuous nature of the procedures for securing a staff member's dismissal,⁴³ and the inability of patients to make any medical choice for themselves form a strait-jacket which makes it impossible to change this situation to any major extent and, in general, impedes the modernization of human resources management in the CCSS.

Inflexibility of hiring conditions is undoubtedly a crucial element which can impede management innovations. In Chile, the interested sectors have so far managed, by militant action, to prevent the amendment of law No. 15076 governing the hiring and remuneration of professional health service staff. Thus, a novel Bill was presented in 1995 to make the definition of staff rosters more flexible and significantly more decentralized; to add due recognition of performance, merit and efficiency to considerations of mere seniority in career development; to promote the assignment of individual responsibilities; to interlink recognition of individual performance with that of the institution, and to make continued employment in the system subject to competitions. However, this initiative was shelved (Sojo, 1996c).

In this respect, it is worth reflecting about a particular feature of a public health system which stands out in international comparisons as an example of notable equity, efficacy and efficiency: namely, that of Canada. Although Canadian hospitals have a system of budgets, the doctors who work in them do not earn a fixed salary: their wages depend on the number of patients they attend under a system of free choice by patients of any of the doctors on the hospital staff, in accordance with a scale of charges set by each province (White, 1997, p. 44).

⁴³ "The possibility of terminating staff members' contracts must be simplified at the national level. At present, the steps that must be fulfilled are due process, appeal, the local commission, and the Central Labour Relations Commission, and this is where the bottleneck lies: an Act of Parliament is required to regulate this aspect, and an effort must be made to unify the form of hiring for all the different sectors". These were some of the challenges referred to by Dr. Jiménez in the interview mentioned earlier.

Continued occupation of management posts should also be linked with the achievement of the proposed objectives. The reform makes it indispensable to develop management skills at various levels.

The CCSS contracts also aim to improve the information available on the finances of the supplier agents. With regard to financial management in the strict sense, however, the contracts do not provide for instruments, indicators or activities designed to measure costs which would make it possible to advance directly in the measurement of financial and economic performance and impute costs to the products. This lack could be a serious obstacle for the establishment of the desired financing model, and this should be taken into account when formulating future contracts.

Moreover, the contracts do not currently include convincing economic incentives. With regard to the economic incentives fund, mention has already been made of its weakness in generating such incentives in the short term, since the generation of savings which is supposed to provide it with its resources is extremely limited in the current conditions. Furthermore, there has not yet been any decision to allow the fund to be used to grant wage incentives on merit.

It is therefore debated whether it is really desirable to introduce a system of performance incentives, whether it should be of an individual or collective nature—for work groups or specific units of the organization—and whether it fits in with the performance indicators provided by the management contracts. Among the range of possibilities in the case of economic incentives there is the possibility of introducing performance-linked wages. The systematic use of training or the granting of fellowships could also be useful for this purpose.

It is likewise crucial to lay down clear provisions for penalizing both the suppliers, if they do not fulfill the agreements, and the purchaser, if he does not fulfill his tasks of providing support for the contract: such penalties must have a clear legal basis. It is also necessary to coordinate the terms of the contracts with the execution of traditional auditing exercises, which must be modified in the light of the new distinction of functions and their interrelations.

As noted in the evaluation exercises, it is essential that staff members should know the results of the contracts so that, since they are participants in their strengths and weaknesses, they can collaborate

in the formulation of strategies for tackling problems and improving quality day by day, in order to avoid discouragement.

At the same time, in spite of all the asymmetries of information facing users and the restrictions on the sovereignty of the consumer typical of the health sector, when forming coalitions which seek excellence in the provision of health services the users are very important, as a source of external pressure on suppliers and of signals which will help in "fixing prices" in the quasi-market from the demand side. This explains the importance of receiving, processing and responding in a timely and suitable manner to the opinions and complaints of clients, collected through the contracts and other means. Consolidating improvements in attention—for example, reducing waiting lines and waiting lists—would undoubtedly bring about greater citizen support for the contracts, which would be very positive for the purposes set forth above.

Another item which is important in this context is community participation. In the case of the hospitals, Hospital Councils, which are foreshadowed in the recently established Health Councils, will be of fundamental importance. These Health Councils are of an advisory and community liaison nature and consist of seven persons: a representative of the CCSS, a

representative of the municipality, and five representatives of community or service associations.⁴⁴

The success of the contracts will not depend only on the formal reorganization of the purchaser-supplier relationship. It will also be necessary to consider how to modify the informal standards and rules which come to take on a binding nature and will be determined by the changes in the informal power relations, also defining the results.⁴⁵

The development of quasi-markets is rooted in social and institutional relations (Ferlie, Ashburner, Fitzgerald and Pettigrew, 1996). In considering the long-term effect of the introduction of contracts on the organizational patterns and inter-organizational behaviour of health quasi-markets, particular importance is assumed by the professional networks of medical and paramedical staff and the weight and influence acquired by their management segment, since these professions had traditionally enjoyed a large measure of self-regulation.

The challenge is of vast extent: it consists no less than of harnessing the will of politicians, staff members and the citizens at large in support of a commitment to excellence in the CCSS which will place the country in a promising position on the eve of the new century.

(Original: Spanish)

⁴⁴ Advocates of maximum decentralization of the suppliers, like Dr. Jiménez, consider that these Councils should be given sufficient authority to become Governing Boards of each hospital, while the Central Governing Board, because of its political nature, should lay down general policies and establish the budgetary limits (interview referred to earlier).

⁴⁵ We thus take account of the warning given by Douglass North: "... although explicit rules provide us with a basic source of empirical materials by which we can test the performance

of economies in different conditions, the extent to which these rules have a single, invariable relation with performance is only limited. In other words, there is also a mixture of informal standards, rules and characteristics of a binding nature which simultaneously define both the range of choices and the results in terms of success. Consequently, if we only take account of the formal rules we will have an inadequate and often mistaken notion of the relation between formal limitations and performance".

Interviews***On the experience of Costa Rica in health system reform***⁴⁶ (held in San José, Costa Rica)

Norma Ayala, staff member of the CCSS Modernization Project,
29 August 1997 and 6 February 1998.

Rodrigo Bartels, staff member of the CCSS Modernization Project,
29 August 1997 and 6 February 1998.

Adolfo Cartín, General Manager of the San Juan de Dios Hospital,
5 February 1998.

James Cercone, staff member of the CCSS Modernization Project,
29 August 1997.

Elías Jiménez, Director-General of the National Children's Hospital,
5 February 1998.

Mario León, staff member of the CCSS Modernization Project,
29 August 1997.

Fernando Marín, Deputy Minister of Health,
26 August 1997.

Luis Bernardo Sáenz, Director of the CCSS Modernization Project,
26 August 1997 and 26 February 1998.

Alvaro Salas, Executive President of the CCSS,
26 August 1997 and 5 February 1998.

Manrique Soto Pacheco, Director-General of the San Juan de Dios Hospital,
5 February 1998.

Julieta Rodríguez, Manager of the Medical Division of the CCSS,
26 August 1997.

Herman Weinstock, Minister of Health,
26 August 1997.

On the experience of Chile in health system reform (held in Santiago, Chile)

Pedro Croco, Director, Management Unit, Ministry of Health,
3 September 1997.

Rony Lenz, Director of the National Health Fund (FONASA),
26 May 1998.

César Oyarzo, former Director of FONASA,
22 August 1997.

⁴⁶ The posts indicated are those which the interviewees occupied at the time of the interview.

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- (undated): *Definición de indicadores de evaluación. Objetivos específicos. Compromisos de gestión. Hospitales periféricos. I semestre de 1997*, San José.
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A development strategy *founded on* **natural resource-based** *production clusters*

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This article contends that the rapid development of Latin America and the Caribbean –a region rich in natural resources– will depend on how fast it learns to industrialize and process its natural resources and to develop the necessary suppliers of inputs, engineering services and equipment for this. Consequently, this will not be a form of development based on the mere extraction of natural resources, as at present, but rather one based on the processing of such resources and the development of the activities that naturally tend to spring up and concentrate around this base (production complexes or clusters). It will therefore be different from the experience of the recently industrialized Asian countries, most of which have few natural resources, and will resemble instead that of the resource-rich countries which are now highly developed, such as the Scandinavian countries, Canada, Australia and New Zealand.

I

Introduction

For the last ten years, Latin America has been undergoing a strategic turnaround of a magnitude not witnessed since the 1930s. The region has discarded its previous inward-oriented development strategy, with a domestic market subject to heavy government intervention and a State which played a leading role in the economy, and has adopted instead a development strategy oriented towards external markets, in which the allocation of resources is determined basically by the market and the main agent of development is private enterprise.

Today there is broad consensus that the industrialization strategy based on import substitution had been giving severely diminishing returns at least since the mid-1970s and that the over-active State had exceeded the limits of its capacity for effective action. It is also clear, however, that so far the region has seen the promise, but not the reality, of the results expected from the present strategic turnaround. Thus, although it has been possible to contain inflation, the economic growth rate is a mediocre 3.5% per year, which is admittedly higher than that of the 1980s but much lower than expected and, in particular, well below the 5.5% achieved between 1950 and 1980, when the now so generally disparaged import substitution strategy was in force.

Part of the explanation for such mediocre results undoubtedly lies in the fact that the macroeconomic imbalances which had accumulated were on a massive scale; that the design and implementation of macroeconomic policy was often faulty, and, in particular, that structural reforms of this scale take time—perhaps a long time—to bear fruit. The question arises, then: is it sufficient to have an open, deregulated economy and leave it on “automatic pilot” in order to grow at the desired rapid rate, or is it necessary to modify the strategy so as to secure deeper international linkages for the region? More specifically, where are the next export impulses to come from in order to permit the economic growth of the region to reach rapid rates, higher than those of the past and more similar to those of the recently industrialized Southeast Asian nations?

This article postulates that the rapid development of Latin America and the Caribbean, a region rich in

natural resources, will depend on the speed at which it learns to process its natural resources industrially and develop the necessary activities to provide inputs and equipment for this. It will thus be a type of development which is not based so much on the extraction of natural resources, as it is now, but rather on the use of those resources and the activities which naturally tend to grow up and develop around them (production complexes or clusters). It will therefore be different from the experience of the recently industrialized Asian countries, which have relatively few natural resources, and will be more similar to that of the countries which are now developed and are also rich in natural resources, such as the Scandinavian countries, Canada, Australia and New Zealand.

This theory runs counter to the arguments not only of the many writers who have blamed natural resources for being the cause of the “Dutch disease” (a short-term phenomenon associated with a sudden boom in a particular export product), but also of the more pessimistic analysts who even talk about the “curse” of natural resources (for example, Auty, 1994). Many of these writers note that in practice, paradoxical though it may seem, countries with a rich endowment of natural resources have tended to register lower growth rates than countries which have few natural resources. Thus, Sachs has estimated that per capita growth is reduced by $\frac{1}{2}\%$ per year for every ten percentage points of participation of primary commodity exports in GDP (Asian Development Bank, 1997). He does acknowledge, however, that this is an empirical rather than an analytical relation: it is not inevitable but simply has turned out this way in practice. It would appear that many of the countries with a rich endowment of natural resources have tended to waste the income derived from those resources in boom periods, rather than investing it in improvements in productivity that would make it possible to grow even in times of adversity. This incapacity to turn pure rents into rents based on advances in productivity lies at the root of these meagre results. This is not inevitable, however, for there are natural resource-rich countries which are now highly developed because they have successfully transformed the rents from their natural resources into rents based on

higher productivity (for example, more than 60% of the exports of Norway, Australia and New Zealand still consist of primary commodities). Thus, the good or bad performance of natural resource-rich countries depends on the suitability of their economic policy, and not the mere fact of having natural resources.

Finally, it may be noted that there are many countries which are following the example of Japan, South Korea and Taiwan: that is to say, exporting manufactures by beginning with those which are most labour-intensive and subsequently moving on to manufactures with greater added value. Because of their shortage of natural resources, however, these countries never had the option of promoting production clusters around those resources, and for the same reason China and India will have no option but to base their exports on light manufactures. There are therefore grounds for thinking that the markets may become saturated with manufactures which do not make intensive use of natural resources—especially those which do not involve very complex technology—as indeed is already occurring to some extent with the production of motor vehicles and electronic goods in Southeast Asia. In contrast, the production of manufactures located upstream or downstream of the natural resources base is being neglected. This is a further reason for believing that a strategy promoting production clusters based on these resources may be very valuable for those Latin America and Caribbean countries which have an abundant endowment of natural resources.

Thus, natural resources are by no means a curse, but they do not of themselves ensure development either. What they do is to offer an opportunity of which the countries should take advantage.¹ This is not a gratuitous or a purely theoretical assertion. Indeed, there are some indications that this trend is already taking place. Thus, at least since the strategic turnaround which took place in the region in the mid-1980s in the direction of a type of development more oriented towards international markets, there has been greater relative expansion of production activities making intensive use of natural resources—especially mineral, agricultural, forestry and fishery resources—while there has been a relative contraction

in manufacturing. At the same time, within the manufacturing sector the branches which make most use of natural resources are those which have registered the greatest growth (especially industrial commodities such as paper and pulp, petrochemical products, iron and steel, aluminium and non-ferrous metals). As a result, production making intensive use of natural resources increased from 60% to 65% of total production of tradeable goods between 1980 and 1997.

This restructuring reflects a return to the use of a natural comparative advantage of a region which is abundantly endowed with natural resources. The result is that production activities making intensive use of such resources have not only displayed solid increases in production but also impressive improvements in productivity. Thus, since the late 1970s, and even more vigorously since the mid-1980s, a new generation of production plants have been established for these activities, with a high degree of modernization, a greater capital coefficient, and vigorous updating of technology. These production plants use continuous production processes whose rate depends on the equipment itself; consequently, the levels of productivity are much closer to those of the international technological frontier.

Although the relative abundance of natural resources in the region, together with their greater availability and quality, has encouraged the activities making intensive use of them, the expansion has tended to be limited to the initial phases of processing: no significant progress has yet been made towards the production of specialized and more sophisticated goods with high national added value (such as fine papers, hydrogenated or low-cholesterol oils, special steels, aluminium sections, copper alloys, etc.). Consequently, what is needed is a development strategy which emphasizes not so much the extraction and relatively simple processing of natural resources, but rather the more rapid development of the many activities which tend to grow up around such resources, without going against the natural market trends, and with an effort to strengthen the links with activities supplying inputs, equipment and engineering services (backward linkages) and the links with activities which process and use natural resources (forward linkages). What is needed is to ensure that the incipient production clusters growing up around the region's abundant natural resource base can develop more quickly into mature clusters like those which exist in the developed countries which are rich in natural resources.

¹ There is extensive literature on the relationship between natural resources and economic development. See, for example, Baldwin (1963), Roemer (1979), Barham, Bunker and O'Heara (1994), Lewis (1989), Sachs and Warner (1995) and Londero and Teitel (1996).

II

Theory: why do production clusters arise?

“Production cluster” normally means a sectoral and/or geographical concentration of enterprises engaged in the same or closely related activities, with substantial and cumulative external economies of agglomeration and specialization (through the presence of producers, suppliers, specialized labour and sector-specific related services) and capable of taking joint action to seek collective efficiency. Among successful examples of production clusters in the developed countries are the industrial districts of Emilia Romagna (Italy) and Baden Wurttemberg (Germany), Silicon Valley and Route 128 (United States), the new computer industry in Ireland, and the electronics industry in Scotland; in the developing countries, examples are the footwear industry at Nuevo Hamburgo (Brazil) and the production of electronic goods and computer programmes at Bangalore (India), simple surgical instruments at Sialkot (Pakistan) and microelectronics equipment at the Hsinchu Science Park (Taiwan).²

Various theories have been put forward to try to answer the question posed in the heading of this section: why do production clusters arise? We shall now review a few of them.³

1. The theory of location and economic geography

The theory of location and economic geography seeks to explain why activities are often concentrated in certain areas and not spread out at random (see North (1955); Krugman (1995) and Borges Méndez (1997)). A very well-known feature of this approach is that it emphasizes the importance of the relative weight of transport costs in the final cost, which would explain why some activities are preferably located near natural resources, others near the markets they supply, while others may be established anywhere. A feature which is not so well-known but is of growing importance is that this approach also emphasizes the interdependence between the raw material

and the processed product and by-products, which means that it is easier to coordinate their movement in a single location. This is the case, for example, of iron and steel producers, since their high level of interdependence leads to the vertical integration of these production activities. A similar thing occurs when a single activity (for example, stock raising) gives rise to various by-products simultaneously (such as fresh meat, industrial products and fertilizers).

Likewise, processing activities which involve big economies of scale, especially in complex processes such as petrochemicals, will only tend to set up plants in the country of origin of their raw materials if it has a large domestic market or is close to important regional markets. Examples of this are the Canadian and Australian industries processing minerals for the markets of the United States and Asia, respectively.

Finally, critical aspects for the location of activities involving the extraction of natural resources are the clarity, transparency and traditions of the local legislation on property rights and the stability and competitiveness of the tax legislation, for investments with high sunk costs and long lead times need security and transparency in the treatment accorded to them, with little or no risk of retroactive changes.

2. The theory of backward and forward linkages

Hirschman's theory of backward and forward linkages (1957 and 1977) seeks to show how and when the production of a sector is sufficient to satisfy the minimum threshold or scale needed to make investments attractive in another sector which it supplies (backward linkages) or whose products it processes (forward linkages). Naturally, every activity has linkages with others. These linkages become significant, however, when their existence determines whether an investment is made or not. When one investment makes it profitable to make a second investment, or vice versa, taking decisions in a coordinated manner ensures the profitability of each of the investments.

Backward linkages depend both on demand factors (the derived demand for inputs and factors) and on their relation with technological and production

² Schmitz and Musyck (1993) and Nadvi and Schmitz (1994) provide a good introduction to the rapidly growing literature on this subject.

³ The following subsections are based mainly on Stumpo (1996).

factors (optimum size of plant). The development of forward linkages, for its part, depends to a large extent on the technological similarities between the extraction and processing activities. The greater these similarities, the easier the learning process will be and the stronger the forward thrust, while the greater the technological differences between the activities, the more difficult the learning process and the weaker the thrust. There is evidence not only that processed products suffer smaller price variations than primary commodities, but also that over the last 25 years the price of processed products has grown significantly more than that of primary commodities in general, especially metals (Yeats, 1991). This would indicate that the development of forward linkages would not only diversify production but could be extremely profitable too.

3. The theory of interaction and "industrial districts"

The theory of interaction seeks to explain the most favourable conditions for learning based on interaction, which, according to this approach, accounts for the success of the "industrial districts" in many areas of Italy and Germany and in some areas in Latin America.⁴ Interaction gives rise to "repetitive plays" which raise confidence and ultimately reduce transaction and coordination costs. Interaction also speeds up the spread of know-how and innovation, which is a social good internalized by the group of enterprises in the district. Thus, intensive interaction in a locality gives rise to technological spillovers, external economies and economies of scale for the enterprises in the district, which could not be internalized if each enterprise interacted with the others over a long distance.

4. The model of Michael Porter

The model of Michael Porter (see Porter, 1991) asserts that the diversity and intensity of the functional relations between enterprises explain the formation of a production cluster and its degree of maturity. These relations refer to the four points of the "diamond", that is to say, the relationships of competition between enterprises in the same activity and their relationships with their suppliers, with supporting

activities, with producers of complementary inputs, and with suppliers of specialized inputs and factors. In Porter's analysis production clusters grow up both around natural resources and around activities based on learning and know-how (such as telecommunications, computation and electronics).

5. Variants with respect to natural resources

In addition to the theories set forth above there are variants which refer explicitly to natural resources. Special mention may be made in this respect of the staple theory of economic growth, which referred initially to Canada (Innis, 1954 and 1962; Watkins, 1963; Mackintosh, 1953; Scott, 1964). This theory explains the economic development of Canada on the basis of the impulses provided by the export of its various natural resources—fish, furs and skins, minerals, timber, paper and wheat—and the investments in related activities to which they give rise. These "second level" and "third level" activities include: i) secondary activities to provide the inputs and goods required by the natural resource and its labour force; ii) investment in export infrastructure (railways, electric power, highways, ports, etc.), and iii) other activities, not necessarily linked with the natural resource in question, which may take advantage of the infrastructure already financed by the export activity, paying only its variable costs. Thus, each export boom gives rise to a wave of first, second and third level investments which not only multiply the effect of the initial export impulse but also generate forms of economic activity which are less and less dependent on that impulse. This is why Canada now has a broad and diversified production base, much broader than that which would be given by its natural resources, many of which have already been depleted.

A similar variant (David and Wright, 1997) is based on the little-known fact that in the development of the United States in the latter part of the nineteenth century its exploitation and processing of natural resources was much greater than its actual share in the world reserves of such resources. In the case of the mining sector, this was due, according to these authors, to the fact that the United States not only had abundant mineral resources but also had suitable institutions for exploiting them: mining laws which were very favourable to prospecting; geological studies of 29 of the 33 states which existed in 1860, and 20 universities which were issuing degrees in mining

⁴ With regard to industrial districts, see for example Bianchi (1992), Bellandi (1996) and Dini (1992).

engineering as far back as 1875 and which had close links with the production sectors. In contrast, at that time Latin America had almost no university courses in mining engineering or metallurgy, and even England only opened its first school of mines in 1851. The same authors also note that the significant technological spillover from mining gave rise to feedbacks between prospecting, extraction, processing and technological advances in the sector and was responsible for strong growth in these activities. In the case of prospecting, for example, the search for a particular mineral often led to the discovery of another mineral which was equally valuable. Likewise, the technological advances in the separation of a metal from its ore often served for other metals too. Phenomena like this explain why the weight of extraction and industrial processing of minerals in United States production was three times greater than the country's share of world mineral resources.

6. A common theoretical substrate

Whatever their theoretical inspiration, all these explanatory hypotheses on the formation of production clusters share the notion that the competitiveness of each enterprise is strengthened by the competitiveness of the whole set of enterprises and activities making up the cluster to which it belongs. This greater competitiveness derives from substantial ex-

ternalities, economies of agglomeration, technological spillovers and innovations arising from the intense and repeated interaction of the enterprises and activities making up the cluster. These enterprises and activities mutually strengthen each other; information flows almost without restrictions, transaction costs are lower, new opportunities are seen more rapidly, and innovations spread more quickly throughout the whole network, while the stiff competition on prices, quality and variety gives rise to new business opportunities, intensifies rivalry between enterprises, and helps to maintain diversity.

Furthermore, once the production cluster has been formed (generally a spontaneous rather than an intentional phenomenon), active and conscious cooperation among its members in pursuit of greater collective efficiency is facilitated (Schmitz, 1997); this strengthens and accumulates the initial externalities, facilitating, for example, collaboration between enterprises to open new markets, create new products, share equipment, or finance labour training programmes. Thus, production clusters are a much richer and more significant concept for economic analysis and policy than the mere question of the sector to which the enterprise belongs. Moreover, if this approach is correct, this would also explain where and when there are tendencies towards the vertical and horizontal integration of an enterprise or economic conglomerate.

III

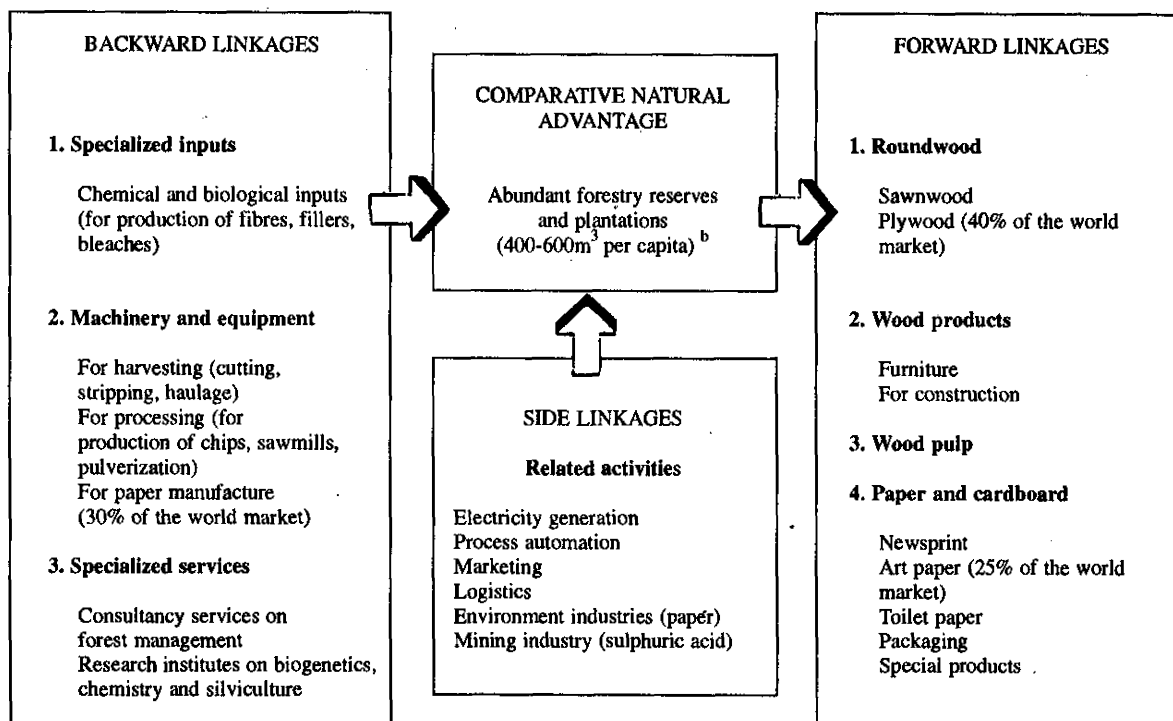
What is a mature production cluster established around a natural resource, and how is it formed?

1. A mature production cluster

In order to understand this concept properly, let us examine a mature production cluster such as that which grew up around the forestry industry in Finland (Rouvinen, 1996). This cluster is very complete and deep, since it generates 25% of Finland's exports (over US\$ 5 billion). It may be noted, by way of comparison, that the large but still incipient forestry cluster in Chile generates rather less than US\$ 2 billion.

If we look at figure 1, we see that the production cluster grew up around an activity with strong natural comparative advantages. Thus, the Finnish cluster: i) has ample forestry reserves and plantations (400-600 m³ per capita, compared with 25-50 m³ in the rest of the world); ii) the forests are close to the sea, which reduces the otherwise high transport costs; and iii) the forests are close to an important international market (Europe). In the case of Chile, because of the latitude of the country its forests receive much more

FIGURE 1

Finland: The mature forestry cluster^a

Source: ECLAC, on the basis of official data.

^a Generates 25% of Finland's exports.

^b Compared with 25-50 m³ per capita in the rest of the world.

sunshine than in Scandinavia, which makes them grow up to twice as fast. Moreover, because Chile is a narrow country, its forests are close to the sea, so that its transport costs are also relatively low.

Finnish forestry activity also has many important linkages with other activities which make up the cluster, thus enabling it to add much value to the extraction phase. There are important forward linkages with extensive possibilities of adding value through more sophisticated processed products in four areas: i) sawnwood (Finland has 40% of the world plywood market); ii) wood products for construction and furniture; iii) wood pulp, and iv) all types of cardboard and paper for newsprint, packaging, toilet paper and coated paper (Finland has 25% of the world market for the latter product).

There are backward linkages in at least three important areas: i) inputs for the planting and processing phases, such as chemical and biological products, fillers and bleaches; ii) all kinds of machinery for

planting, harvesting, processing and paper manufacture; iii) engineering and consultancy services, and iv) (highly important) specialized university courses on the forestry industry and research institutes in the areas of biogenetics, chemistry and forestry, all closely linked with the production system. Thus, the Finnish forestry cluster includes an important industry for the production of machinery and equipment for all phases of activities, as well as engineering and consultancy services. Moreover, much of the present Finnish engineering industry arose in connection with the forestry sector and gradually diversified into other activities. In other words, the cluster has constantly been increasing the proportion of added value through more complex activities using more specialized know-how.

There are side linkages in at least five important areas: i) electricity generation; ii) chemical and mining activities; iii) marketing and logistics; iv) environmental industries, and v) related services.

2. The formation of a mature production cluster

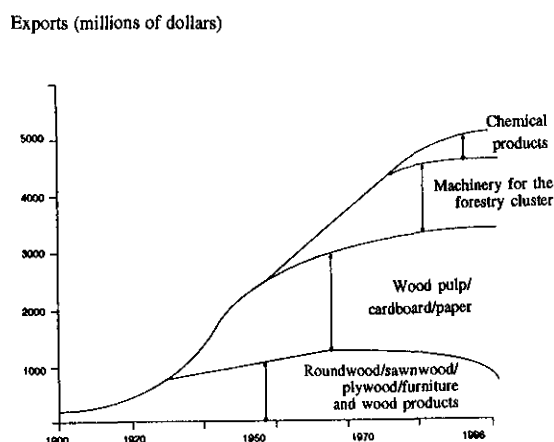
Figure 2 shows the evolution of exports from the Finnish forestry cluster during the twentieth century. As may be seen from the figure, up to the end of the nineteenth century the bulk of Finland's exports consisted of primary commodities with little processing, basically roundwood. These exports gradually began to diversify into activities involving higher levels of processing: first of all sawnwood and then, successively, plywood, furniture and wood products in general. The exports of such products reached their peak in the late 1950s, although they never exceeded US\$ 1 billion; as from 1920, the degree of processing increased, and fundamental importance was assumed by exports of wood pulp, then cardboard and paper and, within the latter category, increasingly sophisticated types of paper. Since 1960, these exports have together accounted for half the total value of the exports of the forestry cluster (currently, around US\$ 2 billion). After the Second World War, Finland began to export machinery for all the activities of the forestry cluster (planting, extraction and processing). The total value of such exports is currently close to US\$ 1.5 billion and is still rising. Finally, as from 1970 Finland began to export important chemical inputs for the forestry cluster which currently amount to US\$ 250 million.

On the basis of this analysis of the evolution of the Finnish forestry cluster, it may be asserted that the formation of a mature cluster goes through four stages (figure 3). In the first phase, the natural resource is extracted and exported with the minimum essential local processing, because of the high transport costs (for example, roundwood and some sawnwood). Almost everything else is imported: the bulk of the inputs, machinery and engineering services (except part of the production engineering services).

In the second phase, processing and export activities are initiated (such as wood pulp, cardboard and paper industries) and a start is made on import substitution with local production of some inputs and equipment (typically under license for the domestic market), while almost all production engineering services are provided locally, as are part of those connected with design.

In the third phase, the country begins to export some of the goods and services which it originally began to produce for import substitution purposes:

FIGURE 2
Finland: Evolution of the forestry cluster



inputs and basic machinery for relatively undemanding markets (as for example, in the case of Finland, to the Soviet Union after the Second World War); the engineering services used are almost entirely of domestic origin, and further progress is made in the export of increasingly sophisticated processed goods (such as fine and special papers).

Finally, in the fourth stage (which began in the case of the Finnish forestry cluster in the mid-1970s) all types of goods and services are exported: processed goods of great variety and complexity, inputs and machinery for demanding markets, design engineering services, and specialized consultancy services. In addition, domestic enterprises begin to invest abroad in the same area of activity.

What occurs in reality is of course much richer and less rigid than in analytical schemes. It may be that some activities "fall back" or "run ahead", but the foregoing pattern of evolution does indicate in its broad lines the typical evolution which is to be expected in the development and consolidation of a successful mature production cluster, that is to say, one capable of maintaining its competitiveness not only through its natural comparative advantages but increasingly through continual improvements in productivity. Without the constant accumulation of technological progress, the evolution of the cluster will become bogged down and will be limited to the "pure rents" of the extraction phase.

In the case of the Finnish forestry cluster, although most of the important technological advances were imported, at least initially, there were also

FIGURE 3

Development of a production cluster

	PHASE I	PHASE II	PHASE III	PHASE IV
1. EXPORTS	Unprocessed natural resource	First level of processing	More specialized first-level processing Second level of processing	Investment abroad
2. INPUTS	Imported	Import substitution production of the main inputs for the domestic market	Export of inputs	→
3. MACHINERY	Imported (repairs carried out locally)	Production under license for the domestic market	Export of basic machinery to less sophisticated markets; development of more specialized equipment	Export of all types of machinery to sophisticated markets
4. ENGINEERING Production Project design Consultancy	Semi-imported Imported Imported	Domestic Partly domestic Partly domestic	Domestic Domestic Domestic, except for specialities	↔ Export

Finnish innovations resulting from learning by doing. These have tended to be small but ongoing innovations, so that they have become significant in the long run, but with the passage of time, because of the strong technological base—of consultancy firms, specialized universities and various research centers in the forestry field—and the close relationship between producers, suppliers and the technological infrastructure, significant domestic innovations have also been made. The Finnish forestry cluster is therefore on the world technological frontier, especially with regard to chemical products for the forestry area (Ojainmaa, 1994).

The foregoing review of the development of the technological base which made possible the growing modernization, specialization and expansion of this cluster makes it clear, however, that success is not automatic in these cases. There are many possibilities of failure, since the evolution is neither certain nor automatic. Although it is true that there was rarely any active promotion, there were chance events which were suitably exploited and turned out to be decisive. Thus, for example, the fact that Finland had to pay war reparations to the former Soviet Union created an insatiable demand for capital goods for the

Soviet forestry, paper and mining industries, and this subsequently aided Finland significantly in its first export stages, since it guaranteed a market for its equipment, which was still relatively unsophisticated and not internationally competitive. Thus, paradoxically enough, the war reparations were of decisive importance in the development and competitive maturity of this capital goods industry.

There have been many cases of failure or only limited success, however, due to the lack of such lucky impulses, ignorance of how to take advantage of them, or insufficient or ineffective promotional measures. Among the best known and most extensively studied cases of this type in the region is that of the Corporación Venezolana de Guayana (CVG).⁵ Although there is no doubt that this Corporation successfully promoted the exploitation of the natural riches of the region—especially iron ore, electricity

⁵ This paragraph is based on the evaluation made by León (1996) of the impact of the CVG on the development of activities relating to basic iron and steel, electricity and aluminium enterprises. The evaluation included in-depth interviews with 62 key agents: 32 from the CVG, seven from the political area, and 23 with entrepreneurs supposedly benefitted by the CVG.

and aluminium— it was less successful in developing the activities of the related basic enterprises, both upstream and downstream. This was not due to any lack of promotional policies—these existed and included, *inter alia*, the establishment of industrial parks and supplier development programmes— but to the ineffective way in which they were implemented. Among other shortcomings, there was politicization, clientage, lax controls, lack of technical criteria, and little policy continuity, especially in the case of policies to promote competition. Consequently, the development of related activities was less than expected, and the enterprises set up often suffered from low levels of competitiveness and specialization, technological backwardness and a high degree of dependence on the basic enterprises.⁶ León's appraisal is particularly negative with regard to the metal products and machinery workshops supplying the basic industries and the failure to develop a scientific and technological infrastructure to support the technological updating and innovation of the activities of the production cluster that was supposed to grow up around the basic enterprises.

3. Mature production clusters in the developed countries

There is a very wide variety of mature clusters in the countries which are now developed, and by no means all of them are based on a natural resource. Since there is a relative abundance of natural resources in Latin America, however, we will go on to review

⁶ More specifically, the high degree of dependence seems to have been due both to the State-oriented concept of development prevailing at the time—which reserved basic activities for the State sector and looked down on the role of private enterprise—and the low level of business capacity. Thus, "since the promotion of other activities did not elicit a suitable response from the private sector, the CVG was obliged to involve itself in areas where no other sector was willing to commit itself—both in areas of a private nature, such as hotels, housing construction, pulp and paper industries, tractor manufacture, etc., and in public-sector areas such as the construction of schools and hospitals"; the CVG remained in possession of the enterprises that it set up, without transferring them to the private sector, and this further inhibited the development of that sector, causing it to adopt an attitude of merely following the CVG's lead, without taking any initiatives itself: "thus, the CVG was gradually taking on more and more responsibilities and areas of action, overstepping the dividing line between a strategy of promotion and one of execution" (León, 1996).

some clusters which grew up around an important natural resource.

In Norway, for example, there is an important production cluster around marine activity (Reve and others, 1992; Reve and Mathiesen, 1994). This cluster includes in particular maritime transport industries, fishery industries, and shipyards for the production of all types of vessels, including the most highly specialized tankers. There are also enterprises producing and exporting machinery and equipment for the fishery industry and the shipbuilding industry, as well as a wide range of services related with maritime activity in all its aspects (for example, marine insurance, shipbrokers, legal services, consultancy services, and research and development).

Because of Norway's abundant resources of hydroelectricity and natural gas, an important electro-metallurgical cluster has also grown up in it. Denmark and the Netherlands, for their part, each have important dairy and stock-raising clusters and significant production of machinery and equipment for these activities, while a complete production cluster has arisen in the Netherlands for the production and marketing of flowers. Canada, and to a lesser extent Australia, have mature mining clusters which cover not only extraction and processing but also prospecting, the production of inputs and equipment, and the provision of related services. And such an apparently traditional activity as poultry raising has given rise to examples of some of the most complete and sophisticated clusters where (at least in the United States) the spearhead areas are not the manufacture of specialized machinery and equipment but the development of bio-technological advances to improve the fattening and egg-laying capacity of the birds.

These mature complexes are marked by the generation of activities so solidly based that many of them have survived the disappearance or relative depletion of the natural resource which originally gave rise to them. For example, the Finnish mining industry gave rise to an important industry for the production of mining machinery and equipment, and today, although mining—the original core of the cluster—is no longer so important in the country, the production of mining machinery is one of its main export activities. Likewise, although the Netherlands continues to produce flowers, it also imports them for re-export: its main comparative advantage lies in the development of new varieties and the marketing of flowers throughout Europe and the rest of the world.

Production clusters do not only arise in connection with physical goods, such as tangible natural resources, of course: they also include the provision of services connected with natural resources in the broader sense. Thus, for example, the tourism cluster was of fundamental importance for promoting the development of Spain after the war, on the basis of the country's abundant sun and beaches. According to each particular case, still greater importance may be assumed by eco-tourism (as in Costa Rica, Ecuador, Amazonia, etc.); adventure tourism (sailing down the rapids and channels of Chile, scaling the Andes, etc.); archaeological or historical tourism (in Mexico and Central America, Peru and Ecuador, etc.); medicinal tourism (in Cuba and other countries), and residential colonies for retirees from the developed world (in the Caribbean, Mexico, Central America, etc.).

In almost all successful clusters, an important element for strengthening and intensifying the linkages was suitable institutional complementation, sometimes of public origin (at the regional or state rather than the national level), but always including the associations of producers operating in the cluster.⁷ We already mentioned above the importance assumed for the development of the mining and also the agroindustrial sectors in the United States by the early establishment of highly specialized university courses on the relevant technology, with close links between the corresponding university departments and industry with regard to innovation. In this respect, the great importance of proximity to major university centres and highly qualified professional labour for the Silicon Valley (California) and Route 128 (Boston area) clusters is well-known. Similarly, the existence of training programmes has been vital for many other

clusters, such as those in Emilia Romagna (Italy), Baden-Wurttemberg (Germany) and West Jutland (Denmark) in the developed countries and the clusters producing footwear (Valle Sinos, Brazil) and clothing (Ludhiana, India) in developing countries.

Centres providing services have also been very important in the progress of clusters. Thus, for example, the more than 100 state technology transfer centres, closely linked with the production cluster, have been vital for the development and production updating of the Baden-Wurttemberg industrial district. The services supply centre (CITER) has aided the development of the Emilia Romagna textile cluster through the provision of information on market trends, international fabric prices, availability of machinery and fashion trends; similar centres also exist for the footwear, agricultural machinery and construction industries. Emilia Romagna also operates centres for the promotion of exports and quality and has programmes for the development of suppliers. Private and public organizations with such functions have also been of decisive importance in almost all the emerging production clusters in developing countries.

Finally, a key role has also been played by the financial institutions, some of them highly specialized, which attend to the credit needs of various types of clusters, both in the developed and the developing countries. In this case, as in those referred to earlier, the generation and initial formation of the clusters was spontaneous and had little to do with any special institutional support, but their subsequent development was furthered both by the collective action of their members and by specific support policies applied by public bodies.

⁷ The analysis of this aspect is based on Schmitz and Musyck (1993) and Nadvi and Schmitz (1994).

IV

Incipient production clusters in Latin America

Are production clusters –even if only incipient–growing up around natural resources in Latin America? The answer is obviously affirmative. Let us take a look at some examples.

1. The oilseeds cluster in Argentina

Our first example is taken from the agricultural and foodstuffs sector, which is of great importance in the region. It refers to the oilseeds cluster in Argentina (De Obschatko, 1997). As figure 4 shows, this cluster generates 25% of Argentina's exports and has grown extremely rapidly: its exports increased by a factor of 17 between the beginning of the 1970s and the beginning of the 1990s, when their value amounted to US\$ 3.4 billion. This cluster, which is of prime importance for Argentina, utilizes the comparative advantages for agricultural production offered by the Argentine pampas and a relatively close outlet to the sea. Its rapid growth was driven by: i) the doubling of the international prices of oilseeds and vegetable oil, which made the production of both these items very profitable; ii) a sharp increase in the yield per hectare over the last twenty years (at the rate of 2.2% per year in the case of soya beans and 4.0% in that of sunflower seeds), and iii) the feasibility of double cropping (wheat in winter and soya beans in the rest of the year), which doubled the yield of the land.

The complex is now quite mature and has backward, forward and side linkages. With regard to forward linkages, there is an important processing industry which takes the agricultural inputs (soya beans and sunflower seeds) and turns them into oil and by-products, doubling the value per ton (from US\$ 245 to US\$ 485). The next phase (marketing) includes such important services as storage, transport and shipping.

Both the agricultural and the processing phases have important backward linkages. The agricultural phase has generated a demand for machinery, herbicides and oilseeds which has given rise to domestic industries producing equipment, biotechnology and

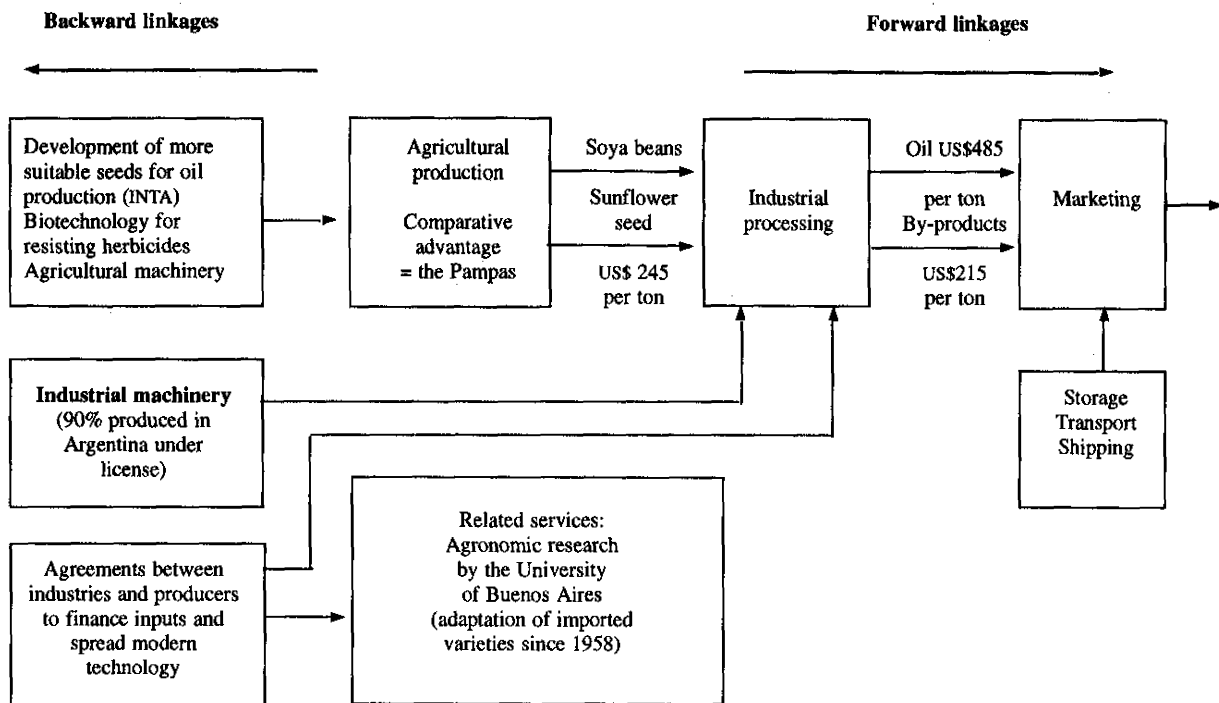
inputs. A domestic industry has also been set up (under license from international equipment manufacturers) which produces 90% of the machinery required by the processing plants. Moreover, the fact that these plants need to ensure an adequate and timely supply of raw materials so that they can maintain full utilization of their facilities has given rise to agreements between the processing plants and the agricultural producers, under which the former provide the producers with financing for inputs and with technical assistance in the dissemination of modern technologies. Finally, the strong and ongoing increase in yields is largely due to the services offered by agricultural research centres such as the University of Buenos Aires, which have undertaken the adaptation and improvement of imported seed varieties.

The cluster has passed through three stages. In the first phase (the agricultural phase), which lasted ten years up to 1984, exports of oilseeds increased by a factor of 200, reaching a value of US\$ 600 million per year. In the second phase (the processing phase), which had already begun during the previous stage, there was also notable growth: exports of vegetable oils doubled, and now have a value of around US\$ 1.5 billion. During this second stage agreements were signed between the processing plants and the producers under which the latter were provided with technology and with financing for inputs, in order to ensure an adequate and timely supply of raw materials for the industrial plants.

There were four decisive factors in this strong development of the industry: i) an increase in the international prices of vegetable oils; ii) an effective exchange rate which was more favourable for industrial exports than agricultural exports, since the tax on agricultural exports was higher than that on exports of oils; iii) the rapid introduction of the most advanced technology⁸ in the Argentine processing

⁸ Even more modern than that used in the United States.

FIGURE 4

Argentina: The oilseeds cluster^a

^a Generates 25% of Argentine exports.

plants, which now use chemical solvents for the production of oils instead of the outdated and inefficient technology based on the use of presses, and iv) improvements in productivity (by a factor of 10) through learning and full use of economies of scale (in fact, the amount of oil produced increased by a factor of eight, while the number of workers employed in the processing plants went down by 20%).

The third stage was marked by a rapid increase in marketing activities. Two phenomena were important in this phase. On the one hand, there was the deregulation of many activities which were essential for marketing, such as railways, transport and port activities. On the other hand, and also partly due to deregulation, there was a cycle of heavy investments in warehousing, transport, railways, ports and private shipping facilities.

The international competitiveness of the Argentine oilseeds cluster is shown by its success in penetrating the most demanding market, that of the member countries of the Organization for Economic Cooperation and Development (OECD). It may be

seen from figure 5 that Argentina occupied second place in OECD imports of oilseeds and related products in 1994, second only to the United States and tying with Brazil and Canada. Although Argentina's share in the OECD market for oilseeds and fodder is below that of Brazil, its share in edible oils is much greater (5% compared with 1%). On the other hand, although Argentina produces machinery for the oilseeds cluster, it is not yet a significant exporter of food processing machinery, as are the United States (with 10% of the OECD market) or Canada (with less than 2%). The next step which may be expected is therefore the export (and not just production for the domestic market) of food processing machinery.

Indeed, as may be seen from figure 6, Argentina has already begun to export such equipment, beginning with the Latin American market, where it has a share of 2%. Although this share is only modest, it is nevertheless bigger than that of Canada, which, as we have seen, is competitive in the OECD (probably in the United States market) but much less so in Latin America. Of the Latin American countries, Brazil has

FIGURE 5
Shares of selected countries in OECD
Imports of oilseeds and related products, 1994

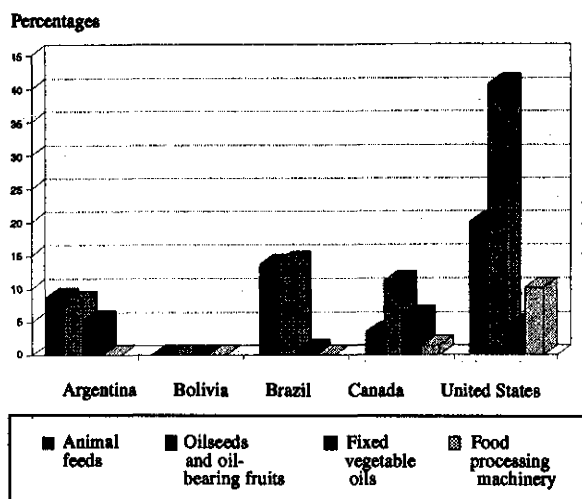
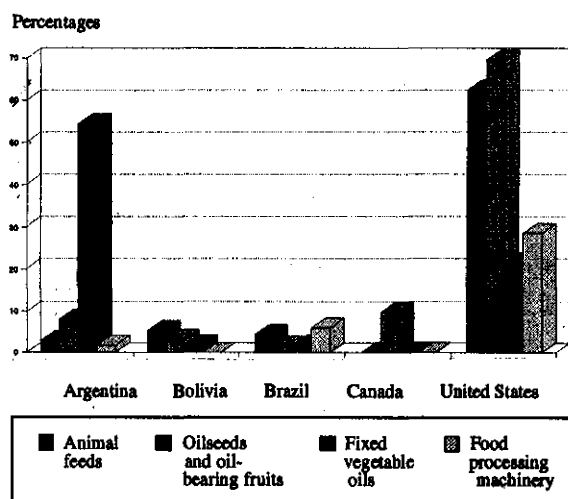


FIGURE 6
Shares of selected countries in Latin American
Imports of oilseeds and related products, 1994



the biggest share in the regional market (with 6%), although this is far behind the United States (with almost 30% of this market).

This suggests that first of all machinery is produced for domestic industry (if the demand is sufficient). Afterwards, with more experience, simple machinery can be exported to the closest markets, while the production of more sophisticated machinery for domestic industry is begun. Finally, in a subsequent stage, simple machinery begins to be exported to all markets, and specialized machinery begins to be exported to the closest markets which can be served from the company headquarters.

2. The mining cluster in Chile

Another production cluster which is quite developed, although not completely mature, is the industrial cluster which has grown up around the mining sector in Chile.

This cluster has grown up around the extraction of copper, in which the country has strong comparative advantages, for Chile has over 25% of world copper reserves –which makes it a kind of Saudi Arabia of the copper industry– and it also has mines with relatively high metal content (around 2%). Furthermore, because of the geographical configuration of the country, in which the mountain range of the Andes is close to the sea, the transport costs to inter-

national markets are relatively lower than in other countries.

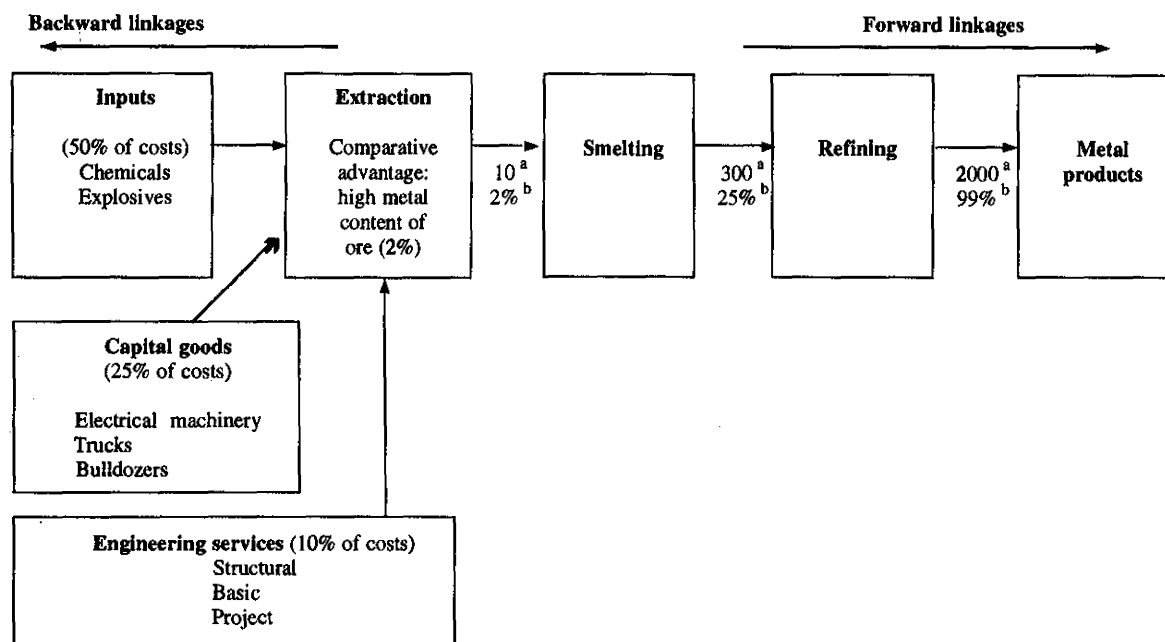
The cluster already displays important forward and backward linkages (see figure 7).⁹ The copper ore as extracted from the mines has a metal content of the order of 2% and a value of around US\$ 10 per ton. After a process of smelting and generally also of refining, the ore is converted into copper of over 99% purity, worth some US\$ 2,000 per ton. In other words, the processing increases the copper content by a factor of 50 but raises the value by a factor of over 200. Most of the refined copper is exported directly, but quite a significant part is converted into wire and other products which are then exported. Greater maturity of the production cluster would involve the promotion of these latter activities.

The backward linkages are just as highly developed, if not more so. Only 15% of the cost of extracting copper corresponds to labour; the remaining 85% represents derived demand for potential domestic suppliers. This 85% is broken down into 50% for inputs such as explosives and chemicals; 25% for capital goods such as drills, crushers, trucks, bulldozers, etc., and 10% for engineering services (basic engineering, project engineering, and structural engineering). Domestic production currently supplies

⁹ The analysis of this topic is based on Duhart (1993).

FIGURE 7

Chile: An incipient mining cluster based on copper



Source: ECLAC, on the basis of official data.

^a Dollars per ton. ^b Copper content.

two-thirds of the inputs, 40% of the equipment (especially replacement equipment) and 75% of engineering services. In other words, 60% of the cost of inputs, machinery and engineering services (i.e., 60% of the potential backward linkages) is for goods and services provided by domestic industry.

As might be expected, this process of replacement of imports by domestic production has been advancing with time. Thus, 40 years ago, in 1955, less than 25% of these linkages involved goods and services provided locally: 40% of inputs (compared with 67% at present), only 5% of machinery and equipment (in contrast with 40% today), and less than 10% of engineering services. There has been noteworthy progress in quantitative terms and in adding value to production, especially in the areas making use of know-how and technology.

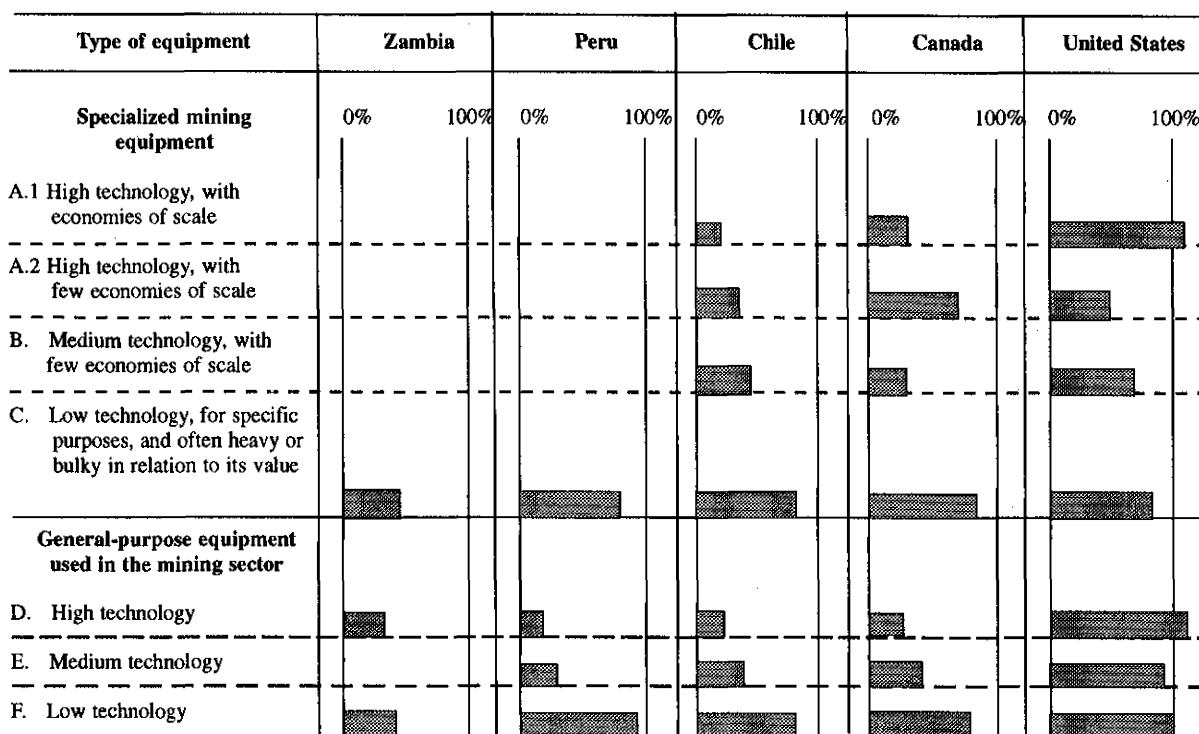
It should be noted that only part of this process of substitution of inputs and equipment was spontaneous. Much of it was due to the strong impulse provided by an active policy in favour of domestic products. The success of this policy may be seen by the fact that today domestic industry is competitive

with imports, without enjoying any significant preferences.

Indeed, a recent study (Ritter, 1996) concludes that the Chilean capital goods industry for the mining sector is not far behind that of Canada in terms of its development. It is estimated that domestic industry provides 80-90% of the mining machinery of a low level of technology (the same percentage as in Canada); 30-40% of the machinery of medium technological level (compared with 40% in the case of Canada), and 20% (compared with 40%) in the case of more specialized machinery of a high technological level (figure 8). Figure 9 provides a comparison of the production clusters of the two countries as regards their shares in OECD imports of copper and related products in 1994. It may be seen from the figure that Canada has a much more highly developed production cluster than that of Chile, with a substantial share in OECD imports not only of copper (where Chile's share is bigger) but also of wire and wirework, metalworking machinery, and civil engineering machinery and equipment. If we look at Latin American imports of the same items, however

FIGURE 8

Relative development of capital goods industries for the mining sector: a global hypothesis or appraisal ^a



Source: Ritter (1996).

^a The bars indicate the percentages of the total volumes of capital goods used by the national mining industry and provided by the domestic equipment manufacturing industry.

(figure 10), we see that Chile is beginning to export wire and wirework and civil engineering machinery and equipment: Chile's share in this Latin American market is not far below that of Canada and higher than that of Australia. This confirms the tendency already noted to begin by substituting imports, then to export to the closest markets, and later export to more distant and demanding markets, and it also confirms not only the relatively high degree of complexity of Chile's production of copper-related goods but also its great future development potential.

Moreover, as the mining machinery industry usually calls for some degree of proximity to the mines (for underground mining, at least, calls for a great deal of adaptation of the equipment to local mining conditions), it can be expected that there will be a considerable boost in the future for the Chilean industries producing capital goods for the mining sector. On the one hand, the large volume of invest-

ment foreseen in the medium-term future for the mining sectors of Argentina, Bolivia, Peru and also Chile guarantees strong demand for such equipment, and on the other, Chile is the only one of these countries with a more or less developed industry of this type close to the mining areas.

It is also worth noting that Chilean engineering service enterprises are exporting their services abroad and have even begun to export technology. Outstanding examples of this are the modified furnace developed and patented by Codelco, which has been sold to smelting plants in Mexico, Peru and Zambia, and the bacterial leaching process developed by the Pudahuel mining company, which has also been sold abroad.

In spite of these advances, however, the rate of progress is still very low for a country which has the biggest reserves of copper in the world. Indeed, the research and development effort in the mining sector

FIGURE 9
Shares of selected countries in OECD
Imports of copper and related products, 1994

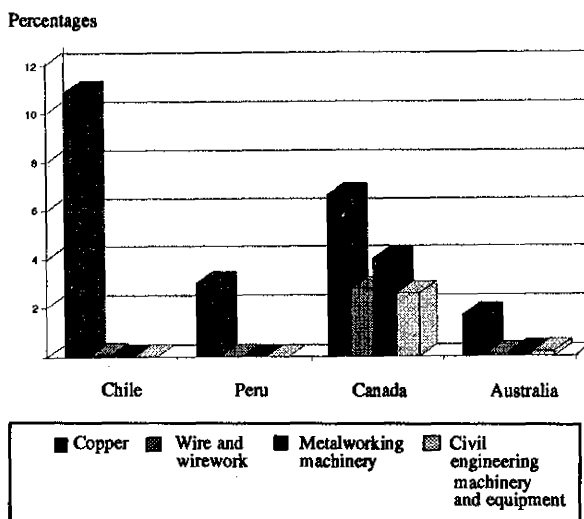
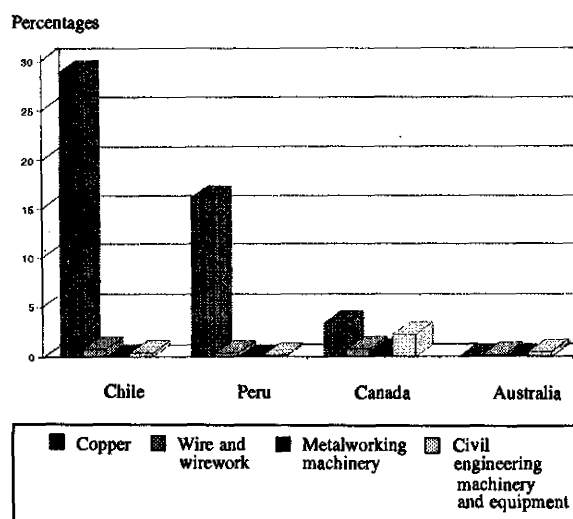


FIGURE 10
Shares of selected countries in Latin American
Imports of copper and related products, 1994



is very insufficient: the technological centres engaged in mining research employ some 150 specialized professionals, and their budget is around US\$ 4 million per year, which is much less than 0.1% of the value of the country's mining exports. Although it is also necessary to add to this figure the research being carried out in the universities and the development projects financed from various technology funds, it is nevertheless clear that the amounts are insignificant for the main industry of a country which is the biggest copper exporter in the world. It may be recalled that the developed countries devote nearly 2% of their GDP to research and development, and even countries which make intensive use of natural resources, such as the Scandinavian countries, spend more than 1% of their GDP on activities of this type connected with natural resources.

3. Other major production clusters

Other important examples of incipient production clusters in Latin America are those connected with the iron and steel industry and forestry activities. Figure 11 shows the shares of three Latin American countries, two recently industrialized Asian countries, and two developed countries (Japan and Germany) in OECD imports of types of goods connected with the iron and steel cluster. First, we see that Germany has the most complete and mature

cluster. It does not export iron ore, of course, but processes the whole of it. Although Japan lacks significant natural resources in this field it nevertheless has a highly developed cluster, although not so much so as that of Germany. Since it lacks raw materials of its own and has a processing industry which depends on imports, Japan has specialized above all in the production and export of metalworking machinery, which is undoubtedly the phase that makes the most intensive use of specialized know-how and technology.

Second, Brazil—a country with abundant iron ore reserves—has a very high share in OECD imports of this raw material, followed by unworked iron and steel, but it has only a low share in the categories which are more demanding in terms of technology. Furthermore, Brazil's share in OECD imports of metal manufactures and metalworking machinery is even below those of South Korea and Taiwan, whose iron ore endowment is very scanty. This shows that an important industrial cluster can be developed, through imports, even without having the natural resource on which is based.

Third, it may be observed from figure 12 that in the case of the Latin American market, Germany's share is much lower, whereas that of Brazil is much higher in all categories, even the more complex ones. Thus, in all categories except machinery Brazil's share is higher than those of Japan and Germany, and

FIGURE 11
Shares of selected countries in OECD imports of iron ore, iron and steel and related products, 1994

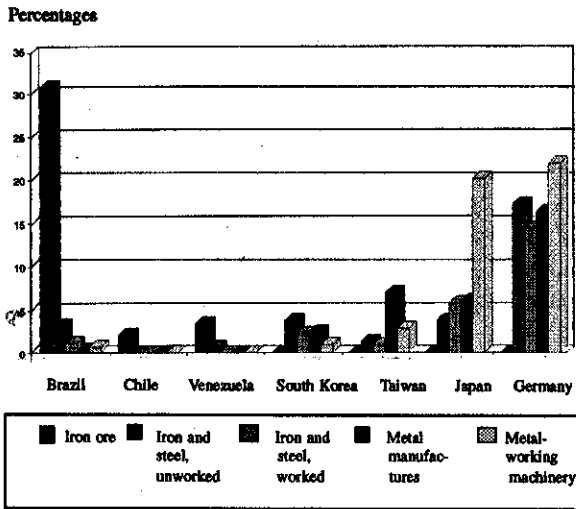


FIGURE 13
Shares of selected countries in OECD imports of wood and related products, 1994

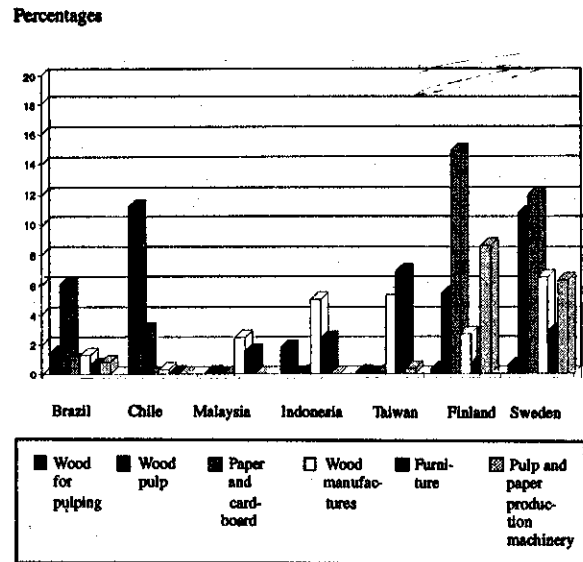
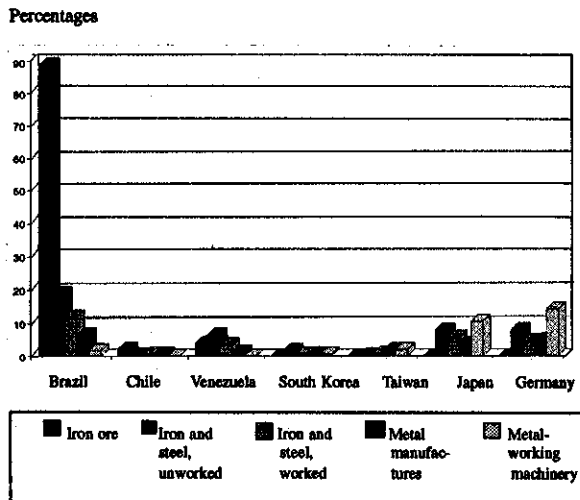


FIGURE 12
Shares of selected countries in Latin American imports of iron ore, iron and steel and related products, 1994



beginning to make its presence felt in the Latin American market, with a share which is higher than that of South Korea in all categories and higher than that of Taiwan in the less complex categories.

Figure 13 shows the share of forestry products in the OECD's imports in 1994. Finland and Sweden have the most complete and highly developed production clusters, while Brazil, Chile, Malaysia, Indonesia and Taiwan also have a certain international presence, although Taiwan does not have forestry resources of its own. It may be noted that there has been specialization in different niches, even within the same branch: for example, Sweden has concentrated on expensive furniture of outstanding design, while Taiwan has concentrated on mass production. In spite of Sweden's greater specialization in high-quality furniture, however, the total value of Taiwan's exports of furniture was double that of Sweden. This shows that a niche of high value and quality is not always that which registers the highest volume.

even in the case of machinery its share is higher than that of South Korea and almost equal to that of Taiwan. This suggests once again that the natural evolution of a production cluster is to progress from import substitution to exports, but starting with the closest or least demanding markets and only later going on to more distant markets. Venezuela, too, is

Comparison of figures 13 and 14 shows that since 1977 the forestry clusters of the developing countries have been gaining shares in the OECD market at a rapid rate, whereas Sweden's share has gone down sharply. The development of the Brazilian and Chilean clusters is even more striking if we look at their share in Latin American imports in these cate-

FIGURE 14
Shares of selected countries in OECD
imports of wood and related products, 1977

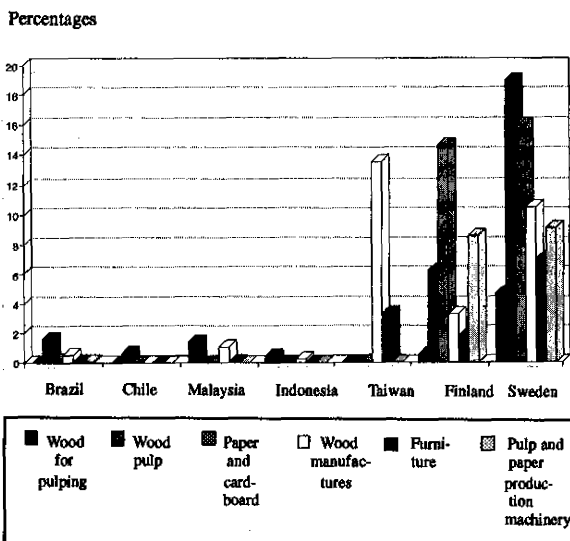
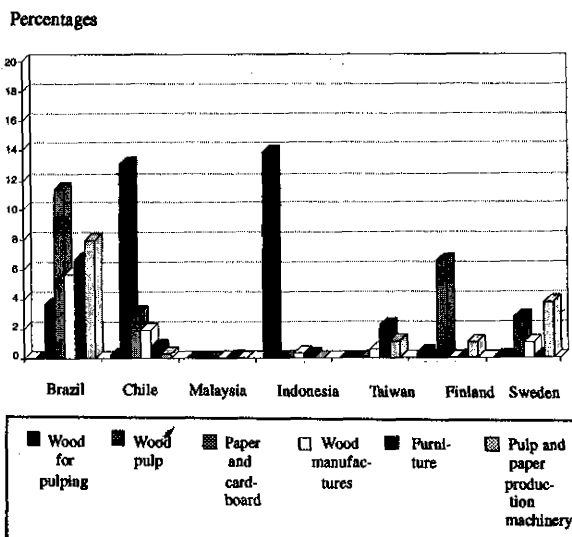


FIGURE 15
Shares of selected countries in Latin American
imports of wood and related products, 1994



gories (figure 15). The development registered by Chile and above all Brazil is very noteworthy. Brazil's share in Latin American imports of wood and related categories dominates in all categories (except wood pulp, where Chile leads) and is much higher than that of Finland and Sweden: indeed, its share in the Latin American market for pulp and paper machinery, as well as the market for paper and

cardboard, is greater than that of Sweden and Finland together. Chile's share, for its part, is greater than that of Sweden, except in pulp and paper machinery. This highlights the big advances that have been made by the forestry clusters of Brazil and Chile, which still have a great deal of potential for developing their participation in the bigger and more demanding markets of the OECD.

V

From spontaneous evolution to promotion policies

In the previous section we showed the important role played by the development of natural resource-based production clusters in many countries which are well endowed with such resources and are now developed. A similar development strategy to promote the consolidation of the as yet incipient clusters based on Latin America's rich endowment of natural resources would provide the region with an obvious development potential.

1. If this development is already taking place naturally, then why promote it?

The answer is that the promotion of such a strategy would help the region to grow at much faster rates than the spontaneous or historical ones, and thus reach the goal earlier. In fact, it is a question of exploiting the great advantage of late development: broadly speaking, it is already known which direction

to take, and such promotion is therefore perfectly feasible. There is no question of a voluntaristic or ahistorical type of promotion, or of one which goes against the market forces. On the contrary, since it follows the direction of the natural evolution of the market forces, what we are doing is anticipating the market and thus accelerating development.

It is important that all the economic agents should be collectively aware of the virtues of the strategy, for this awareness would be equivalent to a strategic planning process which unites wills and coordinates efforts, thus reducing uncertainty, operating at all times closer to the production frontier, maximizing yields, and, ultimately, multiplying the accumulation and efficacy of the factors of production.

2. But when all is said and done, how important can natural resource-based production clusters be?

It is often considered that the global impact of these clusters is only limited, since the core (extractive) activity often has relatively little weight in GDP. This reasoning is deeply mistaken, however, since it concentrates exclusively on the direct impact of the clusters.

Thus, for example, Meller (1996) estimates that the whole of Chilean exports, the great majority of which make intensive use of natural resources, generate only 10% of employment directly. When the indirect employment generated by these exports is included, however –that is to say, the employment generated by the activities involved in processing, marketing and transporting these exports (the forward linkages) and the activities providing them with inputs, capital goods and engineering and consultancy services (the backward linkages)– the amount of employment is more than doubled. It is estimated that the employment generated indirectly by the backward linkages is 6% of the national labour force, while that generated indirectly by the forward linkages is a further 7.5%.¹⁰ Furthermore, thanks for the foreign exchange earned by these exports (and products with a high content of natural resources usually are exported), resources are made available for buying imports, which has a substantial additional effect on

employment. In fact, unlike what occurs with import substitution, each dollar of exports, by making possible a dollar of imports, generates additional revenue for the State which offsets the anti-export bias of economic policy. This bias is equal to the 15% tariff (the average for the region) levied on imports, which are ultimately financed by exports. If this extra fiscal revenue were invested, it would generate an additional 10% of employment (on the assumption that each US\$ 30,000 creates one good, high-productivity job). The total employment of the cluster of activities developed around exportable natural resources in Chile would therefore account for around one-third of the total employment in the country, which is more than three times the direct effect. The true impact of the cluster on the national economy would thus be extremely important.

3. How should production clusters be promoted? Is it a question of “picking winners”?

The experience of mature clusters in developed countries indicates the direction which our development could follow. Although history never repeats itself completely, the path followed by the now-developed countries which have abundant natural resources gives an idea of the direction that Latin America should follow (or not follow). We must take advantage of this knowledge in order to decide how best to speed up the maturity of the incipient production clusters of the region.

Thus, comparison of the incipient natural resource-based Latin American production clusters with similar clusters which are now mature in the developed countries suggests the following measures:

a) To identify, in conjunction with the private sector, the development potential of the activities supplying inputs and equipment, as compared with that of the extraction and processing activities; of processing activities of growing complexity; and of the related services, including in particular engineering and consultancy services. It is not a question, of course, of channeling investment directly to these activities, along the lines of the former Soviet GOSPLAN, but of carrying out a strategic planning exercise among the different economic agents in order to make a systematic and collective analysis of the investment opportunities available in the relevant production cluster.

¹⁰ With regard to the basis for the figures given in this paragraph, see Díaz and Ramos (1998).

b) To identify the activities of the production cluster which require more foreign investment, because of the advanced nature of their technology, their access to international markets, or the amounts of resources involved, and to guide national efforts to attract the most suitable transnational corporations to the country. Already in the 1990s there has been a sharp increase in foreign direct investment in Latin America. Such investment opens up new opportunities for producers in the region to become suppliers of transnational corporations not only for the domestic market but also, possibly, for international markets. However, not all foreign direct investment has the same potential for generating linkages, externalities or vital technological learning, and it is likely that the transnational corporations are not fully familiar with the local opportunities. This justifies efforts to attract, not so much foreign direct investment in general, but the corporations and types of foreign direct investment which are of most interest for the development of the incipient production clusters of the region.¹¹

c) To identify the key technologies for developing the production cluster and to promote the local mastery and updating of those technologies through selective policies for the promotion of research and development, both in domestic enterprises and in research institutes, as well as promoting the updating and adaptation of technology through missions abroad, promotion of licenses and joint ventures, and programmes for the co-financing of consultancy activities in respect of key technologies.

d) To identify the infrastructural needs of the cluster in the short, medium and long term, especially in the areas of greatest public interest and responsibility: physical infrastructure, scientific and technological infrastructure, and human resources infrastructure (especially middle-level technicians, specialized technicians and professionals).

Although "hard" instruments could be used for these purposes (that is to say, direct incentives or coercion), it is considered that it would be sufficient, and would be more in keeping with the current spirit, to use "soft" instruments based on mutual agreement and inducement rather than coercion, except of course in respect of the physical, technological and

human resources infrastructures, since the latter are mainly the responsibility of the public sector, so that there is no option but to plan and order the allocation of its limited resources among its many commitments.

At the same time, it must be acknowledged that speeding up the maturity of the clusters is indeed a form of "picking winners", but not in the pejorative sense of making a voluntaristic choice without adequate basis. Instead, it is simply a question of making a reasonable bet based on past development tendencies and thus speeding up what the market will in any case have to do for itself. Indeed, one of the advantages of late development is that it is possible to learn from the experience of others and thus jump over unnecessary stages. Specifically, what is advocated here is to learn from past experience and promote those activities which have tended to arise spontaneously on the basis of natural resources in the countries which are now developed and are rich in such resources. It therefore means going with the market, not against it.

Nevertheless, it must be emphasized that this strategy is a wager, and there is no absolute guarantee of success. As already noted in our analysis of the Corporación Venezolana de Guayana, the lack of promotion may mean failing to take advantage of important opportunities, but there is also a danger of failure if one goes to the other extreme of a high degree of dependence, through failing to distinguish between promotion and paternalism. Even so, we consider that this is a reasonable bet based on our capacity for learning from the past in order not to depend exclusively on spontaneous developments and chance or providential occurrences.

Finally, it should be noted that this strategy for industrialization on the basis of natural resources is not a panacea but a valuable instrument in the present stage of development of the region, which is faced with the challenge of turning its present endowment of natural resources –currently abundant, but ultimately limited– into a means of unrestricted growth. It is not a question of taking the place of the market, but of speeding up its action and achieving in 40 or 50 years what took a hundred years to occur spontaneously in the countries which are now developed and which had plentiful natural resources. It is this approach which will enable us to achieve rapid rates of economic development, much higher than those of the past.

(Original: Spanish)

¹¹ See Battat, Frank and Shen (1996), especially with regard to the potential offered by transnational corporations for the development of domestic suppliers in the region.

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Big Latin American *industrial companies* and groups

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This article seeks to summarize the results of some studies on the structure and dynamics of the big domestically owned industrial companies and groups in five Latin American countries (Argentina, Brazil, Chile, Colombia and Mexico) and presents supplementary elements for placing them in an overall perspective. The studies include individual analyses of 46 leading companies (in Brazil, Chile and Colombia) and 15 economic groups with an industrial base (in Brazil and Mexico), together with aggregated studies of such groups in Argentina, Brazil and Mexico. In all cases, the studies were based on specially arranged interviews, the review of statistical and documentary information, and data already processed in the relevant literature. The time-scale of the studies ranges from the formation of some big companies and groups in the early years of the century or the period of dynamic import substitution industrialization, up to the changes under way in the second half of the 1990s. Analysis is centered on the last decade: i.e., since the time when the structural reform processes were at their height in most of the countries whose big companies and groups are studied in this work. The article is divided into four sections. After the Introduction (section I), some summary details of the business context in the five countries studied are given (section II), after which the main structural features of the big companies and groups and their recent dynamics at the company, plant and group level are analysed (section III). Finally, in section IV, the main challenges facing public policies in this respect and the positions taken in the current debate on them are set forth.

I

Introduction

In the second half of the 1990s, the big privately owned industrial companies and groups (BIGs) occupy a strong position in the markets of the Latin American countries. This position is the result of processes which took place in the context of the structural changes undergone at the national and international level since the early 1980s and has meant that the BIGs, along with the subsidiaries of transnational corporations, are now the biggest and most dynamic business units operating in Latin American industry. This dominant position has tended to be further strengthened by the privatization of the great majority of State-owned industrial enterprises, while smaller enterprises continue to face problems in modernizing their operations and speeding up their growth.

In terms of their competitiveness, the BIGs are in a transitional position, and in spite of their strength they are facing threats due to their structural characteristics, especially the fact that they are smaller than their international competitors and are located in sectors which are technologically mature and are growing relatively less rapidly in the world market. The growth rates of the BIGs have had difficulty in carrying forward the rest of the domestic economy with them, so that it is hard to describe their competitive position as reflecting a situation of real leadership. Although generally speaking the performance of the BIGs is successful, the rest of the local private companies are going through serious problems in most of the countries of the region, while the new configura-

tions of the economy generated by the structural reforms are still in a state of flux and, in many cases, are strongly dependent on external variables.

The relative fragility and weak leadership capacity of the BIGs raise many doubts and give rise to much discussion with regard to their nature and their potential in relation to the economies where they operate. Most of the studies on the effects of the structural reforms have concentrated on the macroeconomic dimension, but few of them have analysed the situation of enterprises, and especially the BIGs, in this process. This omission is paradoxical, because in line with the policy approach which has predominated in the reforms, it might be expected that there would be growing interest in analysing the strategies and performance of enterprises, since it was expected that these would be the main economic agent in the context arising out of the reforms. Thus, the studies have not dealt with the determinants and forms of the processes of change among enterprises, other than noting the positive role which it was (rightly) expected that the increase in competition would play.

This article summarizes the results of several studies on the structure and dynamics of BIGs in five Latin American countries (Argentina, Brazil, Chile, Colombia and Mexico).¹ These studies include individual analyses of 46 leading companies (in Brazil, Chile and Colombia) and 15 industrial groups (in Brazil and Mexico), together with aggregate analyses of such groups in Argentina, Brazil and Mexico.²

□ Ludovico Alcorta, Martine Dirven, Jorge Katz, Joseph Ramos and Ana San Sebastián made valuable comments and suggestions which permitted the correction of various errors and inconsistencies. This article is a summary version of chapter 1 of Peres (1998).

¹ The country studies are given in Peres (1998). In order to avoid repetition, whenever any of these five countries is mentioned this is understood to refer to the corresponding chapter in that book, unless otherwise stated.

² The criteria followed in selecting the companies and groups studied are described in detail in the corresponding chapters of Peres (1998). In most cases, the criteria were based on the possibility of having access to information and expert opinions on the importance of the companies and groups in question. The way the study was designed tended to concentrate attention on the BIGs which existed at the end of the period studied, which really means that the study covers the BIGs which were at least partly successful in adjusting to the new economic context. The fact that very few BIGs have gone out of business through bankruptcy or liquidation means that this skew is not important, however.

II

The business context

Up to the early 1980s, the linkages of the Latin American companies and economies with the outside world were determined by the conditions established under the economic order that arose after the war. This order was marked by heavy protectionism and the leading role played by the State in organizing and regulating economic growth through its promotion of import substitution industrialization.

In the course of their development, the economies of the region gradually began to display growing internal and external imbalances which led to "stop and go" economic growth. In this context, the biggest local enterprises sought a form of growth which was in keeping with the particular conditions imposed on them by the macroeconomic environment, the regressive income distribution, and the predominant orientation of their production towards relatively small domestic markets with low quality requirements. In particular, the relative smallness of the markets soon imposed a limit on their growth unless they diversified, and at the same time the possibility of high rates of profitability in new sectors promoted by the import substitution industrialization policy made it extremely attractive for them to venture outside their sectors of origin.

Thus, the big enterprises used vertical integration and the establishment of conglomerates as growth strategies, leading to the diversification of their investments into different economic sectors, including banking, against a background of growing concentration of State support and economic power in their favour. Vertical integration enabled them to cope with the problems of non-existent or incomplete markets, especially with regard to suppliers and subcontracting, which were particularly serious problems in under-developed countries closed to external supply. The incorporation of financial activities, for its part, enabled them to overcome problems of asymmetrical information and gain privileged access to credit, especially long-term credit.

Vertical integration and the formation of conglomerates made possible the establishment of large groups of enterprises (BIGs)³ able to develop and use specific assets (such as specialized labour) within

their operations, reduce transaction costs, diversify the risks deriving from the uncertainty caused by economic instability, and provide the necessary guarantees when they needed financing on market terms. The utilization of economies of scale and of scope or field in respect of indivisible assets such as management capacity, corporate functions and specialized technology kept the advantages of their large scale alive even when markets were becoming deeper and their flaws were being reduced (Paredes and Sánchez, 1996).

The combination of the above elements explains why in Latin America, as in other late-developing regions, diversification has been an important strategy for maintaining and increasing the size of groups of enterprises (Bisang, 1996). However, growth based on vertical integration and conglomeration eventually came up against the limits imposed by the size of the domestic market and led to an extremely vulnerable type of diversification of investments.⁴

BIGs were thus the most advanced achievement bequeathed by import substitution industrialization in the area of domestic private enterprises and, together with the subsidiaries of transnational corporations and the big State enterprises, they formed the core of an industrial structure oriented towards the domestic

³ The concept of "economic group" implies a set of operationally independent enterprises coordinated by a central body. Its activities may be concentrated on a certain type of product, diversified throughout a production chain with vertical integration, or organized in conglomerates operating in various sectors of economic activity. Very often, these forms of organization include financial institutions which, in some cases, are the dominant body in determining the common objectives. For a review of the theories on economic groups, see Granovetter (1994) and Bisang (1996).

⁴ In spite of its costs in terms of specialization, the formation of conglomerates still has a role to play in Latin America, as is shown by the fact that, in contrast with the trend in developed countries, the shares of conglomerates in the region are quoted at a premium over those of independent enterprises. Because of their lower capital costs and their greater access to the supply of management talent, conglomerates are considered to be in a better position to take advantage of new business opportunities. In particular, foreign investors seem to view conglomerates as country funds in which their diversification offers advantages in markets which are still of high risk (*The Economist*, 1997).

market. Outside this dominant set of enterprises, there was a large number of small enterprises producing goods of very low technological content and making a very limited contribution to the national product, their main economic contribution being the significant number of jobs they generated.

In the 1980s, the Latin American economies reached such levels of imbalances in their production and financial activities that they were faced with the need to make structural reforms, seeking new growth paths through new types of linkages with the changing international scene. In general, the structural reforms tended to establish new orders marked by deregulation and liberalization of markets and opening up of the economy to the exterior. Consequently, in these countries there were changes not only in the characteristics and forms of macroeconomic op-

eration but also in the production structures and the relations of the various economic actors, both with each other and with the actors in other countries and the world economy as a whole.

In this context, private enterprises came to be the decisive actors in economic growth. Now, more than 15 years after the beginning of the structural reforms, the BIGs continue to be of decisive importance in the economies of the countries of the region. Most of them occupy outstanding positions in the business universe of their countries, although the macroeconomic and institutional context is substantially different from that which existed when they were originally formed and they are very different, in terms of their organizational structures, strategies and types of performance, from those which existed in the early 1980s.

III

Business structure and dynamics

It is hard to draw general conclusions from the results obtained in the studies on the BIGs of the five Latin American countries in question, both because of the different backgrounds and forms of evolution of the enterprises and the differences between the industries in which they operate, and because of the dissimilarities between the countries concerned with regard to their institutional and political evolution, size, geographical location and importance in the region.

Bearing these limitations in mind, the similarities and differences between the conditions, evolution and tendencies of the BIGs within the context of the two main dimensions of the analysis will be explored below. In the first section, a profile of their characteristics will be drawn on the basis of five variables: their origin, the predominant type of ownership, their relative size compared with other big industrial enterprises, the sectors of activity in which they operate, and the relations they have established between their domestic market and the international economy. In the second section, an analysis will be made of their processes of change, which means giving a schematic description of some of the main interactions between business strategies, the evolution of production patterns, and public policy actions, in which the impacts and challenges of external open-

ness, globalization and regional integration occupy a leading place.

1. Profile of the big groups and enterprises

a) *Origin*

The BIGs which currently occupy a leading place in the Latin American business universe were mostly formed during the import substitution industrialization period, although some of them go back to the turn of the century, when the industrialization of the most advanced countries of the region began (Bunge y Born in Argentina, Alpargatas in Argentina and Brazil, the core of the Monterrey group in Mexico, Bavaria in Colombia, and Compañía de Cervecerías Unidas in Chile, among others). Their origin or rapid development during the import substitution industrialization period are particularly noteworthy in the case of the largest BIGs, which already occupied by the late 1970s a position as important as that which they occupy today (for example, Votorantim in Brazil, ACINDAR in Argentina or Compañía de Acero del Pacífico in Chile), although all of them have had to carry out profound restructuring processes in order to maintain their position.

The origin of the main BIGs has been due fundamentally to three rationales. The two most important

of these have been expansion from a strong business base developed around natural resources (for example, Bunge y Born developed from the marketing of cereals to the food industry) and growth through diversification in order to generate synergies from a basically industrial core (for example, the Monterrey group progressed from beer production to the production of glass bottles, metal sheets and corrugated cardboard). A third rationale, which is less frequent, corresponded to cases where the conglomeration was promoted by groups with a fundamentally financial base or connected with civil engineering or other services, which tended to acquire existing enterprises rather than creating new activities. Some outstanding examples of this are the groups generated around the Bradesco, Bamerindus, Garantia and Itaú banks and the Camargo Corrêa and Odebrecht construction enterprises in Brazil, or the industrial and financial groups reconstituted de facto in Mexico after the privatization of the commercial banking system in the early 1990s.⁵

In addition to the BIGs which arose before and during the import substitution industrialization process, there are new and sometimes very powerful BIGs which arose or developed in the course of the structural reforms carried out from the 1980s onwards. These new organizations have arisen from the privatization of traditional activities (ENERSIS in Chile) or from dynamic processes of conglomeration-building based on portfolio criteria (the Carso group in Mexico).

In the five countries studied, the top businesses in the second half of the 1990s were not always the same as those of three decades earlier. The emergence of new BIGs and the disappearance or withdrawal from the group of leading enterprises of a few traditional groups such as Matarazzo in Brazil, Di Tella in Argentina, Cruzat-Larraín and Vial in Chile and the Gran Colombiano group in Colombia⁶ show that the composition of this group of top enterprises is not rigid. This suggests that there are different capacities of reaction to economic and political changes

and that there is competition between capital blocs, in contradiction of the apparent "easy-going life of the oligopoly" which might be expected to exist in captive markets.

b) *Type of ownership*

Both the new BIGs and the traditional ones generally remain under personal or family ownership and are structured within formal or informal economic groups, from which they organize their relations of ownership, control, financing and resource allocation. The main reasons for this preference for keeping BIGs under personal or family control would appear to be the greater flexibility this provides for decision-making in unstable contexts, the greater facility for settling inheritance disputes when the founder dies, and the existence of a legal framework which does not effectively guarantee the rights of minority shareholders and gives rise to some uncertainty about respect for contracts (*The Economist*, 1997). Apart from these reasons, however, the predominance of family ownership and control seems to be typical of countries with levels of development like those of Latin America, and this becomes clear when it is noted that a similar phenomenon is observed in the economies of Southeast Asia (Koike, 1993). Many BIGs continue to be closed companies, in the sense that their shares are not quoted on the stock market. Even when they are quoted, these enterprises only place a small percentage of their total equity on those markets, and the same is true of the increasingly numerous enterprises which place American Depositary Receipts (ADRs) on the United States stock markets. Generally speaking, these enterprises have been obliged to improve their provision of information, and some of them have had to dismember parts of their conglomerates into relatively independent corporations, although this has not fundamentally changed their forms of ownership and control.

⁵ By the late 1970s important groups had been set up around the Banco Nacional de México (BANAMEX) and the Banco de Comercio (BANCOMER), but these disintegrated when the private banking system was nationalized in 1982.

⁶ There have been various different causes for the disappearance of these groups. Matarazzo began to lose weight from the early 1960s onwards because it could not cope with the increased competition with its over-diversified and excessively vertically integrated structure. The crisis of Di Tella came on at the end of that decade when it could not cope with its problems of excessive

diversification, inefficient scale, and insufficient cash flows for dealing with the modernization processes made necessary by competition (Bisang, Burachik and Katz (eds.), 1995). Cruzat-Larraín and Vial went bankrupt in 1983 when, because of the devaluation of the Chilean peso and the recession, their enterprises could not pay off the loans that their own banks had made to them with funds borrowed abroad. Finally, the Gran Colombiano group came to an end when the government decided to nationalize its controlling body, the Banco de Colombia, in 1984 because of some dubious transactions (Arbeláez, 1997).

In some countries, such as Colombia, their reluctance to open up the ownership of their equity seems to have impeded the possibility of forming strategic associations with foreign investors, with consequent negative effects with regard to the transfer of production and management know-how. At the other extreme are Argentina and Mexico, where the number of such associations has increased markedly in the 1990s. The results of this have not been fully evaluated, but it would appear that in some cases the associations have only lasted a short time or have merely foreshadowed the acquisition of a substantial part of the local enterprise by the foreign partner, as in the case of the purchase of Cervecería Modelo (Mexico) by Anheuser Busch.

c) *Relative size*

The question of the size of BIGs and their relative position with respect to foreign corporations calls for a disaggregated study comparing what has happened in the five countries studied. For this purpose, information was used from three samples of the hundred largest domestic and foreign industrial enterprises in Latin America,⁷ with data for 1990, 1994 and 1996, respectively. Each of these samples was taken from a broader sample covering the 500 largest industrial and non-industrial enterprises of the region, published annually by the review *América Economía*.⁸ As noted in chapter 1 of Peres (1998), in 1996 the hundred largest industrial enterprises registered joint sales of US\$ 163.8 billion, equivalent to 29% of the sales of the 500 largest enterprises (US\$ 568 billion). The economic importance of the big enterprises is obvious when it is considered that the GDP of the region in that year was approximately US\$ 1700 billion.⁹

If we aggregate the information in the sample in question by country and type of ownership, we see that 99 of the 100 largest industrial enterprises in the region are privately owned (table 1), the Corporación

Venezolana de Guayana (CVG) being the only State-owned enterprise registered. The numerical balance between domestic and foreign-owned private industrial enterprises is also noteworthy, but this conclusion must be subject to reservations in the light of the structure of sales in the sample (table 2).

Thus, whereas domestically-owned private enterprises accounted for 40.2% of total sales in 1996, the share of foreign-owned enterprises was substantially greater (57.3%), while the presence of State-owned enterprises was very small (2.5%).¹⁰ A noteworthy feature in this picture is also the large average size of the enterprises concerned. In 1996, the average domestic enterprise in the sample had sales of US\$ 1345 million, while the foreign-owned enterprises averaged US\$ 1879 million. Naturally, these data do not reflect the economic power of each of these groups. Although the size of the domestic enterprises may be underestimated because not all the enterprises of the groups to which they belong are taken into account, the great majority of the big foreign firms in the region are subsidiaries of giant world corporations.

At the individual country level, there are various different situations. Brazil and Mexico account for 75% of the big industrial enterprises of the region, with Brazil having the larger share. As regards the balance between domestic and foreign-owned private firms, the latter predominate in Brazil, while in Mexico, Argentina and Colombia there are different degrees of relative balance between the two types of firms and in Chile there are only domestic large private enterprises.

In order to complete our consideration of the scale of the big Latin American industrial enterprises, it is worth comparing them with the big international

⁷ In the samples, the definition of ownership used was based on the criterion of the majority shareholder at the end of the calendar year.

⁸ For some countries, especially Mexico, the sample includes both enterprises and groups of enterprises (holdings). As this procedure is not followed for all the countries, it would be wrong to claim that the unit of analysis in the tables in this article is the BIG, although a number of them (especially those in Mexico) are indeed included. It should also be noted that the enterprises included in the samples vary from year to year, depending on their interest in participating.

⁹ Some reservations should be made regarding the significance of sales as an indicator of the size of enterprises. Firstly, these amounts may be overvalued because of the level of the real exchange rate prevailing in the region. Secondly, these values underestimate the importance of domestic private enterprises because they do not include all the economic groups in which these are organized. Thirdly, insofar as the sample includes holdings (almost all of them Mexican), there is a risk of duplication. Since it is not possible to estimate the sign of the negative effect of these three skews, the data in the tables derived from the samples should be viewed with caution and taken as merely indicative.

¹⁰ By way of comparison, it is worth noting that in 1996, among the 500 biggest enterprises in all sectors of activity, 276 domestic private enterprises accounted for 42% of sales, 161 foreign-owned enterprises for 29.5%, and 63 State-owned enterprises for 28.5% (*América Economía*, 1997, p. 152).

TABLE 1

Latin America: Ownership of the 100 largest industrial enterprises, 1996
(Number of enterprises)

	State enterprises	Domestic private enterprises	Foreign enterprises	Total
Brazil	0	17	23	40
Mexico	0	18	17	35
Argentina	0	7	8	15
Colombia	0	2	2	4
Chile	0	2	0	2
Venezuela	1	3	0	4
<i>Total</i>	<i>1</i>	<i>49</i>	<i>50</i>	<i>100</i>

Source: Prepared by the authors on the basis of data given in chapter 1 of Peres, 1998.

TABLE 2

Latin America: Characteristics of the 100 largest industrial enterprises, by type of ownership, 1996

Type of enterprise	Number of enterprises	Sales (millions of dollars)	Average sales per enterprise (millions of dollars)	Breakdown of sales (percentages)
Domestic private	49	65 898	1 345	40.2
Foreign	50	93 953	1 879	57.3
State-owned	1	4 000	4 000	2.5
<i>Total</i>	<i>100</i>	<i>163 851</i>	<i>1 638</i>	<i>100.0</i>

Source: Prepared by the authors on the basis of data given in chapter 1 of Peres, 1998.

corporations. On the basis of the information on the 500 biggest world firms given in *Fortune* magazine, we see that the total sales of the 100 biggest (domestic and foreign-owned) industrial enterprises in Latin America in 1996 was less than the income of the world's largest corporation (General Motors), which came to US\$ 168.4 billion in that year.¹¹ The biggest private industrial enterprise ever recorded in the region was a joint venture between Ford and Volkswagen (Autolatina) in Brazil, which was dissolved in 1994. Even so, this enterprise, with its annual sales of almost US\$ 10 billion, was only in the last places among the biggest world-level enterprises.¹² No do-

mestic private industrial enterprise in Latin America had sales anywhere near that level in 1996.¹³

d) *Sectors of activity*

A third feature of BIGs which is worth stressing concerns the sectors of activity in which they operate and their weight within them. Table 3 gives data for 1996 on the five biggest enterprises in 19 industrial sectors, prepared on the basis of the sample of the 500 biggest enterprises given in *América Economía* and already referred to earlier.

The first thing that we see from the table is the economic concentration that exists in Latin American industry. In the 19 industrial sectors in question, the 83 (domestic and foreign-owned) enterprises which qualify among the five biggest in each sector had sales of US\$ 122 billion and provided almost 780,000 jobs in 1996, when the gross value of industrial pro-

¹¹ Information taken from the web site <http://www.pathfinder.com/fortune500/500list.html>.

¹² In order to give this information its due weight it should be borne in mind that, as already noted, the phenomenon of conglomeration is not fully registered in the sample, and this true both of domestic private firms and foreign corporations which have large subsidiaries in a number of countries of the region. For both types of enterprises, consolidating all their sales would qualify them for inclusion among the lower levels of the world's largest corporations.

¹³ In 1996 there were no private non-financial enterprises among the seven Latin American companies figuring in the corresponding list (*The Economist*, 1997, p. 7).

TABLE 3

Latin America: The five largest enterprises in 19 industrial sectors, 1996

Sector/enterprise ^a	Country	Ownership ^b	Sales (millions of dollars)	Share of domestic enter- prises in sales of the five largest enterprises	Number of workers	Exports (millions of dollars)
Soft drinks and beer				100.0		
Femsa ^c	Mexico	DP	2 558.7		35 937	55.8
Polar ^c	Venezuela	DP	1 700.0		18 000	...
Modelo	Mexico	DP	1 548.4		38 757	290.7
Brahma	Brazil	DP	1 541.1		4 858	...
Petrochemicals				100.0		
Alpek	Mexico	DP	1 546.9		5 876	...
Copene	Brazil	DP	1 130.7		1 017	...
Cydsa ^c	Mexico	DP	861.7		10 481	400.2
Copesul	Brazil	DP	594.8		743	64.9
Glass				100.0		
Vitro ^c	Mexico	DP	2 317.0		33 428	758.0
Steel				80.4		
CSN	Brazil	DP	2 169.7		12 532	579.8
Grupo Acerero del Norte ^c	Mexico	DP	1 739.0		23 869	522.9
Ispat Mexicana	Mexico	F	1 650.2		4 083	639.5
Usiminas	Brazil	DP	1 605.8		9 210	333.4
Hylsamex ^c	Mexico	DP	1 273.5		7 623	235.0
Auto parts				76.8		
Desc ^c	Mexico	DP	1 576.7		18 880	582.6
Robert Bosch	Brazil	F	934.0		10 829	266.1
Unik	Mexico	DP	579.7		9 816	...
Iochepe-Maxion	Brazil	DP	466.2		5 082	98.9
Grupo Industrial Saltillo ^c	Mexico	DP	465.2		10 285	102.9
Textiles				74.1		
Alpargatas	Argentina	F	421.3		2 166	...
Alpargatas Santista	Brazil	DP	416.7		5 196	-
Grupo Synkro ^c	Mexico	DP	399.7		...	40.1
São Paulo Alpargatas	Brazil	DP	389.7		11 777	...
Agro-industries				71.2		
Cargill	Argentina	F	1 308.0		1 800	1 066.3
Molinos Río de la Plata	Argentina	DP	1 215.4		4 600	373.8
Coamo	Brazil	DP	712.9		3 179	386.8
Nidera Argentina	Argentina	DP	674.5		840	482.6
La Plata Cereal	Argentina	DP	631.9		568	446.3
Cement				69.0		
Cemex	Mexico	DP	3 488.7		20 527	125.3
Apasco	Mexico	F	525.5		2 607	7.9
Santa Marina	Brazil	F	373.1		3 018	...
Vencemos ^d	Venezuela	F	340.0		4 000	91.5
Cebrace	Brazil	F	331.6		...	-
Pulp and paper				66.4		
Papeles y Cartones (CMPC)	Chile	DP	1 265.0		...	298.5
Kimberly-Clark	Mexico	F	1 198.0		8 013	70.5
Klabin	Brazil	DP	564.7		6 337	...
Aracruz	Brazil	DP	536.7		2 547	490.0
Machinery and equipment				57.6		
Condumex	Mexico	DP	787.6		11 554	...
Asea Brown Boveri (ABB)	Brazil	F	477.7		3 006	...
Empresa Brasileira de Compressores (Embraco)	Brazil	DP	410.7		6 006	...
Caterpillar	Brazil	F	406.2		2 338	...
Foodstuffs				48.1		
Nestlé	Brazil	F	3 591.8		17 150	123.0
Sabritas	Mexico	F	2 600.0	

TABLE 3 (concluded)

Copersucar	Brazil	DP	2 033.7		1 107	380.8
Bimbo	Mexico	DP	1 983.2		55 148	...
Ceval	Brazil	DP	1 729.5		13 828	735.6
Household appliances and electronics				46.0		
Multibrás	Brazil	DP	1 804.5		11 101	63.9
Xerox	Brazil	F	1 630.0		6 000	66.1
Itautec Philco	Brazil	DP	929.9		4 887	...
Ericsson	Brazil	F	806.8		2 330	...
Mabe	Mexico	F	772.9		13 120	30.1
Tobacco				39.4		
La Moderna	Mexico	DP	1 883.9		11 249	55.9
Souza Cruz (BAT)	Brazil	F	1 583.2		8 920	...
Massalin (Philip Morris)	Argentina	F	1 455.7		1 795	...
Nobleza Piccardo (BAT)	Argentina	F	892.4		1 700	...
Cigatam	Mexico	DP	672.4		3 446	...
Chemicals				18.4		
Celanese	Mexico	F	1 255.9		6 791	613.5
Basf	Brazil	F	983.9		4 429	107.0
Grupo Irsa	Mexico	DP	757.4		4 472	-
Bayer	Brazil	F	574.3		2 555	192.5
White Martins Industriais	Brazil	F	542.6		4 503	...
Computer and telephone equipment				14.7		
IBM	Brazil	F	1 950.0		4 039	136.1
IBM	Mexico	F	1 550.0		...	1 258.3
Hewlett-Packard	Mexico	F	1 141.9		1 045	365.8
NEC do Brasil ^c	Brazil	DP	905.7		2 496	-
IBM	Argentina	F	630.0		1 200	...
Tyres				14.6		
Goodyear	Brazil	F	835.2		...	212.4
Pirelli Pneus	Brazil	F	644.0		4 930	132.3
Bridgestone/Firestone	Brazil	F	617.0	
Tigre	Brazil	DP	358.6		2 642	-
Aluminium				8.1		
CVG ^c	Venezuela	S	4 000.0		28 000	1 050.0
Alcoa Aluminio	Brazil	F	1 060.4		8 346	...
Albrás	Brazil	S	518.1	
Caraiba	Brazil	DP	492.9		944	...
Motor industry				0.0		
Volkswagen	Brazil	F	7 003.3		29 616	-
Chrysler	Mexico	F	6 455.4		11 066	4 948.3
General Motors	Mexico	F	6 345.6		91 263	4 526.5
General Motors (GMB)	Brazil	F	5 432.9		20 800	611.6
Fiat	Brazil	F	4 742.9		21 359	329.9
Toiletry and cleaning articles				0.0		
Gessy Lever	Brazil	F	2 748.7		9 724	41.6
Avon	Brazil	F	1 222.3		3 500	-
Procter & Gamble	Mexico	F	1 200.0	
Unilever	Argentina	F	796.7		2 800	...
Total			122 270.5	39.8^f	779 686	24 791.5

Source: Chapter 1 of Peres, 1998.

^a In some sectors fewer than five enterprises are listed because there were not sufficient enterprises in the sample or because some were eliminated in order to avoid duplication with holding companies. The individual enterprises in the sectors are ranked according to the shares of domestic enterprises in the sales of the five biggest firms; when the shares are equal they are ranked according to their total sales.

^b Types of ownership: DP: domestic private; F: foreign private; S: State-owned.

^c Corresponds to a holding company; may include activities not related to the sector.

^d Property of Cemex.

^e Enterprise controlled by Globopar, the holding company of Organizações Globo.

^f Average weighted by the sales of the five largest firms.

duction in the region was of the order of US\$ 750 billion and the level of industrial employment was close to 8.5 million persons.¹⁴ Domestic firms had a share of 39.8% in the sales of this universe.

Secondly, the table shows that the sectors where big domestic private enterprises had a clearly predominant share of the sales of the five biggest enterprises (over 66% of the total) corresponded to traditional activities producing mass-consumption goods or basic inputs (non-alcoholic beverages and beer, glass, petrochemicals, steel, textiles, agro-industries, cement, and pulp and paper) and to one metal products and machinery industry: the manufacture of motor vehicle parts. While the share of domestic enterprises in foodstuffs, machinery and equipment,¹⁵ household and electronic appliances and tobacco products¹⁶ stands at an intermediate level (between 30% and 66% of the total), they have little or no participation in some sectors making intensive use of technology and advanced marketing techniques, such as automobile production, the manufacture of computer and telephone equipment, tyres, chemical products, and toilet and cleaning articles.¹⁷ Although the privatization processes opened up some modern areas other than the industrial sector to the BIGs—such as telecommunications, where they have had to enter into associations with big transnational corporations in order to cope with the strong competition—they do not have an important share in technologically advanced manufacturing activities at the international level.¹⁸

¹⁴ This employment figure does not include micro-enterprises.

¹⁵ Due fundamentally to the output of Condumex, a Mexican company producing electric cables.

¹⁶ It should be noted that the sale of the two biggest Mexican tobacco companies to foreign corporations in 1997 markedly reduced the share of domestic enterprises in this sector.

¹⁷ Their share of the aluminium sector is due to the high level of participation of two State-owned enterprises among the four biggest firms.

¹⁸ There are very few cases of the entry of BIGs into high-technology industries, the most outstanding examples being the investments of the Pulsar Group (Mexico) in biotechnology and some cases of participation (sometimes only transitory) by Brazilian groups in joint ventures for the development of computer programmes and equipment or consumer electronic goods, generally originating while the reserved markets policy was still in force (Itautec, Philco, Semp Toshiba, Sharp, NEC, CCE da Amazônia, for example). Of the 46 big enterprises analysed individually in this study, only one (Sonda, Chile) could be considered as specializing in a branch of technology typical of the present technological revolution (production of computer programmes).

The combination of sectoral specialization in relatively homogeneous goods involving large economies of scale, on the one hand, and sizes of enterprises which are small compared with their main competitors, on the other, make the BIGs somewhat vulnerable in terms of competitiveness, as we shall see later. Protectionism allowed some of these sectors to devote themselves to the production of goods which were practically not tradeable, so that their growth was totally determined by that of the domestic market. With the opening up of the region's economies, however, these sectors are facing growing global competition from world-level competitors who are smaller and smaller in number but increasingly powerful. As a result, the BIGs have lost the stability they previously enjoyed through being leaders in these traditional sectors and are facing the strategic challenge of either growing or being absorbed by big global corporations.

A third element that emerges from the table is the concentration of sectoral leadership in Mexican firms, which have the biggest sales in six of the eight sectors where domestic enterprises have a share of over 50% in the sales of the five biggest firms and register the biggest sales in the sector.

Finally, if we combine the information from table 3 and from chapter 1 of Peres (1998), we may conclude that there are BIGs where the conglomeration combines sectoral leadership with direct links with banks or other financial agents, thus further strengthening the advantages in terms of access to the capital markets that usually go with a large scale of operations.¹⁹ However, the financial-industrial linkage may also offer other forms of more open access to these markets, as may be seen from the case of highly successful groups which neither own banks nor belong to them, one of the most notable examples being Cementos Mexicanos (CEMEX).

e) *Relations between the domestic market and the international economy*

In order to conclude our profile of the BIGs, we may refer to the relations they have established between their domestic markets and the international market. As will be analysed in detail below, in response to the process of opening-up to external

¹⁹ In this respect, it is useful to recall the classic works of Leff (1976, 1978 and 1979), in which it was argued that the Latin American economic groups were a response to the insufficient development of the capital markets of the region.

competition the BIGs entered the field of non-traditional exports, in addition to the various strategies they used to defend their domestic market segments. In this way, they sought to expand their outside markets within their traditional regional spaces or those developed through integration and, in time, in the big markets of the industrialized countries too. Table 3 shows that, of the 41 domestic enterprises which belonged in 1996 to the group of the "top five" in 19 industrial sectors, 37 of them exported part of their production, although the sample does not register the corresponding amounts in all cases. In the sectors where domestic enterprises predominate, the proportion of exports in their total sales is particularly high in the case of agro-industries, pulp and paper production, steel and glass. If we consider only the 24 domestic enterprises for which export data are recorded, the average proportion of exports in the 19 industrial sectors is 23.6%. Although this proportion is almost double the 13.1% they registered in 1994, it is far below that of the foreign-owned enterprises in the sample (33.9%): a result which is strongly affected by the exports of the motor vehicle manufacturers.

One group of BIGs –usually the biggest ones– have internationalized their activities more fully, since they not only export goods but also capital, making direct investments abroad through the creation of new enterprises, the acquisition of existing firms, mergers or strategic alliances. This internationalization takes two forms.

On the one hand, there is a regional-scope process associated with the consolidation of trade integration, such as the process displayed by the BIGs operating in MERCOSUR or in the framework of the North American Free Trade Agreement (NAFTA). In the first of these cases, noteworthy examples are the investments made in Argentina by the Chilean companies Enersis and Compañía Manufacturera de Papeles y Cartones (CMPC) and Brazilian auto parts producers such as COFAB. In the second case, the most important investments have been those made by Vitro (Mexico) in the United States.²⁰ So far, this second form has been more frequent.

²⁰ The attempts at internationalization by Latin American firms have had mixed results. Thus, the purchase of Anchor Glass, the biggest glass bottle maker in the United States, by Vitro in 1989 ended in failure seven years later. The strategic alliances and joint ventures have also had varied outcomes, and it is not unusual for them to last for only a short time and to be dissolved for various reasons.

On the other hand, a more complex form of internationalization is that carried out by enterprises which set up subsidiaries in various parts of the world in a coordinated manner and as part of a common strategy. These enterprises are seeking to become global players, and they are strongly influenced in this by the forms of competition prevailing in their industries: this was so in the case of producers of cement, soft drinks and beer, among others. The most important example in the region is that of CEMEX, with its investments in the United States, Spain, Central America and South America; indeed, its Mexican activities now come under those of its North American division.

The relative importance of these Latin American global enterprises, compared with other similar ventures which have arisen in developing countries, can be better appraised with the information from a 1995 sample of the 50 largest transnational corporations originating in developing countries (see UNCTAD, 1997).²¹ Among the enterprises studied, 13 were of Latin American origin;²² eight were from industrial sectors, four from petroleum and mining, and one from communications media. Among the eight industrial enterprises, five were Mexican, two were Brazilian, and one was Chilean.

Among the six largest Latin America enterprises, only one was industrial (CEMEX). Moreover, although this was the second largest industrial enterprise according to the value of its assets abroad, it only came in 26th place in the ranking by total sales, since CEMEX's sales were less than 10% of those of the biggest industrial group in the sample (Daewoo), which came to over US\$ 26 billion.

This information highlights once again the specialization of Latin American enterprises in areas closely linked with processed natural resources, in contrast with the concentration of the East Asian countries on activities such as the manufacture of electronic goods. At the same time, however, in spite of the limitations of this type of information it may be noted that, in terms of the index of transnationalization,²³ the enterprises of the region have a similar average (32%) to that of the Asian countries, excluding China.

²¹ The sample has limitations of coverage, so that the data from it should only be used indicatively.

²² Similar data for 1993 registered the presence of 17 such Latin American enterprises (UNCTAD, 1995).

²³ The index of transnationalization is calculated as the average ratio of foreign assets to total assets, of foreign sales to total sales, and of employment abroad to total employment (UNCTAD, 1997).

2. Business dynamics

The BIGs have had to face various situations of change in the course of their history. Two past events were particularly important: i) the introduction of explicit import substitution industrialization policies in the 1930s, with their consequent impact on the dynamics of organizations which had arisen in the context of the agricultural or mining export model of previous decades, and ii) the exhaustion of those policies and the onset of the external debt crisis in the early 1980s. Today, they are going through an equally important period in which they are seeking to adjust to a less protectionist economic order, with strong competition in the goods and capital markets, in the midst of a technological revolution which appears to be speeding up still further.

The analysis of the present adjustment may be organized into three levels: i) the changes in the shares of the BIGs in the universe of big enterprises of the region; ii) the changes which have been taking place at the industrial enterprise and plant level, and iii) the dynamics of the general strategy of the groups to which these enterprises belong.

a) *Changes in the shares of domestic enterprises in the universe of big enterprises*

The available aggregated information shows that the big domestic enterprises have increased in size but have lost relative weight in the universe of (domestic and foreign-owned) large private industrial enterprises, subject to some reservations which will be explained later. This has been the result of the interaction of two important processes which have taken place in Latin America as a consequence of the structural reforms. The first was the privatization of State enterprises in the course of the 1980s and 1990s, which has led to their virtual disappearance from the universe of big manufacturing enterprises in the region. The other was the growing presence of subsidiaries of foreign enterprises as a result of deregulation, easing of the rules limiting their presence in some specific sectors, and the policy measures taken in order to attract foreign capital. In spite of the active role that domestic enterprises played in the privatization process and in the defence of their local markets and expansion of their exports, they were not able to prevent the big increase in the presence of subsidiaries of foreign corporations.

The increase in size may be seen from table 4, which shows that the domestic enterprises in the uni-

verse of the 100 largest industrial enterprises of Latin America increased their annual sales from an average of US\$ 827 million in 1990 to US\$ 1,345 million in 1996.²⁴ In spite of this effort, however, they grew more slowly than foreign enterprises, which increased their average size from US\$ 1,075 million to US\$ 1,879 million over the same period. This table also shows that the share of domestic private enterprises in the sales of the 100 largest industrial enterprises went down from 45.9% to 40.2% between 1990 and 1996, while the share of State-owned enterprises went down to less than one-third of its initial level but that of the subsidiaries of foreign corporations grew significantly to 57.3% of the total. It must be borne in mind, however, that the enterprises of a single industrial sector—motor vehicle assembly—accounted for 30 percentage points of the share of foreign enterprises both in 1996 and in 1994 (in 1990 they accounted for 22.1%). Thus, 8 of the 11 percentage points by which foreign firms increased their participation was due to the outstanding performance of that sector in the countries studied (Mortimore, 1997), and almost the whole of this increase occurred between 1990 and 1994.

Leaving aside what happened in the motor industry, however, the information in table 4 also points to other elements, since it shows that much of the decline in the share of domestic enterprises in the universe of the 100 biggest enterprises took place as from 1994, while the foreign enterprises operating in sectors other than the motor industry increased their share by almost four percentage points. The 1995 Mexican crisis and its negative impact on the other economies of the region (the “tequila effect”) could mark a turning point in this respect.²⁵ Not only may it be inferred that the lower propensity to export of the domestic enterprises compared with the foreign enterprises had a more adverse effect on them in view of the decline in the domestic market, but also that the information contained in the country studies presented in Peres (1998) shows the importance of the purchases of domestic firms by foreign corporations

²⁴ In the context of slow economic growth which marked the period in question, this increase in size suggests that the loss of the static rents which they enjoyed from protection was more than offset by their exploitation of the wider market provided through trade openness.

²⁵ In particular, the share of Mexican enterprises in the sample of the 100 biggest enterprises went down from 22.0% in 1994 to 19.5% in 1996.

TABLE 4

**Latin America: Evolution of the 100
largest industrial enterprises, 1990, 1994 and 1996**

Enterprises	1990	1994	1996
		Number of enterprises	
Domestic private	52	55	49
Foreign	40	44	50
State-owned	8	1	1
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>
		Sales (millions of dollars)	
Domestic private	43 011	68 269	65 898
Foreign	43 009	80 991	93 953
State-owned	7 688	2 757	4 000
<i>Total</i>	<i>93 708</i>	<i>152 017</i>	<i>163 851</i>
		Average sales (millions of dollars)	
Domestic private	827	1 241	1 345
Foreign	1 075	1 841	1 879
State-owned	961	2 757	4 000
<i>Total</i>	<i>937</i>	<i>1 520</i>	<i>1 638</i>
Shares in the sales of the 100 largest industrial enterprises (%)			
Domestic private	45.9	44.9	40.2
Foreign	45.9	53.3	57.3
Motor industry	(22.1)	(30.0)	(30.2)
Others	(23.8)	(23.3)	(27.1)
State-owned	8.2	1.8	2.5
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Source: Prepared by the authors on the basis of data from *América Economía* (1993, 1996 and 1997).

as from 1995. Outstanding in this respect, in the countries hardest hit by the "tequila effect", was the sale of stock holdings giving total or partial control of enterprises in the food industry in Argentina and in the beer and tobacco products industries in Mexico.

Nevertheless, however, industrial enterprises have also been sold out to foreign investors in countries, such as Chile, where the "tequila effect" was practically nil. In these cases, the foreign investors' interest in occupying positions in the markets of those countries by purchasing existing companies may be due to the maturity of the globalization potential of the production sectors in question and the expansion of markets as a result of subregional integration in Latin America. This is shown by the fact that although some purchases involved enterprises with production or financial problems, such as the Brazilian automobile parts manufacturer Metal Leve, many of them corresponded to successful companies such as the electric power holding company Enersis in Chile or the three main Brazilian household appliance manufacturers, which were acquired by big transnational corporations between 1995 and 1997 (*The Economist*, 1997).

b) *Changes at the plant or enterprise level*

At this level, the main changes have been in organizational, commercial and financial functions, the situation being more heterogeneous at the production and technological levels. Forms of business organization have tended to reduce the number of levels of authority, leading to a less vertical structure, and have concentrated activities in business centres or units, markedly increasing the professional nature of management: a modernization process which has coincided in some cases with a change of generation in family-controlled businesses. Within this context, commercial functions and financial engineering continue to be the strongest areas of management.

With regard to marketing, there have been substantial changes in relations with clients and suppliers of services or inputs. The strengthening of a client-oriented approach (or an approach oriented towards the consumers or users of intermediate products) has made it possible in some cases to stand up to competition from imported goods. In other cases, it has been necessary to combine this approach with the importation of finished or intermediate goods in order to complete the product lines offered to clients

and distributed through strong marketing channels set up during the import substitution industrialization era.²⁶

While the relations with clients (especially end-users) and suppliers of production services have significantly improved as a result of the efforts to keep domestic customer loyalty and reduce operating costs, relations with suppliers of tradeable inputs present a more varied picture. The pressure from imports has made itself felt particularly in the replacement of domestic suppliers by those from abroad: a strategy which has been accompanied by the importation of finished goods for sale on the domestic market. In both cases, this has reduced the demand for domestic inputs: a phenomenon which has been matched, for similar reasons, by a much less highly developed domestic supply of capital goods. However, there have been extensive programmes to develop suppliers for some assembly industries, such as the assembly of computer equipment at Guadalajara (Mexico), or the automobile parts industries at Bahía (Brazil) and Córdoba (Argentina).

Traditional comparative advantages,²⁷ accumulated capacities and macroeconomic policy seem to be the variables that determine the selection of one or the other of these approaches. Everything seems to indicate, at least in the short term, that the tendency towards an increase in the relative importance of imports of inputs and capital goods will predominate, except at times of macroeconomic adjustment with recession and abrupt devaluation of the exchange rate. This has led to the weakening of many local production chains and has reduced the options open to small and medium-sized supplier firms, as explicitly acknowledged, for example, in the Industrial Policy and External Trade Programme adopted by Mexico in 1996 (Peres, 1997).

²⁶ This has been so in the case of automobile assembly firms (such as Fiat in Brazil or the Compañía Colombiana Automotriz (CCA) and the Sociedad de Fabricación de Automotores (SOFASA) in Colombia), household appliance manufacturers (such as the Industria Colombiana de Electrónica y Electrodomésticos (INCELT) in Colombia or the Compañía Tecno Industrial (CTI) in Chile), and even steel and petrochemicals enterprises such as Acerías de Colombia (Acesco) and Poliolefinas Colombianas (Policolsa).

²⁷ The strength of the systems of suppliers for the big agro-food groups in Brazil (Perdigão and Sadia), Argentina (Moreno, Urquía, Bunge y Born) and Chile (Industria Azucarera Nacional - IANSA) shows the importance of the comparative advantages base for promoting *non-voluntaristic* supplier development programmes. The limited competitiveness of the Colombian suppliers of barley for the Bavaria beer company shows the same thing in the opposite sense.

The product mix manufactured or marketed by firms has also changed, although not always in the same direction. While textile companies such as Fabricato and Coltejer in Colombia and São Paulo Alpargatas in Brazil have reduced their range of products, other types of companies have expanded it, as in the case of WEG Motores, Oxiteno (chemicals) and USIMINAS (iron and steel) in Brazil. Although there have also been some cases of expansion of the product mix of some Chilean companies (MADECO, for example), it would appear that the Brazilian companies mentioned have moved in this direction because of the size of their domestic market and the possibility of combining economies of scale and scope.

Even in the cases where companies expand their range of products, the tendency to subcontract with third parties to carry out secondary activities is a generalized response to the greater competition. Sometimes this subcontracting is accompanied by greater vertical integration of the industrial group itself, as we shall see below.

The strengthening of financial engineering in the big enterprises has allowed the BIGs to consolidate their access to short- and long-term international capital markets, their most notable operations being the issue of ADRs on the New York market. In a few cases, access to the capital markets has meant the complete opening-up of the firm's equity, but as already noted, family control continues to predominate.

The production and technological development functions of the enterprises have not generally developed as much as the marketing and financial functions. Among the enterprises of the three countries which were studied in detail, those of Brazil show the greatest interest and capacity in these areas, which is also consistent with other indicators, such as the number of ISO 9000 certifications obtained. Market size and the relative maturity of the existing capacities seem to be the main factors behind this better performance, especially with regard to product design, exploitation of brand names and quality management (Bonelli, 1997), effectively supported in some cases by public policy.²⁸

²⁸ The progress made in Brazil in the area of "soft" technologies is generally attributed to the success of the Brazilian Quality and Productivity Programme applied since 1990.

In the other countries, advances in production and technology are relatively less marked.²⁹ The main achievements in terms of increases in average labour productivity at the sectoral level –which were noteworthy in the first half of the 1990s even after deducting the effect of the economic cycle (Katz, Benavente, Crespi and Stumpo, 1997)– are mainly attributable to reductions in the number of persons employed, as a result of the subcontracting of secondary activities; more flexible working processes, and the incorporation of some elements of new management techniques. However, the individual country studies show that there were also substantial investments in the modernization of the plant and equipment of the big firms in some mature import substitution industrialization industries, such as the production of iron and steel in Argentina, sugar in Chile, beer in Colombia and cement in Mexico. The BIGs' abundant access to finance facilitated this response to the increased competition due to trade openness, in contrast with the position of smaller firms.

The different relative weights of the various management functions depend on supply and demand factors. The crisis of the 1980s caused the top management to centre their attention on marketing and finances, since the problems which they perceived to be most acute were the fall in sales and the inability of their firms to meet their financial obligations. In due course, this demand gave rise to a supply of highly qualified professionals in these areas. Matters of production and technology were relegated to the background: an approach which was often strengthened by the importation of capital goods requiring little or no adaptation, which increased considerably with the economic recovery of the early 1990s.

c) *Growth strategies*

The changes which have taken place in the strategies of the BIGs may be grouped in various ways, but in general they tended to be centered on the triad of withdrawal, defensive and offensive strate-

gies,³⁰ although the first two of these imply, in the long term, the cessation of activities or loss of control of the firm by its original owners. In all cases, the strategies could be either a reaction to outside pressures (reactive strategies) or they could be basically proactive.

The universe of BIGs displays all three of these types of strategies, although, because of their size, the examples of withdrawal tend to be concentrated in the category involving the sale of the whole enterprise or a controlling interest to foreign investors, rather than its closure; examples of this are the Astra petroleum group in Argentina, the COFAP auto parts firm in Brazil, and the two big cigarette manufacturers in Mexico: Cigarros La Tabacalera Mexicana (CIGATAM) and La Moderna.

Defence of the domestic market has taken different forms, the most important ones being preventive investments (especially in the two biggest economies); the importation of finished products for sale on the domestic market, taking advantage of local distribution networks; greater and more intensive orientation of activities towards the client (especially noteworthy in the food industries); the formation of combined industrial and financial groups, in countries where this is permitted by law;³¹ and rent-seeking through access to fiscal, trade or sectoral promotion benefits. Although these latter benefits are less prevalent than in the past, they are still far from having disappeared completely, as shown by the examples of the motor industry in Argentina, Brazil and Mexico, forestry in Chile, or the support given to various industrial sectors in Colombia.

²⁹ Even in the case of Chile, the relevant chapter of Peres (1998) notes that although that country occupied ninth place in the "business management" ranking of the 48 countries listed in 1996 in the *World Competitiveness Report* (IMD, 1996), it dropped to 27th place when the "science and technology" factor was included.

³⁰ Naturally, defensive strategies do not make much sense in the long run. In the face of greater competition and ongoing technological change, a defensive strategy can only be a stage on the way to withdrawal or to an offensive strategy. Experience also shows that there is no need for a preliminary defensive stage, since many of the biggest firms have followed an offensive strategy ever since the beginning of the external debt crisis. Restructuring of assets (mergers and acquisitions), investments abroad and closer links with the financial sector developed throughout the 1980s, although they were combined with strategies to defend the domestic market share when trade openness began to be applied.

³¹ Among the countries studied, Chile displays the lowest degree of formal linkages between banking and industry, because of the experience of the crisis of the early 1980s, although some of its industrial groups do have clear links with banks. Also, both in Chile and Brazil there is growing participation by pension funds (private, in the case of Chile; belonging to big State enterprises, in the case of Brazil) in the equity of the biggest enterprises. This could open up new ways of promoting finance-based conglomeration.

One form of defensive strategy which has been used (although it involves new diversified investments) is the shift from industrial activities to modern non-tradeable services. The tendency to move out of industrial sectors is the result of signals coming from the trade openness process and macroeconomic policies which maintain an overvalued national currency that adversely affects the profitability of the tradeable goods sectors. The possibility and desirability of investing in non-tradeable services has also been furthered by the deregulation of some markets or the privileged access that some groups have had, or hope to have, to the privatization of telecommunications, electricity distribution, and the infrastructure in general. In many cases, as seems clear in Colombia, this approach has led groups to use their big industrial enterprises as a source of financial resources for taking part in privatization operations or deregulated markets, while putting off or minimizing their investments in the modernization of production activities.

In this sense, one might wonder to what extent the structural reforms have done away with the rent-seeking behaviour of major sectors of the business world, since although some markets for non-tradeable services are hotly disputed between strong competitors, the conditions of that competition and, hence, the final profitability of the activities in question, depend on State regulations and the differential access of the competitors to the market.

Offensive strategies are more complex, and at least three different types may be distinguished:

i) Growth with increasing specialization around the basic core business, as in the case of some BIGs strongly centered around the processing of natural resources, such as Bunge y Born and Pérez Companc in Argentina, Klabin in Brazil or Alfa in Mexico. This category also includes BIGs which have not increased their degree of specialization because it was already very high, such as CEMEX in Mexico and the Matte Group in Chile.

ii) Growth with moderately increased diversification, possibly combining de-verticalization at the level of individual enterprises with an increase in vertical or horizontal integration at the level of the group as a whole, as a result of participation in a few privatization operations, mergers, or acquisition of other private companies. In all cases, the basic criterion for engaging in this type of operations is the achievement of potential synergies. Techint and

Pescarmona in Argentina, Angelini in Chile, Suzano and Votorantim in Brazil, Santo Domingo (Bavaria) in Colombia and Pulsar in Mexico are examples of this type of moderate strategy.

iii) Growth with extreme diversification, largely as a result of participation in numerous privatization operations. These cases, which give rise to true conglomerates without any clear production, commercial or even financial synergies, are often due to the adoption of portfolio-based criteria. The most notable examples are the Sociedad Comercial del Plata (energy, construction, services) in Argentina, Vicunha (textiles, iron and steel, mining) in Brazil, and Carso (telephone services, electric cables, tyres, restaurants) in Mexico. These conglomerates cover extremely dissimilar activities and their great relatively recent development is based on close links with the international capital market, the main domestic banks, and the decision-making circles at the political level of privatization operations. Naturally, the expected gains and the financial risks are both high.

In each particular case, the strategies adopted depend on a complex set of factors. The sectoral factor is generally important at three levels: i) the different competitiveness of each sector and hence its capacity to compete with imports in a context of trade openness; ii) its different degree of maturity, due to its particular learning curve and degree of progress; and iii) the relevant promotional policy packages, which, although often not openly acknowledged, have been important in almost all countries (petrochemicals in Argentina, forestry in Chile, and the motor industry in Mexico and Brazil are some notable examples). The sectoral factor alone is not sufficient to explain the business strategy adopted, however, as is shown by the studies of pairs of BIGs located in the same sectors in Brazil (Peres, 1998).

Thus, the iron and steel groups (Gerdau and Belgo-Mineira) took different approaches to buy-outs and privatization operations. Although Klabin and Suzano compete in the pulp and paper market, the former sought to specialize, while the latter showed more interest in moderate diversification. Finally, there could hardly be a greater contrast than in the case of the textile groups, since whereas Alpargatas took a basically defensive strategy, Vicunha (which was based on very strong financial support) ended up as a major participant in the Companhia Siderúrgica Nacional and in the mining giant Companhia do Vale do Rio Doce.

The caution or boldness of the business leadership, though difficult to define, are important factors in explaining the final adoption of a strategy. These differences in management styles, which are relatively independent of the systemic determinants, would also explain the different preferences of the groups with regard to privatization operations, ranging from little or no participation to an overwhelming presence both in the home country and abroad. Naturally, the style of management and the quest for economic power are often inseparable in operational terms. Beyond these differences, however, an element which is shared by the different strategic options is the growing weight of the external market, whether in exports or in imports, and whether it is a

question of receiving or of making foreign investments.

In short, the growth of the successful BIGs has not been merely the result of repeating a tried recipe. On the contrary, in order to develop in the product lines in which they already had experience they have had to make big changes in their organization, marketing techniques and finances, as well as investments in new plants and modern equipment. Even so, some of the elements analysed in the following section suggest that staying within their traditional product lines may restrict their long-term growth, so that in the future they will probably have to face up to the need to shift their growth paths towards more dynamic sectors.

IV

Challenges and policy responses

The current profile of the BIGs is itself a proof that a significant number of them have made a positive shift within the framework of the structural changes that have taken place over the last decade. The results are still limited and changing, however, because this class of enterprises, together with the sectors and the economies in which they operate, are still in a state of change, subject as they are to internal tensions and the pressure of international competition.

The present situation of the BIGs reflects successes in consolidating their growth paths, successfully coping with the dynamics of the industries in which they operate, and taking advantage of the support offered by public policies. However, they are faced with challenges due to the limits imposed by their sectoral specialization and the contradictory signals emerging from the interaction of the structural reforms and the macroeconomic policies which have accompanied them.

1. The limits of sectoral specialization

In the long term, the continued presence of BIGs in product lines that are not drawing closer to those registering high growth rates in the world market suggests that they may eventually run out of further growth possibilities. Although in the short term some traditional product lines have registered strong

growth which has served as the basis for the growth strategies of such enterprises, this has been influenced by elements which may not always favour their growth in the long term,³² if the most dynamic international trade flows continue to be concentrated in the products of the electronics and advanced engineering industries and natural resources continue to lose ground (Mortimore, 1995).³³

The expansion of BIGs through their traditional product lines regularly leads us to discover that, in order to keep up their growth, they must expand their markets abroad. In order to do this, they must confront big transnational corporations which are not only competing in the same world markets but are also trying to take over the domestic markets of the

³² As shown by the vegetable oils, forestry, fishery, mining and other industries, the increased output of these goods has been based mainly on strong expansion of their production frontier through investments in physical facilities and know-how. There are no generally accepted forecasts, however, regarding the possibility of maintaining in the long term the growth rate that this frontier has displayed in recent decades, even if demand for such goods continues to grow.

³³ Although it could be argued that it is not possible to draw a distinction between good and bad types of sectoral specialization, differences in the income-elasticity of world demand, returns to scale and learning paths make it doubtful whether all sectors are equally good for the long-term growth of an economy. See, in this respect, Cohen and Zysman (1987).

BIGs. They are therefore faced with the following dilemma: whether to make changes in their strategies, forms of organization and production, finance, marketing and world market position in order to take on the global competition, or whether, on the contrary, to try to improve their current position in order to increase the value of their enterprises so as to sell them to their foreign competitors for the best possible price, taking advantage of the possible temporary over-valuation of their countries' national currency.

The first of these options requires extraordinary financial, technological and marketing resources, whereas the second option is increasingly frequent in the region, giving rise to growing foreign takeovers of the most dynamic segments of local industry.³⁴ The relatively small size of the BIGs compared with the world leaders and even with similar enterprises of some East Asian countries makes them an easy prey for hostile takeovers once their national or regional markets become attractive.

The option of selling the company opens up a series of opposing alternatives for the owners of the big Latin American companies. On the one hand, the sale may convert them into mere portfolio investors, but on the other, the liquid capital thus obtained may help them to move into new areas of investment. These moves follow two different rationales. In some cases, as already noted, the money obtained is invested in the production of non-tradeable goods and services (public utilities, privatized firms enjoying special protection regimes, etc.), in the expectation of preserving niches protected from foreign competition. On the other hand, however—particularly when the vendor possesses other enterprises with “specific secondary assets”—this may lay the foundations for a new long-term expansion path.³⁵

³⁴ Although foreign takeovers are not a problem in themselves, they make it more difficult to apply policies based on consensus-seeking between the public and private actors, as is increasingly the practice in Latin American countries (Peres, 1997). Acceptance of the explicit participation of external agents in the design and implementation of public policies would mean major changes in the political and cultural framework of most of the countries of the region.

³⁵ An example of this is the Pulsar group in Mexico, which sold its tobacco company La Moderna to the British-American Tobacco Company (BAT) for US\$ 1.7 billion in order to obtain resources to strengthen its biotechnology seed company, which is only small but is a world leader in its sector and will, it is hoped, be the basis for the group's development in the areas of agro-industry and forestry.

2. The impact of the structural reforms

The structural reforms sought to create a new pattern of competition, more open to the exterior and with less State intervention. In general, after a first period of relative moderation and gradualism, they became more intensive and even, in some countries, quite radical. In this context, the BIGs, which had been the great beneficiaries of the import substitution industrialization model, were seen in theory as obstacles to the establishment of a system of free competition, in view of their domination of important oligopolistic markets. In actual fact, however, the form taken by the structural reforms and explicit promotion measures gave rise to an economic order which was highly favourable to the development of the BIGs.

In addition to direct support through fiscal subsidies for some of the activities in question, four types of policies played an important role in this respect:

i) Privileged access to the main privatization operations, which were hardly ever carried out under free market conditions. In particular, the bodies responsible for the privatization were allowed to select the future groups that would control the privatized enterprises and to embody highly discriminatory conditions of access and future operation in the tendering rules. Indeed, there are indications that in some cases members of the privatization bodies or even of higher political levels were actors and beneficiaries in the tendering process.

ii) The international trade negotiations for the formation of free trade areas, as was perfectly desirable, gave the private sector an important role in participating in or advising on the definition of production sectors or policy practices which were particularly sensitive matters for each country, where greater openness could represent either a threat or an opportunity. However, the natural heterogeneity of the private sector meant that this participation was controlled in effect by the BIGs or the chambers of industry in which the BIGs played a decisive role.

iii) The implementation of the legislation designed to strengthen free competition through deregulation tended to maintain the status quo as regards the concentration of the various industrial branches, on the perfectly correct grounds that in open economies market power is not determined by the existence of a concentrated industrial structure. The view that the right thing to do was to avoid any actions militating against competition rather than to

obviate concentrated structures was functional in maintaining the BIGs' shares in their key markets.

iv) Some promotional programmes aimed at non-industrial sectors also had a positive impact on the BIGs, especially in Mexico, where the demand generated by big highway and housing construction projects aided civil engineering enterprises such as ICA and producers of cement and flat glass (CEMEX and Vitro), which were important components in the main Mexican groups. The greater economic weight achieved by the big civil engineering and heavy engineering enterprises (*empreiteiras*) in Brazil was also due to this rationale.

In short, the new economic order operated in such a way that although the BIGs were oligopolies which had mostly arisen in the conditions of protection established under the import substitution industrialization process, it was nevertheless highly functional for their growth.

The studies included in Peres (1998) show that these groups have indeed been able to process the signals given by the new economic order in an effective manner. However, some incoherencies in those signals have hindered the materialization of the results which were expected from an export-led form of development which could link up efficiently with the rest of the industrial structure, and not just the leaders.

On the one hand, external openness has meant macroeconomic policies determined by the availability of the short-term international capital which is a key factor in financing the deficit that accompanies such openness. In this context, the free movement of capital and the over-valuation of the local currencies caused by the high real interest rates in dollars, the contraction in public expenditure and the containment of real wages are the "anchors" of the macroeconomic balances, especially price stability.

The result of this is that the signals emitted by the macroeconomic environment are contradictory, because although there is stability in the short term, the conditions in which this stability is achieved give rise to uncertainty, financial speculation and an increase in the expectations of future instability.³⁶ Thus,

³⁶ A further factor which complicates this situation is that some of the key factors governing short-term capital flows are not under the control of national governments, as was shown by the crises in Mexico (1994) and Thailand (1997).

the key variables of macroeconomic policy tend to weaken what should be the core of a new growth model: efficient international linkages through exports, especially of products with growing local added value. The ambiguous and confused signals transmitted by the main macroeconomic variables favour and continually increase the emphasis placed by enterprises on short-term considerations, which is unfavourable for a really sound restructuring process and for long-term competitiveness.

At the same time, the signals emitted by the structural reforms were insufficient. As noted earlier, these reforms –in spite of the importance they assigned to competition among the private actors– did not take due account of the actual problems of enterprises. On the contrary, the reform strategies made the structure of relative prices determined in free markets the key variable for giving the economic agents the information they needed in order to take their consumption and production decisions and, hence, ensuring that the economy would follow a path of sustained growth.

In these strategies, no attention was given to the design of policies to facilitate changes by entrepreneurs in response to the reforms. On the contrary, it was considered that the State should facilitate faster and more radical business adjustments by refraining from direct intervention and allowing the application of what was known at the time as "shock therapy", which was supposed to minimize the costs of change and establish suitable conditions for enterprises to promote sounder growth of the economy on the basis of the market rationale.

The failure to take account of the differences between individual enterprises and the many factors determining their behaviour suggests that the reforms were implicitly based on the idea of a form of competition determined by the relative power of the enterprises concerned, in which the biggest enterprises would in principle be in a privileged position to adapt to the macroeconomic and sectoral changes. Consequently, it may be asserted that an important component in the reforms was an ideological discourse (in the positive sense of the term) aimed at promoting the restructuring of the BIGs and their assumption of a new but still predominant position in the new national and international conditions.

In keeping with this approach, the first stage of the reforms generally rejected active industrial policies and any financial, technological or organiza-

tional strategy aimed at systematically promoting the restructuring and re-articulation of the various segments and sectors of activity towards a new type of organization of production capable of generating a dynamic of systemic competitiveness. In the second stage, in the mid-1990s, there has been a marked recovery of interest by the governments of the region in developing industrial competitiveness policies, although their political will and capacity for action in this respect are still weak (Peres, 1997). All this has limited the attempts to create business strategies that seek new paths for the expansion of production.

3. The issues in the policy debate

Together, the contradictory conditions within which the changes in the enterprises interact with the "selection environments" formed by the production patterns and the public policy contexts mean that the processes of change are taking place in an unstable manner, even for the successful BIGs, and involve costs, risks and delays for the economies where they operate. This is because these processes are not helping to generate a new economic fabric which is clearly viable in the long term. Everything suggests that it is necessary to reconsider some elements of the fundamental conception of the structural reforms if it is desired to achieve the progressive linking up of changes in enterprises, in the production pattern and in public policies in order to follow an efficient development path under the new international conditions. In this context, there are four policy areas which merit special attention, since they will form part of the future debate in the region:

i) The linkages between the financial and industrial sectors are the first area of unsolved problems, in spite of the different solutions that have been tried, ranging from *de facto* recognition of the operation of financial-industrial groups to the total separation of these two sectors for reasons of banking safety and prudence. In the first case, however, it has not been possible to obviate opportunistic or downright corrupt behaviour, with its consequent costs in terms of public confidence and expenditure, while in the second case there are obvious difficulties in inducing the banking system to progress in the financing of production activities related with the development of new sectors and technologies.

ii) The relative size of the BIGs is a second area of unsolved problems. Although, on the one hand,

large size and growth may endanger free competition and increase structural heterogeneity, on the other hand most of the BIGs are too small by international standards to have much chance of succeeding against the great world-level oligopolistic industries. Moreover, this relatively small size has made them vulnerable to buy-outs by foreign investors from both inside and outside the region. Although this might not be very important or might even be positive in terms of the growth and technical progress of the enterprises, it raises problems when trying to design concerted policies, because of the difficulty of openly including outside agents in the processes of negotiation and implementation of domestic policies, to say nothing of the strictly political dimension of the loss of national control over still more leading agents of development.

iii) We have seen throughout this article that openness, trade integration, accumulated capacities and the sectoral dimension are the main determinants of business strategies. With regard to the first two elements, the countries of the region have already adopted clear and in some cases irreversible positions, although some important decisions regarding timing and tempos are still outstanding. There is still a lack of decision at the sectoral level, however, and there is a lack of will to commit the necessary resources for the formation of competitive capacity. The lack of decision on how to act at the sectoral level in a context of markedly reduced protection may persist for a long time, and it may be that only isolated actions will be taken to meet needs associated with competition for foreign investments, the rescue of some sectors which are in crisis and, in the biggest countries, efforts to deconcentrate economic activity. However, there is no reason or valid excuse not to advance in the implementation of the many competitiveness policies designed in recent times in the region (Peres, 1997).

iv) Increasing the linkages of the BIGs with the rest of the enterprises is perhaps the most important problem to be solved in order to ensure stable long-term development. Although the progress made has been only modest and there are even some cases of serious setbacks, the tendency towards the delinking of secondary activities will continue to be strongly pursued in the process of seeking greater competitiveness. The first reaction has been to use imports as a source of inputs and capital goods, but the pursuit of competitive advantages may cause attention to be

directed to the possible comparative advantages of domestic small and medium-sized enterprises as suppliers of parts, components and services for production activities. The same political will that could boost the implementation of the competitiveness policies referred to earlier is very necessary in this area too. However, this political will is subject to the limits imposed by the specialization of the BIGs in sectors processing natural resources, where it is difficult to develop such long subcontracting chains—that is to say, chains with as many levels of small and medium-

sized subcontractors—as those which exist in the assembly industries (for example, the consumer electronics, clothing or motor industries).³⁷

Advancing in these policy aspects will require major efforts in terms of studies and proposals. The country studies which served as the basis for this article provide abundant material for reflection and for the design of action proposals designed to integrate the macroeconomic, sectoral and microeconomic factors that affect the business world in Latin America.

(Original: Spanish)

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Between political control and efficiency gains: the evolution of agrarian property rights in Mexico

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As a product of the Mexican revolution, the ejido was originally organized as an institution with the multiple aims of achieving political control over the peasantry, representing peasants in their relations with the State, and assisting production by smallholders. These multiple objectives, which were initially consistent and supported a successful phase of growth and improved welfare, became increasingly contradictory, precipitating a major crisis in both production and rural welfare. By 1992, when Article 27 of the 1917 Constitution was reformed, the ejido was characterized by strong State intervention in the internal life of the ejido, including its decision-making mechanisms, the conditions for access to public resources, and the management of rural welfare. It was this very decay of the ejido system in a global context of political and economic liberalization that induced the profound reforms initiated under President Salinas, which include a redefinition of the relations between the State and households in the ejido sector, a change in the public institutions serving the sector, a reform of the legal framework that regulates access to land, and a modification in the instruments of agricultural policy. This article describes the initial impact of these reforms on the ejido sector.

I

The peasantry considered legally as minors: the conflict of rights, 1910-1940¹

The social pact which guaranteed stability and peace in the countryside for much of the second half of this century and made it possible to institutionalize the conflicts which had arisen culminated its development during the regime of President Cárdenas,² which came after 25 years of armed revolution, in the course of which the peasant revolt was militarily defeated, its political programme and social demands were incorporated into the constitutional framework of the new regime, its leaders were subjected to repression or were integrated into the political system, the other powers challenging State hegemony in the rural sector—the big landowners and the clergy—were politically split up, and the new institutional system was consolidated on the basis of corporative complementarity between the State agencies and the national farmers' organizations.

The basic provisions incorporated in article 27 of the Constitution were drafted in line with the views of a wide-ranging intellectual movement which exercised a great deal of influence over the vision of the new political regime and had already begun to express itself in the final days of the Porfirio Díaz dictatorship.³ One of the central points of this movement was its challenge to the conservative role played by the hacienda.⁴ The reform of land distribution was viewed mainly as a policy for modernization, with the main task of removing constraints preventing the development of capitalism and the strengthening of the domestic market. It was therefore considered that land distribution reform would

of itself create a social class capable of attaining the golden prize of modernity: the entrepreneurial farmer.

Perhaps the most important aspect of the views of this intellectual movement was the emphasis placed on the role of the State as the social actor par excellence, both for politically reorganizing Mexican society and for promoting its economic development. Article 27 of the Constitution which emerged from the 1917 Constituent Congress established the State as the creator of property—thus going against the conventional doctrine of natural law—in the sense that it laid down that the rights of ownership of land and water belong *originally* to the Nation, which “has had and has the right of transferring their control to private individuals, thus giving rise to private property”, and that “the nation shall always have the right to impose on private property restrictions in the public interest”.

Even though the Constitution provides that the State is at all times the representative of the Nation, in practice by setting up a presidential regime it transferred to the Executive the representation of the nation and thus the role of creator of private property.

Article 27 recognized three forms of rural property ownership: small private property, communal property and ejido property, with differential treatment for ejido and communal property. Rightly noting the damage caused during the period of liberal reform in the latter half of the nineteenth century to the indigenous communities by the application of the concept that *all citizens have equal legal capacity*, it attempted to indemnify them by providing that all matters relating to land distribution or restitution or the settlement of disputes with the indigenous peoples should be solved in *administrative* courts and not the conventional judicial courts “so that they could act at their discretion, appraising the special circumstances that might arise as a result of the lack of capacity of the indigenous peoples. Otherwise, the administrative courts, which are administrative because they have to have discretionary powers, would be reduced by one or other legal means to becoming courts of law in the strict sense of the term, making

□ This article corresponds to a paper prepared for presentation at the 23rd International Conference of Agricultural Economists, Sacramento, California, August 1997.

¹ This section is based on Gordillo (1988b).

² President Lázaro Cárdenas governed Mexico from 1934 to 1940. For a thorough account of that period, see Cordova, 1973.

³ This intellectual movement has been analysed by Krauze, 1971, and Córdova, 1973. One of the main representatives of this movement was Andrés Molina Enríquez.

⁴ For the main arguments on the conservative role of the haciendas in Mexico, see Orozco, 1895.

them useless [for the purpose of land distribution]. It may be said that under those conditions no land allocation or restitution can take place because it will be blocked and defeated by the skill and the resources of the landowner" (García Treviño, 1956, p. 51). Furthermore, in order that there should be no doubt on this differential treatment between the ejido and the community on the one side and private property on the other, Andrés Molina Enríquez, the father of Mexican agrarian reform, argued several years later that "the distinguished members of the Querétaro Constituent Assembly bore in mind that both the communities themselves, in order to challenge the large landowners, and the labourers, in order to challenge the industrial entrepreneurs, were in such an inferior condition that it was indispensable for the government to act on their behalf in order to balance the forces on both sides and ensure full justice, playing the same role in both cases as a public prosecutor or state attorney in all matters in which *minors* are parties to the dispute".⁵ This creates a "tutelage" relationship between the State and the peasants, who are considered to have a similar legal status to children or minors.

Without challenging the basic principle underlying the constitutional rules referring to the tutelage role of the State in respect of the peasants, the Cardenista school of thought introduced two major changes into government policy: the role of agrarian reform as an instrument of social stability, and the role of the ejido as a permanent institution. This policy was based on two assumptions: that it was no longer possible to delay resolving the basic demand of the peasant movement—namely, access to land—because of the risk that the mass movement might spill over beyond the institutional framework,⁶ and secondly, that the ejido must become the hub of government rural policy.⁷

The ejido, which until then had been seen as an instrument for containing the demands of the peasant masses, took on new features (which were to be maintained until 1991),⁸ as the result of a two-fold

linkage: between the ejido and the State (and more particularly with government agencies), and between the ejido and its members, the ejidatarios, who are the partners in that production unit.

For the Cárdenas regime, the ejido was required to play a two-fold economic task: to supply cheap food and raw materials, and to boost the domestic market through the demand generated by the landowning peasants themselves. But for Cardenism these economic functions could only be properly performed if the ejido was linked to the government agencies. Consequently, a wide-ranging multi-tiered pyramidal arrangement was set up, linking the ejido through its management—the ejido Executive Committees and the Supervisory Council—⁹ with agrarian leagues and through them to the national-level Confederación Nacional Campesina (CNC) (National Peasant Confederation).

Even though the final phase of this organizational process culminated with a Presidential decree setting up the CNC and making it compulsory for all ejido members to belong to this organization, it would nevertheless be wrong to attribute its formation *exclusively* to a government decision. Before the foundation of the CNC there was a long period of peasant protests and organizational experiments on a regional basis which frequently led to the formation of state agrarian leagues and supraregional peasant representation bodies, such as the Liga Nacional Campesina (National Peasant League) ruled by Ursulo Galván from Veracruz in the early 1930s. Consequently, in the formation of the CNC the pressure from below stemming from the peasant protests converged with the central government's decision to consolidate its hegemony in the rural sector.

State tutelage over the peasants was not exhausted with the formation of the CNC, however. On the contrary, that body was only one of a number of institutions set up or strengthened during the Cárdenas regime with the express intention of supporting the development of the ejido and guaranteeing State hegemony. The agrarian law reforms in 1934 and 1935 gave the Agrarian Reform Department (Departamento de Asuntos Agrarios y Colonización) an enormous range of discretionary powers to protect and supervise the development of the ejidos and the communities, and above all to *regulate access to the land*. The formation of collective ejidos in the

⁵ Cited in Córdova, 1974, pp. 339-340.

⁶ Indeed, many regional peasant leagues were accusing the new governing elite of betraying the main goals of the Mexican revolution.

⁷ Castillo, 1956, pp. 5-164, provides a pioneering interpretation of the problem of the Mexican ejido.

⁸ The constitutional reform of article 27 and the New Agrarian Law were passed through Congress and promulgated between November 1991 and February 1992 under President Salinas.

⁹ These issues are discussed at length in Gordillo, 1998b.

irrigated areas that had been expropriated from the large estate owners gave rise to a number of government rural development agencies, of which the most important was the Banco Nacional de Crédito Ejidal (the National Ejido Credit Bank). Although these institutions were very frequently referred to as being created to support and serve the ejido until it was wholly sustainable, both in practice and in the eyes and intentions of the political managers of these bodies the aim was to maintain permanent governmental intervention in the production, regulation and supply of agricultural output, particularly of the staple commodities.

Among all these institutions linked to the countryside, an initial division of labour very quickly took place: the CNC was responsible for channelling the peasant demands, particularly for land allocation, while the government agencies were responsible for regulating and settling those demands, particularly those relating to the organization of ejido production.

As already noted, the policies which eventually fashioned Mexican agrarian law therefore shared two ideas: that the State must protect the interests of the peasants as a means of guaranteeing social equilibrium, and that this protection or tutelage should be only temporary.

The solution to the dilemma raised by the practice of treating the peasantry as legal minors, which became necessary at the end of the 1940s when the institutionalization of the Mexican Revolution took place, was a hybrid formula first set out in the Bill tabled by President Calles in 1925, but whose most clear-sighted exponent was a former member of the Zapata army. It may be summarized as a combination of common property with private appropriation (*usus fructus*).¹⁰ The argument of the Zapatista Soto y Gama was as follows: "Property belongs in common to the community. Why? Because it is the community which is entitled to dispose of a plot of land when, for example, the ejido member dies. Why? Because the community has the right to impose regulations on this ownership, or rather on its use. *Usufruct* is therefore private, because the plot is given so that all of its products can be enjoyed, the whole of its harvest, by the person receiving it. But is this private property viewed under Roman law, property typical of the capitalist? Obviously not. Can he dispose of that plot of land? No. Can he mortgage it? No. Neither can he

alienate it or break it up. In other words he does not possess the third of the characteristic rights of the full notion of ownership: he has right of use, right to the fruits, right to usufruct or beneficial use (*usus fructus*) but no more than that. He does not have the right to dispose or misuse. He receives the land as a social function but does not have the right to abuse it. And the worst abuse that one can inflict on the land is not to work it" (Córdova, 1974, pp. 339-340).

The more moderate school of thought retained the ideal of private property as the final outcome of the ejido, and in order to make this happen some of the land allotted to the ejidos was split up into parcels, which originally should have not more than twenty hectares. In keeping with the ideas of the more radical school, an important role continued to be assigned to communal traditions, and thus a key component of each ejido was to be its communal area. Most importantly, however, the strategic vision that finally prevailed in the next three decades was the moderate one which saw agrarian reform and the ejido system basically as a political mechanism to ensure stability in the countryside. The role of the ejido as a production unit was completely neglected, and the function of supplying food was to be given to private agriculture.

However, this hybrid formula bears within it a two-fold contradiction which was to emerge constantly and which to a very large extent has created the conditions for today's peasant unrest. On the one hand, there is a contradiction with regard to the right of ownership which may be described in the following terms: the right to private enjoyment may mean—and this is what it has in fact meant—a growing erosion of common ownership to the extent that it gives certain members of the ejido community greater access to the economic and political resources which enable them to develop private capital accumulation processes. But in the same way the right to common ownership may mean—and has meant in reality—that private enjoyment may be prevented due to social inertia which immobilizes the production potential of all the commonly owned land.¹¹

Furthermore, there is a second contradiction between the right of ownership and the right of farmers to organize themselves (Castillo, 1956). In the final

¹⁰ This expression comes from Córdova, 1974, p. 339.

¹¹ This contradiction regarding common lands is worthy of special attention because 67% of all the land distributed to the ejidos is common land. See de Janvry, Gordillo and Sadoulet, 1997.

analysis, the legal ownership of the land is deposited in the State as the representative of the nation. But in the presidential system it is deposited in the President. This is further strengthened by a wide range of government agencies which intervene in the ejido *production cycle*. To the extent that this has weakened the ejido as a body of representation, it has mutilated or eroded the capacities of the rural communities to organize themselves to protect their own interests.

Both these contradictions have affected the internal operation of the ejido and particularly what we might call its polyarchic system. From the very beginning, two joint decision-making bodies were established: the Ejido Executive Committee, made up of a president, a secretary, a treasurer and three committee members, together with a Supervisory Council also made up of six people, but also the Ejido General Assembly, which was to meet at least once a month in order to define the general policies of the ejido and resolve internal disputes. The democratic principle of minorities and majorities was established and (until the statutory reforms in 1983) the Supervisory Council was automatically made up of candidates from the electoral list which came second in the Ejido Executive Committee elections. Direct and universal suffrage was instituted, so that the elections to appoint the leadership were based on a list of ejido

members with full rights (the electoral register) and the voting was direct, secret and personal. Rules of procedure were also drawn up to codify the procedures to be followed in decision-making and implementation and in the application of penalties, the sharing of profits, etc. The ejido leaders could stand for re-election, but they must receive the votes of three-quarters of the ejido members in order to be elected for a second term immediately following their period of office.

All these rights and powers which enabled the ejido members to organize themselves freely, making the ejido an organ which directly represented the peasants, were severely distorted by the dual contradiction embedded in the hybrid formula that was finally imposed, however.

To put it another way, as a body representing the peasants, the ejido is bound to be in a permanent state of tension with the ejido's quality of also being a State apparatus. This inevitable tension was expressed in the elective structure which determined the way in which the conflicts and struggles in the countryside were to be expressed.¹² As a result of these struggles, the role of the ejido was strengthened both as an organ representing the peasants and as a State apparatus, but neither of these two aspects disappeared completely until the 1991 changes in article 27 of the Constitution.

II

Loyalties and free-riders (1940-1970)

In the years following the Cárdenas regime, a development model became established which encouraged a rapid process of industrialization, exploiting the situation that had been created in the wake of the Second World War. The typical conflict between the agricultural and agro-exporting elites and the newly emerging industrial elites which blocked agrarian reform efforts in other Latin American countries emerged in Mexico only after the bulk of land reform had already occurred. Thus, the strategy of "no expropriation provided there is modernization",¹³ which was so successful in the 1960s and 1970s in the rest of Latin America, took a slightly different form in Mexico in the 1940s. In the political arrangement reached in the second half of the 1940s between the

various dominant elites, commercial private agriculture was given the main responsibility of supplying food to the urban centres whose growth was obviously being spurred by the incipient industrialization process. But the ejido agriculture—that is to say, the reformed sector—was there to stay, however precarious its existence was to be in the years to come. Under these assumptions—especially the irreversibility of land reform, albeit in fact blocked from

¹² See Przeworski, 1985, especially p. 73: "The assertion that social relations structure class struggles must not be interpreted in a mechanical fashion. Social relations ... are a structure of choices given at a particular moment of history".

¹³ See de Janvry and Sadoulet, 1989.

then on— the “no expropriation if modernization” strategy functioned as elsewhere by “inducing the State to reallocate the land reform budget and redirect the attention of land reform agencies to the pursuit of modernization in medium and large farms” (de Janvry and Sadoulet, 1989, p. 1406).

1. Survival and transformation

Perhaps one of the most fascinating features that is noted when analysing this period has to do with the survival of the ejido itself. Why was it that —if the ejido, which had become a pool of cheap labour, was exploited and systematically decapitalized without bringing any real benefits to its members— the ejido members themselves did not give rise to an internal movement contesting the very concept of the ejido? And if the government was promoting different measures that tended to disintegrate the ejido and give pride of place to private farm ownership, why was it that it did not complete its work in this respect?

This second question could be answered pragmatically, by asserting that the State did not completely destroy the ejido system because it worked extremely well in the current circumstances, both for the purposes of rural accumulation and political control. But this is an *ex post* response to an *ex ante* phenomenon. Unless the State is viewed as an entity endowed with absolute rationality, this response takes no account of the reasons why, when faced with the unstoppable wave of rejection of populist policies which invaded the top levels of government from the late 1940s up to 1970, decisions were not taken to end the transitional period that the existence of the ejido presupposed.¹⁴

As far as the first question is concerned, the answer might be that this did not happen because of the institutional barriers to changing the legal system without losing access to the land. But this decision by the ejido members not to abandon the ejido must be qualified, depending on what we mean by “abandon”. Secondly, we must take account of the other key element which Hirschman (1977, pp. 78-104) introduces, namely loyalty —present and past— as a mechanism which strengthens continued membership of organizations under certain circumstances.

¹⁴ A well-documented study on this wave of rejection of populist policies is given in Torres and Medina, 1978, 1979a and 1979b, *passim*.

Abandoning the ejido, in the strict sense of the term, would have meant giving up the ejido parcel land and, more broadly speaking, losing membership in the ejido. In the period in question there were a number of circumstances which would have made this attractive, such as the higher wages that could be earned in more dynamic agricultural regions or in the cities, or emigration to the United States. Furthermore, in many rural areas of Mexico the emergence and consolidation of petty caciques or local bosses which occurred in this period generated forms of co-existence which were so unpleasant that this alone would probably have been enough to offset the uncertainties of moving to another rural area or to the large towns. This is not to say that this did not occur. Both in the more dynamic poles of agriculture and in the large urban centres there is strong evidence of migration flows from the ejidos during those years.¹⁵ But this migration, when it became permanent, usually meant the migration of a part of the household, but not of the member of the family in whom the agrarian rights in the ejido were vested (or when it did include him, he had already negotiated an agreement with the ejido authorities which generally implied leasing or lending his parcel for a period of time without losing it altogether). Thus, these migrations did not lead to a break with the ejido. It may be assumed that this was so because this first generation of ejido members were in a similar situation to that described by Hirschman: expensive entry into the organization, blind loyalty, and institutional barriers to leaving (Hirschman, 1977). The cost of entry was high because usually most of the ejido members had been struggling for many years, at the cost of great sacrifices and even exposing their own lives, in order to gain access to the land. The type of loyalty which they showed towards the ejido, which they recognized as the natural body to represent them, was strongly influenced by past history, in which the establishment of the ejido was only achieved after countless battles, and the operation of the ejido itself was strongly marked by the peasant movement.

Obviously, the institutional barriers do not stem from the difficulty of giving up the ejido, but rather from the difficulty of giving it up *while retaining ownership of the parcel* and, to a certain extent, *retaining membership of the ejido*. It is symptomatic

¹⁵ Paré (1977) deals mainly with migration from one rural area to another. For their part, Astorga (1985) and Arispe Schloesser (1985) provide interesting interpretations of rural migration.

that in the offensive against the collective ejidos in the 1940s, their dismantling led to the breakup of the collective forms of working the land, but not to the disappearance of the ejido. To sum up, access to the ejido parcel and to membership of the ejido were of crucial importance for the titular ejido members as an "insurance policy".

This explanation brings in another element: loyalty and institutional barriers combine both to prevent people from leaving the ejido and from using their "voice", which in this case could have taken the form of fighting the ejido bosses. What happened, then, was a form of silent protest which was expressed both through migration and through failure to participate in the ejido assemblies. Incidentally, it would appear that the rural areas with the greatest social conflict at this time were those where collectivized agriculture was being dismantled.

This interpretation leads us to give a provisional answer to the second question as well. For the political elite of the time, who were promoting industrialization, it was obvious that the agricultural support for this process had to come from private agriculture. This is shown by the fact that virtually all State policies were designed to encourage this. But the construction of the institutional framework for sustaining this change in agricultural policies in favour of the private sector was quite a long-term process, because in the short term the governmental agencies were deeply involved in either actively supporting the ejido system or at least paying lip service to it, and furthermore there was resistance and even conflict within them regarding this change of direction.¹⁶

Moreover, commercial agriculture did not automatically respond to the promptings of the State, above all following the trauma of the expropriations under Cárdenas, and the weight of ejido production, particularly in basic staples, was still considerable. Lastly, everyone could clearly see that the State had been buying social peace for many years in the countryside thanks to agrarian reform. In addition to this was the fact that the emergence of the caciques, the internal breakup of the ejidos and the marginal position to which the ejido had been relegated in terms of

public policies had not caused serious social upheavals, so that no further steps were taken towards dismantling the ejido system. In a sense, the preservation of the status quo was a result of the success achieved in the agricultural sector as a whole.¹⁷

To sum up this important point: *the ejido was not privatized because on the peasants' side it was a crucial "insurance policy" that facilitated multipurpose activities and on the government side it was a vital political apparatus for maintaining stability in the countryside while allowing private commercial agriculture to be the main provider of food.*

2. Social mobilization for gaining access to land

In the late 1960s, a number of events were to occur which changed this context and to a large extent defined the trends of the new wave of peasant mobilizations.

As commercial agriculture concentrated on lucrative crops, both for export and as inputs for the agri-food complex, giving up the production of cereals, it became urgently necessary to redirect the ejido system towards the production of staple foodstuffs and emphasize its role as a production unit, which, as already noted, had been neglected since the 1940s. This change in the cropping pattern was of course due to changes in the international division of labour and the presence of transnational food corporations at the end of the 1950s, but it was also furthered by the general policies of the government, which needed foreign currency to finance the import substitution process.

There were also other phenomena inherent in the type of rural development that these changes were bringing about. The source of these changes must be traced back to the time when State incentives for staple foodstuff production were basically concentrated on private commercial agriculture, and its high profits, based on increasing the physical volume of production through increased yields and extension of cultivated land, were blocked by two factors: the capital needed to sustain increased yields (particularly of staple crops) or to continue with large-scale

¹⁶ A typical example of this was the conflict over the basic thrust of agricultural research in Mexico between the Special Studies Office of the Mexican Department of Agriculture, which operated under the auspices of the Rockefeller Foundation, and the Agricultural Research Institute which also came under the Department of Agriculture but was influenced by the members of the League of Socialist Agronomists.

¹⁷ From the early 1940s up to the mid-1960s, agricultural and livestock production turned in a very dynamic performance. In fact, from 1946/48 up to 1964/66, total agricultural output grew by an average of 7.1% per year. Since at the same time the annual population growth rate was 3.2%, this gave a 3.8% annual per capita increase. See Gordillo, 1990.

irrigation developments, and the resurgence of peasant movements exerting direct pressure against the unlawful hoarding of land, which was the favourite way of extending the cultivated land under the control of private agriculture.

As from 1965 there were increasing signs of a major crisis in the agricultural sector, the most evident symptoms being the reduction in the land under cultivation and a decline in the growth rate of maize production in the rain-fed zones. The combination of these two indicators strongly suggests that this agricultural crisis was mainly within the ejido system.¹⁸ This crisis was the result of the unbridled decapitalization process to which ejido agriculture was subjected, and the difficulties being faced by the internal migrants in search of jobs as a consequence both of the transition towards a new stage in the import substitution process on which agricultural development depended, and the increasing mechanization of commercial agriculture. The ejido was in fact experiencing a dual crisis: a production crisis and a social reproduction crisis.

Commercial agriculture gradually gave up the production of cereals and tended to replace them with fodder crops and the soya-sorghum complex, along with the development of livestock raising, which took away extensive areas that had previously been devoted to cereals production. Because of the decapitalization process to which it was subjected, the ejido system could not fill this vacuum, and since between 35% and 45% of all ejido households in those years were unable to derive even half of their income from on-farm activities, and were facing increasing difficulties in finding off-farm incomes, the impossibility for the ejido as such to build up an accumulation fund of its own was coupled with the increasing difficulties facing households in covering their own consumption needs. The ejido system's response to all this was a reduction in production output, due both to the greater emphasis on self-consumption and to the reduction of the land under cultivation, which, as already noted, led to the agricultural crisis at the end of the 1960s.

These same circumstances gave rise to another and apparently paradoxical phenomenon: because of the greater pressure on ejido agriculture, despite the difficulties in the off-ejido labour markets this situ-

ation gave rise to permanent migration flows, which were largely responsible for the explosive growth in the poverty belts around the large towns, the emergence of peasant towns adjacent to the commercial agriculture zones, and the appearance of peasant ghettos in the large towns and cities (i.e., neighbourhoods or settlements inhabited by people from the same peasant region, who not only maintained their cultural and affective bonds with their communities but also established a permanent flow of economic assistance). As in the previous period, however, these migration flows that were now permanent presupposed that the legal bond with the ejido was maintained, and not broken.

Another phenomenon was also beginning to emerge very noticeably: the generational takeover from the original ejido members, because it should be borne in mind that most of the original ejido members received their lands between 1930 and 1940. Even though the land distribution did not stop, and between 1964 and 1970 it was actually stepped up,¹⁹ the number of ejido members involved and the geographical location of the first ejidos made this generational takeover quite significant.

The form that it now took was quite different from that observed in the case of the first generations of ejidatarios, but perhaps what was most important was the combination of: i) a process of fragmentation of the ejido parcel, giving access to land to the eldest son, albeit in a very unstable manner; ii) the formation of committees of applicants for land, made up basically of other sons of ejidatarios and neighbours, which asked the authorities to expand the original ejidos; and iii) permanent or temporary emigration of some of the other siblings, following a pattern in which part of the household went out to a particular

¹⁹ According to official figures, under the presidency of Díaz Ordaz, 24 million hectares were distributed, 16 million more than in the period of Cárdenas. The quality of the land distributed becomes very clear when one compares the number of ejido members benefitted in the two periods: under the presidency of Díaz Ordaz, about 300,000 household heads received land, compared with just over 750,000 under Cárdenas. In the period from 1964 to 1970 the land distribution figures also included land distributed in other periods but actually delivered during that period. A legal reform was also introduced which defined the land delivery procedure as being the allocation of land a great distance away from where the applicants originally lived ("*nuevos centros de poblacion*"). The real intention was to relieve the pressure on the large estates of irrigated land, but in many cases the result was that the peasants declined to move to other regions. Nevertheless, the land was recorded as having been distributed.

¹⁸ See the statistics given in the article by Gómez Olivier, 1978, pp. 714-727.

migration area in advance of the others, settled down there and subsequently formed a base so that the other members of the household could join them later as temporary migrants.

The 1960s were characterized by great instability in peasant households, not only as a result of migration but also because of a great many conflicts within households, between households, against the ejido caciques, etc., all basically due to the desire to gain access to an ejido parcel.

Within the ejido, more and more people were clamouring for a change in the system. This represented a direct challenge to the bosses and a slow and sometimes underground process carried out through the formation of committees of applicants for land

made up of the sons of ejido members and settlers on the ejidos. In one way or another the creation of these land-demand committees also created new ways of thinking, directly related to the operation of the ejidos, and activated the historical memory of the original members. Furthermore, the inhabitants of the ejidos found that they were becoming enormously more influential in terms of the government's response to their mobilisation—even though it was normally limited to their particular ejido—and their boycotts, which in this case took the form of refusal to work their land (Hirschman, 1977, pp. 86-87).

All these processes led to a new wave of peasant protests, starting in the 1970s and still continuing to this day.

III

The dynamics of political control (1970-1988)

The governmental response to this crisis was typical of political cycles in Mexico. For thirty years after the Cárdenas regime the policies he had implemented in the countryside were either flatly rejected as populist or simply considered outdated policies of a historic period which had now passed. But in 1970 the newly elected regime headed by Luis Echeverría badly needed new legitimation following the bloody repression of the student movement in 1968, and in addition it was confronted in the countryside with a new wave of peasant mobilization more widespread than any seen since the 1930s. Faced with new demands for land coming from the ejido members, and with incipient but clear signs of stagnation in agriculture and livestock production, the regime resorted to the arsenal of Cardenist policies and measures, with the clear intention of revamping the social pact that had been of crucial importance in the 1940s.

In order to do this, the Echeverría regime introduced two major changes. Firstly, like the Cardenist school of thought, it again considered the ejido as the main hub of State intervention and as the basic production unit for guaranteeing food production and self-sufficiency. The Agrarian Law, which had not undergone any major changes since 1946, was completely reformed, with the introduction of a new chapter regarding the "economic activities of the ejido". At the same time, a new set of institutions

were either created or given broader mandates to implement the legal changes. No regime before, including the Cárdenas regime, had engaged in such a broad range of interventions as those resulting from Echeverría's reforms. A new ministry (the Ministry of Agrarian Reform) was set up in the 1970s, and the ministries of agriculture and of water resources were merged into a single powerful body. New para-State bodies were also created through various mergers to provide such services as rural credit, foodstuff distribution, agro-industrial development, production and distribution of inputs, etc., thus greatly expanding the scope of State intervention.

Secondly, the government sought to deal with the peasant mobilization—mainly conducted by grassroots groupings that were questioning the dominant role of the official peasants' organizations—by trying to revitalize the corporative arrangements. Although during the first year of the new regime cases of illegal occupation of land were severely punished, using army troops for the purpose, very soon the wide extension of the mobilizations forced the government to try controlling them by agreeing to use its discretionary powers to confiscate private land and distribute it to landless peasants. Indeed, by the end of the Echeverría regime major expropriations of land had been carried out in the irrigated districts where the best-quality land was to be found, and the

distribution of land rose to one of the highest levels since the time of Cárdenas. This gave rise to a profound political crisis, with both peasant organizations and private farmers dissatisfied with the government's performance.

But what was perhaps the most important feature of this period was the extent to which the system of political control was refined and extended to the reformed sector. After having analysed the ejido from a historical perspective—limited of course to the twentieth century—we will now review the interaction amongst its different components, taking its role as an instrument of political control as the basic driving force. It is important to keep in mind that the State's shaping of the ejido into an instrument of political control happened slowly and unevenly across the country. Ejidos have always been highly diverse and heterogeneous. They differ not only in their natural resource endowments but also in their membership composition and the different trajectories of their struggles for land. While acknowledging this diversity, however, it is still possible to analyse the model of political control that was applied to all ejidos. This model operated at three levels: the legal framework, political representation, and social reproduction. All these levels operated simultaneously but with varying intensities depending on the period and the region. While the government's organizations and the format of State intervention have thus differed, they have all been based on a model of control that was authoritarian, hierarchical, yet inclusive.

1. State intervention in ejido affairs

There were specific legal codes that very strictly regulated the organization of production within the ejido and laid down the rights and obligations of the ejidatarios. For example, the ejidatarios had to work the land directly; they could not hire wage labour. They could not rent the land or sell it. Absences from the ejido of more than two years led to loss of right to the land. All ejidatarios had to establish the order of heirs to their land in writing, usually naming a spouse or partner as the preferred successor. Ejidatarios could vote for and be elected to the Executive Committee of the ejido's Assembly. They could also vote on the definition of an internal set of rules that regulated their rights, particularly their access to the community's common lands. Each ejidatario also had the right to an urban lot on which to establish a residence

and to a maximum of twenty hectares of land for direct cultivation.

Access to land could be gained in any of four ways. For an indigenous community with legal documentation, access to the land was gained through the right of restitution. If a person lived in a human settlement where land was available for distribution within a certain radius, he or she could obtain land through a grant. If an individual was willing to relocate to another region or state, he or she could obtain land in colonization zones where new population centres were being promoted. Finally, existing ejidos could obtain an extension of their land and thus incorporate new ejidatarios.²⁰ In the last decade before the recent reforms, the government allowed the incorporation of households whose members had the title of ejidatarios but had no land (*ejidatarios con derechos a salvo*).

A number of mechanisms existed through which the State intervened in the internal life of the ejidos to impose the law (Whetten, 1948; Fernández y Fernández, 1973):

i) There was State intervention aimed at legalizing the ejidos' internal decision-making processes. For example, almost all important decisions were made in the ejido assembly: distribution of urban lots and plots for cultivation; approval of internal rules; requests for credit and other public services such as schools, running water systems, or roads; regulation of access to collectively used lands; and definition of forms of work within the ejido. However, to make an assembly's decisions valid, a representative of the Ministry of Agrarian Reform (SRA), formerly called the Agrarian Department, had to be present. Furthermore, calling an ejido assembly was only considered legal if a representative of the SRA or of the municipal authority endorsed it. Extraordinary assemblies could only be convened by the SRA.

ii) The State intervened in ejido arbitration matters. For example, family controversies about the use of land plots or conflicts regarding inheritances had to be settled in State administrative tribunals. These tribunals were part of the structure of the Ministry of Agrarian Reform and they also settled boundary disputes between ejidos, between ejidos and private landowners, and between ejidos and indigenous communities.

²⁰ The legal names for these four processes are *restitución*, *dotación*, *nuevos centros de población*, and *ampliación*.

iii) The State controlled the flow of public resources to the ejido. Since the late 1970s, commercial banks have made loans to ejido members, but before that time only official State banks offered this service. In order for an ejidatario to receive credit, an official authorization from the ejido assembly was required. However, the credit was given to the ejido. Thus, all its members were co-liable for the total amount of credit received and had to offer their harvest as collateral. In order to secure this collateral, the official bank established agreements with the ejido, with each member who had received credit, and with the State organization that marketed the ejido's crops and livestock production. This marketing organization, CONASUPO (the National Basic Foods Company), bought the harvest at an established guaranteed price and issued cheques to the ejidatarios and the official bank. Part of the credit was paid in kind. If the credit was for fertilizers, FERTIMEX, the para-State organization for the production and distribution of fertilizers, was responsible for repayment. If the credit was for insecticides, other chemical products, or machinery, the bank established contractual arrangements with the respective private enterprises. In the irrigation districts, an irrigation permit was also required. This permit was issued by the Ministry of Agriculture and Water Resources (SARH), previously called the Ministry of Water Resources and, before that, the National Irrigation Commission (Gordillo, 1988b).

Until very recently, all borrowers from the official bank were required to purchase crop insurance from an official institution. There were also State enterprises that operated all along the commercial chain in coffee, cocoa, sugar cane, tropical fruits, and other specialized crops. These para-State bodies provided credit, purchased the harvest, and supplied technical assistance and inputs as well. In every case, an ejido assembly was required to agree on the ejido's participation in the programme. Overwhelmed by so many State requirements, the ejido assemblies could at best only discuss policies initiated by the government, stifling initiatives that could have emerged from the ejidatarios themselves.

iv) The State also intervened in a wide range of social welfare and infrastructure services. The Ministry of Education established schools and provided teachers. Public organizations for health, housing, food aid, roads, ethnic issues and recreational activities also intervened. This extensive State intervention

in social services was focused in particular on the indigenous communities and poorest ejidos, which contributed to the development of a functional distribution of government agencies across ejidos and a deepening of heterogeneity in the rural sector: while the social development agencies concentrated on meeting the needs of poor ejidos and indigenous communities, the agencies promoting production attended to the demands of private producers and the more prosperous ejidos.

2. Political representation

At another level, the political control model operated through different forms of political representation in the ejido, with pervasive political interventions. Until the mid-1980s, with a few exceptions during the 1950s and 1960s,²¹ in order to gain access to public goods and services, ejidatarios must belong to the National Peasants' Confederation (CNC), which in turn was affiliated with the ruling Institutional Revolutionary Party (PRI). Thus, through decisions of the ejido assembly or more frequently of the ejido's executive committee, the ejidatarios were made members of both the CNC and the PRI. It is worth emphasizing, however, that although the model of political control was authoritarian, it was also inclusive. In other words, it did not aim at excluding the rural social actors but rather at incorporating them into rural governance. The State accomplished this through different levels of peasant organizations.

The first level comprised the corporative organizations, which were given preferential treatment by the State. At first these organizations were eminently political, because of the links connecting the ejido executive committees with the regional committees, the state leagues, and the CNC. During the 1970s, however, as a consequence of the first substantive modification of the agrarian law in almost thirty

²¹ During those years, two major splits occurred in the uncontested political monopoly of the CNC. These splits gave birth to four organizations: the Unión General de Obreros y Campesinos de México (UGOCM), the Central Campesina Independiente (CCI), the Consejo Agrario Mexicano (CAM), and the Central Independiente de Obreros Agrícolas y Campesinos (CIOAC). The first three organizations were subsequently incorporated in the official political party (PRI), but CIOAC has always been loosely linked to leftist parties.

years,²² the economic organization of the ejido came to be the favoured form of corporative organization. That is why, in the 1970s, the first ejido unions and Rural Collective Interest Associations (ARICS) were formed. Since all forms of economic organization had to stem from government initiatives and were used to facilitate the implementation of government programmes, major efforts were made to include the rural population through this mechanism. New forms of organizations were established to incorporate new social groups. For example, the UAIMS (Agro-Industrial Units for Women) were also created in that decade. During the 1980s, youth organizations, Community Committees for the Distribution of Foodstuffs (Consejos Comunitarios de Abasto), and specialized organizations for specific products were created (among other organizations) within the ejidos. Whenever there was an important new national objective, a new widespread demand in the countryside, or a favourite programme of the current President, new organizations were established. Even though this was not the original purpose, the creation of these organizations increased the negotiating capacity of the ejido, giving rise to a new generation of peasant leaders.

The second level of peasant organization was based on traditional community organizations, which had been present since time immemorial. They were grounded on reciprocity, with organizations for mutual insurance, collective labour, and labour exchange. In most ejidos, these organizations adapted to changing circumstances but they never disappeared. Since the official criterion to determine whether peasants were organized or not was the number of formal organizations that existed, these community organizations were not considered and it was always assumed that peasants were not organized.

The third level of peasant organization consisted of entities that had previously existed only on paper—because they had been artificially created by the government—but were transformed into representative organizations. The process whereby existing formal and informal community institutions—ejido unions, Rural Collective Interest Associations, cooperatives, etc.—were converted into representative organizations was a result of mobilizations on behalf of ad hoc causes.

The coexistence of these different levels of peasant organization was largely the result of a non-intentional separation of functions. Corporative organizations established the links between the State and peasants, while community organizations established relationships of solidarity among members of the community, and representative organizations emerged when traditional channels for posing demands failed to work.

3. Secondary markets as a source of social reproduction

No model of political control is perfect, especially in the absence of a pre-established plan. Because the model evolved as it was being implemented, many aspects emerged randomly. Several elements of the model contradicted each other, and the instruments of control varied from one Presidency to the next. There were, however, two features of the model that did not vary. Its inclusive nature was maintained, which means that, rather than excluding new social agents or possible dissidents, the State usually tried to co-opt each group under the existing rules, and there was a strong agrarian ideology, which helped to hold the structure of the ejido together. This ideology was organized around two basic themes: i) the alliance between the peasants and the State, with the supposed objective of assuring the progress of the former, and ii) the need to resort to State agents as intermediaries between peasants and the rest of national society.

However, it seems to be a feature of all societies that every State intervention in political or economic markets—particularly interventions sustained over a long period of time—creates countervailing responses and secondary markets. The model of State control over the ejidos was no exception. For example, the prohibition against selling ejido land created a secondary market (Warman, 1980; Gledhill, 1991). Widows and ejidatarios who had migrated for good were the primary participants in land sales, while sales of surplus lands or part of an ejidatario's land to resolve severe economic crises were the primary sources. The prohibition against renting land created an even more active illegal market, especially in irrigated areas. From the ejidatarios' point of view, the temporary rental of a plot of land was a means of economic recovery in case of hardship. Frequently the illegal rental of ejido land was related to migration (De

²² A new agrarian law was promulgated during the presidency of Luis Echeverría (1970-1976).

Walt, 1979). In some cases, the rightful ejidatario migrated for an extended period of time and rented the land to circumvent the rule that prohibited him/her from leaving the ejido for more than two years. In other cases, an old ejidatario or his widow rented the land because they had no children to help work it. Alternatively, wage labour was hired to replace the labour of family members who had migrated. The ejido assembly, which had to be held monthly in the presence of a government official, was frequently conducted without the official's presence, although the latter nevertheless established his presence *ex post facto* in order to obtain favours and perquisites. Sometimes assemblies that had never taken place were invented, with the connivance of the government representative. Credit, insurance, roads, and schools could be obtained in this way, and this method also served to expel ejido members, incorporate new ejidatarios, and dismiss ejido Executive Committee members.

The secondary markets generated their own political and economic agents: the ejido bosses. Since all black markets break the law, it was necessary for these agents to legalize their offences. For example, selling a plot of land was legalized through a process of elimination of ejidatarios and new assignments (*depuración y nuevas adjudicaciones*). The seller of the plot ceased to be an ejidatario at the time of sale, adducing any legal reason that would suffice, while the buyer was incorporated as a new ejidatario. Also, a member of the ejido who left for more than two years could be excused from working the land for "health reasons". Without such mechanisms, many of the peasant leaders who had stayed away from the ejido for twenty years or more would have lost their land. Sometimes an ejidatario would not leave officially but would "lend [his land] without compensation" to the ejido executive committee or to a person authorized by the committee, although in fact he did so in exchange for money. The same system was used for renting land. To cover up an ejidatario's absence, his name would always appear on the list of those present at the ejido assemblies. Furthermore, the ejidatario was on the credit list of the official bank and even on the list of those taking out insurance with the State firm. To compensate tenants for the shortness of

the rental period (which was necessary because of the illegality of the transaction), the ejidatarios who rented their land also allowed their respective tenants to use their names. In this way the tenants gained access to official credit, which was subsidized. Some private landowners in northeastern Mexico went so far as to rent not only ejido parcels but even entire ejidos.

Some of the secondary markets that emerged from State interventions in economic matters became highly lucrative businesses. For example, the "disaster business" consisted of feigning damage to the harvest and collecting the crop insurance. In order for this to work, the cooperation of an ejido executive committee member was necessary, because he or she was the first to be notified of the "disaster". The cooperation of representatives of the Ministries of Agrarian Reform and of Agriculture and Water Resources was also necessary, because they were responsible for verifying the supposed disaster. Insurance company agents, official bank representatives, and of course the ejidatario himself all cooperated in confirming the "disaster" too. The ejidatario collected the insurance for the "damaged" harvest and then sold the same harvest through regular market channels. For the ejidatario, this was a way of counterbalancing the low guaranteed prices or simply making a little extra money. And what did the other participants in the deal gain? This is where the official bank agent came in. Credit had been given to the ejidatario in installments. The last installment paid out before the disaster claim was filed was endorsed over to the official bank agent, who then collected the money and distributed it to the whole chain of collaborators in this peculiar business (Reillo, 1987).

In short, the reproduction of the ejido was supported by secondary or "black" markets. These played an important role in adapting State political and legal interventions to the logic of peasant society and economy. This interaction between two different and frequently contradictory logics affected the way both of them functioned, making them compatible, if not convergent. But of course the efficiency and equity costs were enormous, both in resource wastage, in public budget deficits, and in the welfare levels of the ejidatarios.

IV

Reforming agrarian reform (1982-1994)

1. The convergence of opposites

The reforms in the countryside that were implemented during President Salinas's regime (1988-1994) addressed two basic areas: the relationship between rural producers and the State, and the relationship among productive agents in the countryside (Gordillo, 1992).

During the last twenty years, peasants successfully developed mechanisms of resistance to the implementation of public policies in rural areas. The State, with its instruments of intervention and control, was increasingly seen as an enemy by the different social agents in rural areas. Frequently, economic problems became politicized and stirred up confrontations that had paradoxical effects. The very same State policies that suffocated the ejidos also increased the latter's demands for more State support.

As a result of the debt crisis of 1982 and the subsequent implementation of stabilization and adjustment policies, a rural development strategy based on the pervasive presence of the State ceased to be economically viable. The State had intervened through very diverse means, including selective indirect subsidies, which were usually regressive. This strategy was very costly for the State because it depended on the massive disbursement of subsidies, and the model soon became highly inefficient. Subsidies were channelled not only to the ejido sector but also, and indeed mainly, to the private sector in agriculture. These subsidies had different purposes: for the ejido sector, they were intended to grease the machinery of political control; for the private sector, they sought to stimulate production. It was the private sector that was assigned the classical role of agriculture in an import substitution model, providing foreign exchange and cheap food. The model of political control became inefficient because it had been developed for a closed society organized into corporative segments. The winds of political mobilization, which started to blow strongly in Mexico after the student movement of 1968, began to erode this authoritarian model, and the State's legitimacy came to depend increasingly on electoral

processes and greater political openness. At the same time, the 1982 debt crisis also helped to shatter the economic model that had prevailed in Mexico since the 1950s.

Consequently, political control and economic subsidies decreased, creating an exceptional opportunity for convergence between free-market macroeconomic policies and social mobilization. Economic policy—which focussed mainly on trade liberalization, deregulation and privatization—converged with social mobilization objectives, which focussed on restructuring peasant representation through political liberalization, in rejecting State intervention. This convergence was neither premeditated nor deliberately promoted by government or civil society. On the contrary, economic liberalization was to be accomplished by modifying and using political authoritarianism, not abolishing it. Similarly, the strategy of political liberalization—and in some cases democratization—was meant to preserve the economic privileges gained through State subsidies.

How did these two opposing tendencies come to converge? There was never an articulated policy combining both strategies. Rather, what happened was that the juxtaposition of policies had created an institutional vacuum. The political control model depended on State intervention. However, the State enterprises responsible for this intervention were largely privatized, and their control loosened when they found themselves in financial crisis. The political clientele supported by these enterprises prevented their complete privatization, and many State enterprise assets were instead transferred to rural producers. For example, the basic instruments of political control in the countryside were affected when BANRURAL (National Rural Credit Bank) ran into financial difficulties and land distribution ceased. However, peasant resistance prevented the complete disappearance of the official bank and led to the emergence of alternative mechanisms such as the credit without collateral provided by the National Solidarity Programme (PRONASOL), and, more recently, the establishment of credit unions. Peasant resistance also

prevented the total cancellation of land distribution and obtained a promise to negotiate about lands still in the process of allocation. This very particular convergence helped to remove obstacles, but it did not lead to the creation of new institutions.

The economic reforms sought to abandon the system of guaranteed prices and align internal prices with international ones. But the juxtaposition of the two currents, economic and political liberalization, caused two crucial problems. First, the system of guaranteed prices, which had covered twelve products, disappeared, but guaranteed prices were maintained for maize and beans. No reasonable adjustment scheme was ever prepared for smoothing the process of price alignment and trade openness, which dramatically changed the marketing of agricultural products and increased peasant indebtedness. At the same time, maintaining guaranteed prices for maize and beans generated extraordinary rents for some producers. The agricultural sector turned en masse to maize production, and agriculture evolved toward monoculture instead of diversification.

The reform of Article 27 of the Mexican Constitution in 1991-1992 helped to further dismantle the political control model. The promoters of economic liberalism saw this reform as a way to free the ejido's production potential and create a market for land. To implement their plans (especially the more unpopular measures) they counted on the effectiveness of the political control model. The promoters of political liberalism, on the other hand, saw the reform as dismantling the political control model but not the system of economic rewards that it provided. Both perspectives were utopian. One looked toward decreasing economic intervention while maintaining political control. The other looked toward decreasing political control while maintaining economic intervention. The contradiction between these two positions created serious institutional gaps that allowed the emergence of an incipient peasant production system but also seriously jeopardized the effectiveness of the reforms put in place.

2. A truncated peasant economy

After examining the complexities and contradictions of political control over the ejido, one wonders how it managed to survive for so long. As already noted earlier, the answer lies in the dual role of the ejido as

an insurance device and as a political apparatus. We will now deal with its role as an insurance device, which is another way of saying that the ejido played an important role as a body of peasant representation. This is clearly linked with the particular form of operation of the peasant economy. It is well known that the peasant economy is based on the household as a production and consumption unit and on a series of mutual assistance practices between the households in a community. The ejido provided this peasant economy with an institutional arrangement that linked these two crucial elements with a third element of equal importance: access to common property resources.

However, the way the political control model was implemented distorted the three elements of the ejido peasant economy. The adjudication of land plots to the head of the household, and the almost complete absence of legal rights for the other household members, sowed seeds of conflict. It is apparent, when reviewing ejido conflicts over the past decades, that family disputes were common—conflicts between fathers and sons, between husbands and wives, and among children. These conflicts have escalated because enormous demographic transformations have taken place in the ejidos, particularly since the 1970s, but the ejidos have not had the necessary flexibility to accommodate these changes. The original ejidatarios have aged, and many new settlers (*avecindados*) have come to the ejido villages (sometimes outnumbering the ejidatarios), even though they could not acquire the status of official members of the ejido. Another important factor has been the extensive migration to other parts of the country and to the United States.

Traditional peasant production practices based on native seeds, biological control, organic fertilizers, animal traction and intercropping were degraded by a truncated process of technological modernization that was initiated by government organizations for research and development in agriculture. Indeed, until recently intercropping was expressly excluded from credit support despite its being a cornerstone of peasant farming systems. There were also no clear rules about access to common lands. This has led not only to illegal appropriations of land but also to the acceleration of social differentiation within the ejido and to severe ecological degradation of ejido resources. Thus, the ejido sector had become a truncated peasant economy that coexisted with a

State model of political control: in other words, it was a repressed peasant economy in the grip of the State. The ejido was both the apparatus that embodied the State's political control over peasants and the form of organization of production and representation that allowed the peasant logic to be utilized and reproduced. Compatibility between State logic and peasant logic had been achieved through the existence of secondary markets that combined controls and subsidies, but inevitably, when this unstable equilibrium started to fall apart, the political control model was also decisively affected.

When using the term "peasant production system", it is necessary to guard against any Chayanovian interpretation of this peasant agriculture, as well as against any revival of the old peasant extinction/survival polemic that raged in the 1970s in Mexican academic circles. The peasant production system referred to here is characterized by its search for a form of integration in the market system: a position based on the comparative advantages of ejido agriculture *vis-à-vis* private agriculture. Ejido agriculture has an advantage because of its reliance on family labour, community organization, access to collective resources, strong participation in labour markets, and particularly its reliance on national and international migration.

We will now turn to the basic traits of this peasant production system and the way they developed in the context of the changes that occurred in the ejido sector between 1990 and 1994. Comparison of the results of the 1994 ejido survey conducted by the Ministry of Agrarian Reform and the University of California at Berkeley with those of the survey carried out in 1990 by the Ministry of Agriculture and Water Resources and ECLAC will help to give an idea of the transformation of the ejido sector in the midst of a profound crisis in the entire Mexican agricultural sector (de Janvry, Gordillo and Sadoulet, 1997). This larger crisis has been marked by adverse economic incentives, shrinking public support and wide institutional gaps.

In the following analysis of farm sizes, individual plots of land are measured in hectares of national rainfed equivalent land (HNRE), which correspond to the observed average yields of rainfed maize, by agroecological region, in order to adjust area for quality differentials. The unit of measurement is a hectare of rainfed maize that produces the 1994 national average yield of 1.09 tons.

a) *Concentration of the land in small holdings*²³

If the ejidatarios are classified by the size of their plots and their geographical region, we observe that between 1990 and 1994 there has been a process of concentration of small holdings in most regions except in the Pacific South. There has thus been a slow process of elimination of the most extreme forms of minifundio. This suggests that a partial solution to rural poverty could be found through the abandonment of the smallest plots, i.e., through migration and non-farm employment. Several aspects of the ejido reforms have contributed to this abandonment. One is the newly acquired freedom to rent land, which has allowed the smallest farmers to rent out their land and engage in other activities. The other is greater flexibility to participate in off-farm activities and migration without the threat of losing land rights in the ejido. The decline of the minifundio has been less rapid in the Gulf and Pacific South regions, where indigenous attachment to the land is more prevalent and from where migration to the United States is not as intense. In these two regions, where the incidence of extreme poverty is highest, a solution to rural poverty thus cannot be expected to come simply from migration and export of the poverty problem to other sectors and regions.

b) *Consolidation of peasant farming systems: intercropped maize cultivation*

One of the most notable features of the 1990-1994 period has been the expansion of the land planted with maize. This has been induced both by price distortions that favour maize over other crops and by price guarantees that eliminate the element of risk. Maize has thus been a relatively attractive crop during the last four years. In the ejidos, the result has been a 20% increase in the area planted with maize in rainfed areas and a 68% increase in irrigated areas. On rainfed land, 66% of the increase corresponded to monocropping and 34% to intercropping. The first is typical of farms with a greater commercial orientation and the latter of peasant farming systems. Most of the increase (84%) came from farms of more than 5 hectares of NRE, where land formerly in pastures and fallow was shifted to maize. Most of the increase in intercropped maize (72%) occurred on smaller

²³ This section is based on de Janvry, Gordillo and Sadoulet (1997).

farms, where it reflects the use of typical peasant farming systems. On irrigated land, 91% of the expansion in maize cultivation was on the larger farms, where it displaced traditional cereals such as wheat and oilseeds, and 97% of this expansion was in monocropped maize. On the smaller farms, there was an increase in intercropped maize. On the larger farms, the expansion was principally in commercial types of monocropping, which accounted for most of the aggregate expansion. The response to incentives to produce more maize thus accelerated the process of differentiation, with smaller farms increasingly specializing in peasant farming systems and larger farms in commercial farming systems.

c) *Technological regression*

It is clear that there was a severe retrogression in the technological level of the ejidos on virtually all fronts and across all types of farms during the 1990-1994 period. Looking again at maize, the only exception to this technological regression was the diffusion of improved seeds on the larger farms. For the rest, there was a sharp decline in the use of chemical products and fertilizers. The sector was virtually abandoned in terms of access to public technical assistance, across all farm sizes. Simultaneously, there was a general increase in the use of manual labour in agricultural work and a decline in the use of machinery. The sector thus coped with the profitabil-

ity crisis by using less technology per unit of production and reverting to family labour.

d) *Strong orientation towards production for home use*

In order to bring out the prevalence of a peasant economy and the depth of social differentiation within the ejido sector, we may look at the degree of participation of ejidatario maize producers in the market for that cereal, either as sellers or as buyers. We thus see that 41% are sellers or seller/buyers of maize, while 27% are pure buyers. Another 31% are self-sufficient, using the maize they produce principally for home consumption (24%) and to a lesser extent for feeding animals (7%). This reveals a sharply differentiated universe of maize producers, where less than half participate in the market as sellers. It is this group of sellers that will be hurt if there is a fall in the price of maize, as is expected under NAFTA. The other 59% will either not be directly affected by maize prices or will actually be benefited by falling prices as net buyers. These net buyers and self-sufficient producers without large herds of animals are smaller farmers with little irrigated land. The existence of a strong peasant economy will thus cushion the negative effect of a fall in the price of maize, which will have a sharply differential effect across different categories of maize-producing households, depending on their position with regard to the market for this cereal.

V

Some conclusions for the near future

The changes observed in the ejido sector between 1990 and 1994 therefore reflect the following phenomena:

- The impact of macroeconomic policies, characterized by effective control of inflation but also by a serious profitability crisis in agriculture linked to decreasing global growth rates, increasing appreciation of the real exchange rate, a fall in the real support prices of the main staple crops, high interest rates, and the loss of subsidies to the sector.
- An institutional vacuum created by the decline in the State's role in agriculture, leading to the privatization, scaling down or liquidation of many

of the public institutions supporting the sector and only a very partial reconstruction of alternative institutions to support the ejidos. In general, this reduced the availability and raised the cost of access to credit, insurance, markets, modern inputs, seeds, water, and technical assistance.

- The beginning of a process of adjustment to the new economic and institutional rules by ejidatarios and by the ejido as a form of organization.

By 1994, the changes in the legal statutes codifying the use and ownership of ejido land had already activated the land rental market. The reforms had also liberalized individual and community initiatives, allowing numerous adjustments in the production sys-

tem, in household income –earning strategies, and in the organization of the ejido– adjustments that had been prohibited before the constitutional reforms or had been carried out illegally.

What we observed between 1990 and 1994 was thus an ejido sector in crisis, at the initial stages of a long process of adaptation and transformation. The obvious difficulties that ejidatarios confronted were partly contextual and structural, but they were also symptoms of a difficult and protracted process of transition towards economic and political liberalization.

We may conclude by observing that the outcome of the second Mexican agrarian reform process initiated by President Salinas is still far from certain. Liberalization of the ejido has unleashed numerous individual and collective initiatives that have produced visible adjustments, showing the ability of this vast sector to respond to incentives. At the same time, the overall context of economic crisis in agriculture and dismantling of rural sector institutions has reduced the economic benefits that the reforms could have yielded, and hence the scope of the modernization and diversification that was expected to follow. The main step in the reforms –namely, the individual titling of ejido lands in usufruct– has hardly begun. And the ultimate outcome of the reforms is tied to the resolution of much broader economic and political questions with which Mexico is still struggling: on the economic side, restoration of economic growth, maintenance of a competitive real exchange rate, and creation of jobs; on the political side, implementation of participatory democracy, decentralization of government, and enforcement of the rule of law.

What is certain is that this second agrarian reform process offers major opportunities to improve efficiency and welfare in the ejido sector. Years of neglect and cumulative contradictions between the functions of the ejido as a mechanism for simultaneously achieving political control over the peasantry,

representing peasants, and organizing production by smallholders had created a huge efficiency gap that now needs to be filled. Analysis of success stories can help to identify the measures that must be pursued to fill this gap (de Janvry, Gordillo and Sadoulet, 1997). They include a favourable macroeconomic environment, institutional reconstruction, promotion of organizations (in particular through the ejido system), and public investment in irrigation and education. The agrarian reform initiative needs to be complemented by a comprehensive programme of rural development in support of the land reform beneficiaries: a programme that still needs to be put into place (de Janvry and others, 1996). Because of the high level of heterogeneity of farm households, a rural development programme for the ejido sector should focus not only on agriculture but also on the other sources of income accessible to ejidatarios. This means that it will be necessary to coordinate the interventions of a whole range of public and private institutions. Unless these measures are rapidly implemented, the majority of smallholders in the ejido sector are unlikely to be competitive, and they risk being displaced by a small number of well-endowed entrepreneurs in the ejido and the private sector as the land market is perfected. Failure to be competitive would thus lead to massive displacement of smallholders and to pressures on the urban labour markets and the border to the north. In the interests of global economic efficiency, the welfare of a large segment of the Mexican poor, and political stability, it is therefore urgent that the agrarian reform process under way should be complemented by a broader range of initiatives to help the agrarian reform beneficiaries to become competitive in the new economic and institutional context before the process of granting title deeds is completed and the market for land sales is activated by the reforms.

(Original: English)

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Tariffs and the *Plano Real* in Brazil

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This article analyses the economic rationale of Brazil's tariff policy during the first two years of the *Plano Real*. To this end, a study is made of the changes made in import duties for all the products traded. The tariff reform process in Brazil was begun in 1988, after the old Tariff Act had been in effect for thirty years, and represented a marked intensification in the process of trade openness, with the definition of a schedule of gradually decreasing tariffs which was further speeded up as from 1990. The *Plano Real* began in July 1994 and had many effects on import policy. The trade liberalization process reached its height in the first quarter of 1995 in terms of the average level of tariffs and their degree of dispersion. Since then there have been several episodes of tariff increases, differentiated by sectors, which have increased the degree of dispersion of the tariff structure. If two sectors with special treatment (petroleum and motor vehicles) are excluded, a direct relation may be observed between the value of imports and the nominal tariff level, with pronounced variations over the period studied. At the same time, the fact that for some sectors the tariff rate weighted by the value of imports was below the average rate for a number of months indicates that there are grounds for reviewing tariff levels in some cases. The article concludes with some observations on the performance of import policy.

I

Introduction

The Brazilian economy is often cited in the literature on foreign trade policy. A number of studies have also analysed the multiplicity of instruments adopted as barriers to imports that compete with domestic products (especially in the 1960s and 1980s), the mechanisms used in practice to circumvent these barriers through the application of special import arrangements, the various export incentives, the process of definition of import duties, and the concern to neutralize possible skews in trade policy.

Not long ago, in 1988, Brazil embarked on a process of reform of the tariff structure which had existed for the past 30 years under the Tariff Act, which underwent some changes in 1989 and many more in 1990.

The adoption of the *Plano Real* in July 1994 had a number of effects on import policy. The income-effects and price-effects of a successful stabilization programme provide a natural stimulus for the demand for imported goods. Moreover, the concern to ease access to cheaper imported products had the dual effect of exerting pressure on groups which had an oligopolistic position in the domestic market and promoting greater efficiency of the production system.

In addition to the concern for price stability, there was the conjunctural matter of the proximity of

the date fixed for the entry into effect of the tariff structure negotiated with the other members of Mercosur: the Common External Tariff was due to come into force on 1 January 1995. The second half of 1994 was therefore marked by continual changes in import tariff rates.¹

This question was already dealt with very effectively by Kume (1996), while Nonnemberg (1996) analysed other related policy measures; the first of these authors deals with the evolution since 1988 of the effective rates of protection given to the various sectors of production, while the second author highlights the importance of financial arbitrage movements as a stimulus for financing imports.²

In the present article, we will try to identify the economic rationale of Brazilian tariff policy by examining the effect of each of the various changes in import tariff rates for all the products traded. The period covered is from July 1994, when the *Plano Real* began, to the end of September 1996, which was the latest month for which data were available at the time of writing. All the decrees and decisions affecting tariff rates were taken into account, thus permitting a full description of the evolution of national import policy in the first two years of the *Plano Real*. The methodological annex shows how the primary data were processed.

II

Evolution of the tariff structure

In the course of the present decade, Brazilian external trade policy has evolved in the direction of reducing trade barriers, which has been reflected in a corresponding increase in the value of imports (table 1).

It may be noted from table 1 that although tariff rates have tended to go down steadily (except for a

slight reversal in the last year) and that this has corresponded to a rise in the total value of imports, the rate of such tariff reduction displays variations which are worthy of our attention. Thus, between 1990 and

□ This study could not have been made without the efficient computational support of Decio Fialho of ECLAC. Equally important support was provided by André Bauer in processing the data.

¹ It may be noted that the priorities laid down in the *Plano Real*—in effect from 1 July 1994—also strongly influenced national policy on convergence with the Common External Tariff.

² For a relatively full description of the period preceding the adoption of the *Plano Real* (1958-1993), see Pinheiro and Almeida (1995).

TABLE 1
Brazil: Import duties and
value of imports, 1990-1996

Year	Simple average rate (per cent)	Value of imports (Millions of dollars FOB)
1990	32.12	20 661
1991	25.19	12 042
1992	20.78	20 554
1993	16.49	22 797
1994	13.97	33 106
1995	13.07	49 263
1996 (Jan./Sep.)	13.10	49 619

Source: Estimates provided by H. Kume and figures prepared by the authors on the basis of primary data.

1993 the simple average tariff rate went down by half, whereas the most noteworthy increases in imports took place in the most recent period. Furthermore, there has been a relative stabilization of import tariffs since 1994 but, as we shall see below, this apparent stability actually conceals a varied set of parallel reductions and increases in the rates for different products.

In order to explain the different rates of change of import duties and of the increase in the value of imports, it is necessary to take into account various other relevant elements, such as exchange rate policy, the income-effect of the demand for imported products, the existence of special import regimes, and even an aspect which is usually neglected in most studies: i.e., the process of familiarization of consumers with foreign-made products which were not obtainable on the domestic market for decades. This latter element is a slow process which involves the establishment and consolidation of domestic marketing channels for the imported goods, and it undoubtedly explains—at least in part—the time-lag in the response of demand for these products.

1. General features of the trade openness process

a) *The products affected and the average tariffs*

The first aspect to be noted when analysing import policy in the first two years of the *Plano Real* is that the variations³ in import duties affected 83% of the total list and 28% of the products affected under-

³ Note that it is a question of "variations" and not necessarily of "reductions".

TABLE 2
Brazil: Incidence of changes in import duties,
July 1994 to September 1996

	Number of products	Per cent
Total number of products studied	13 428	100.0
Products which underwent a change in rate	11 183	83.3
Products with two or more changes in rate	3 830	28.5
Products with three or more changes in rate	939	7.0
Products with five or more changes in rate	148	1.1

Source: Prepared by the authors on the basis of primary data.

went two or more changes in tariff rates in the period between July 1994 and September 1996. In other words, this was undoubtedly a time of marked redefinition of the country's trade relations with the rest of the world.

The figures in table 2 indicate that in this period there was heavy intervention in the import tariff structure. Some specific products (at the ten-digit level of classification) even underwent several changes in the nominal rate. In the case of 148 products there were five changes or more, which—over a period of only 27 months—may have become a disturbing element in the formation of expectations by the economic agents.

There was a similar picture of differences in the rates of trade openness and import performance over this period (table 3 and figure 1).

Over the period in question there was an initial spell (in the last two quarters of 1994) of marked reduction of import duties which—in conjunction with other factors—resulted in a significant increase in the value of imports. At the beginning of 1995 there was a slight increase in the simple average rate, and from the second quarter of 1995 on this rate reached a level of around 13% which has been maintained since then. The quarterly value of imports evolved differently: it practically doubled between the third quarter of 1994 and the second quarter of 1995, fell slightly in the following quarter, and (subject to small fluctuations) has remained at that level (around US\$ 12 billion) since then, with a new surge in the third quarter of 1996.

The last three columns of table 3 give some important supplementary information. Before considering them, however, a brief methodological digression is called for in order to highlight the importance of

TABLE 3

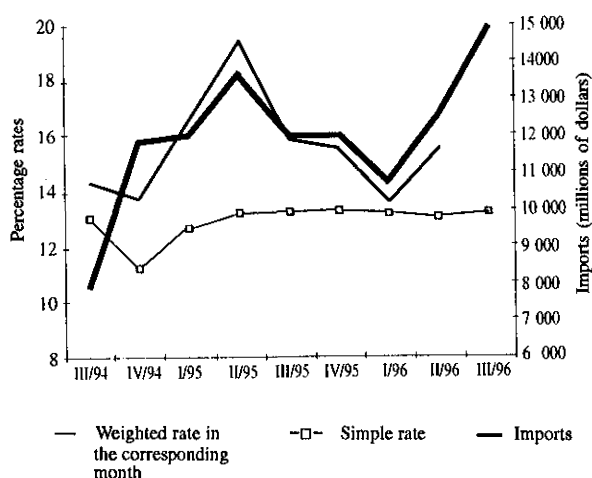
Brazil: Quarterly value of imports, rates of import duty, and number of products affected, 1994-1996

Period		Value of imports (Millions of dollars CIF)	Simple rate (per cent)	Number of episodes of changes in rates		
				Reductions	Increases	Total
1994	III	7 931	13.0	4 738	21	4 759
	IV	11 824	11.2	253	22	275
1995	I	12 017	12.6	2 462	5 349	7 811
	II	13 656	13.2	468	401	869
	III	11 916	13.2	84	85	169
	IV	12 030	13.3	63	97	160
1996	I	10 737	13.1	1 738	303	2 041
	II	12 477	13.0	195	171	366
	III	14 965	13.2	13	150	163

Source: Prepared by the authors on the basis of primary data.

FIGURE 1

Brazil: Tariff rates and imports



including the indicator on the number of variations in the rates.

If we take as an example what happened between December 1994 and January 1995, we note that the simple average import tariff rate suggests that there was a generalized rise in import duty, which rose from 11.19% in the first month to 12.62% in the second. However, these figures are the net result of a policy under which there were 5093 tariff increases at the same time that there were 2691 reductions. In other words, it would be desirable not to limit our analysis to the general level but to take account also of the data at a more detailed level.

Table 3 clearly shows that the changes in the tariff structure were actually concentrated (judging

from the number of episodes of changes in rates) in the third quarter of 1994 and the first quarter of 1995,⁴ and that this was not a continuous process.

Although the number of cases of tariff reduction predominates over the period as a whole, there were also tariff increases for a substantial number of products, especially in the first quarter of 1995 (particularly for those products which had to adapt their tariff levels to the Common External Tariff) and also early in 1996 (although the increases, which were adopted in order to correct the trade balance, were not so marked on this occasion).

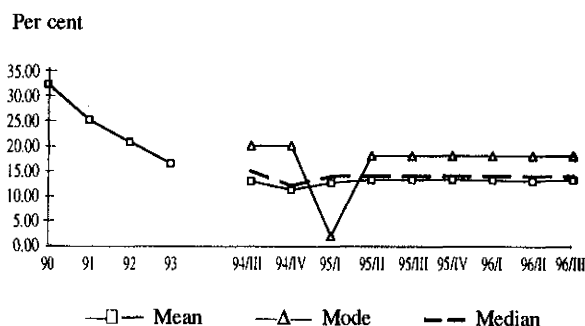
The global results of these movements (compared with the "simple" rates) are shown in figure 2.

There was a clear downward trend in the average tariff at the end of 1994, which actually represents the continuation of a process begun in 1990 (as shown in figure 2), with relative stability around the median as from the second quarter of 1995. The most frequent rate reached its minimum level in the first quarter of 1995 and stabilized at 18% as from the second quarter of that year.

Protection theory recommends that if the adoption of import tariffs cannot be avoided, then the distortions introduced into the economic system will be minimized if the rates of import duties and their dispersion are kept as low as possible. Thus, according to this theory, a reform which reduces tariff levels and also reduces the variance in the distribution of the tariff rates is a step in the right direction.

⁴ With a little additional variation in the first quarter of 1996.

FIGURE 2
Brazil: Indicators of recent tariff policy



However, analysis of the evolution of the tariff structure suggests that the behaviour was uneven, to judge from the deviation pattern of the tariff rates:

1994		1995		1996		
III	IV	I	II	III	IV	I
8.0	7.9	7.2	9.4	9.6	9.8	9.0
						8.4
						8.9

These figures indicate that initially, up to the first quarter of 1995, there was a move towards greater uniformity of the tariff structure (at lower rates), but there was growing dispersion in the rest of that year, followed by a lack of convergence throughout 1996.

b) *The weighted rates*

So far, the data have been presented on the basis of simple rates (i.e., measurements weighted only by the period of validity) and in aggregated form. It is known, however, that during the period in question there were substantial changes in the country's list of imports. In 1993, for example, imports of consumer goods represented 12% of the total value of imports, but this proportion rose to 17% in 1994 and 22% in 1995.

This means that we must consider the tariff structure in the light of the effective weight of the products concerned: i.e., we must consider the import tariff rates weighted by the value of imports of each product.

The exceptional growth of trade flows in this period raises the further difficulty of identifying the most suitable import vector for this weighting. The structure for the immediately preceding period does not reflect the changes made, and the years 1994 and

1995 must be considered atypical because they reflect import demand structures which were heavily influenced by the initial phase of a stabilization process.

The most feasible alternative was –as described in the preceding section– to weigh the vector of the simple rates by the import structure in the 1990-1993 period (as the reflection of a minimum pattern) and by the import structure in 1995 (reflecting a maximum pattern), complementing the analysis with estimates of the rates as weighted by the current value of imports: i.e., the value actually registered in each quarter.

Table 4 and figure 3 show the differences in the weighting criteria.

The three estimates of weighted rates show a sharp drop in tariffs in the last quarter of 1994, a recovery in the next two quarters, a new reduction in the second half of 1995 and a slight increase in 1996.

Analysis of these data and of the figure shows that: i) the behaviour of the simple tariff is not capable of reflecting this movement; ii) the changes in the structure of the import list over the period were sufficiently pronounced to give substantially different results when the data are weighted by the average for the previous three years or for a period of markedly high demand such as 1995; and iii) weighting by the value of imports in the same quarter gives results which are less skewed, with values intermediate between the results obtained with the other two weighting methods.⁵

These results show the need to make the analysis more detailed in order to take account of the movements in each quarter –the relation between the value of imports and the rate of duty– and the policies applied in respect of particular sectors.

⁵ It should be noted that the import values are only partly a response to the levels of import duties: according to the Ministry of Federal Revenues (data published in the *Gazeta Mercantil* of 11 December 1996), if we consider the relation between the value of imports and the amount effectively paid in import duties in the first ten months of 1996, then Brazil's imports were brought in at an average real rate of 7.1%, which is a good deal lower than the average nominal rate of 13.6% estimated by that Ministry. This is explained by the effect of "special import regimes" which ensure differential treatment for some imported products. In sectoral terms, the same study also reveals manifest differences, as in the case of transport equipment, where the nominal rate of duty in 1996 was 19.78% but the real duty was 6.46%, or consumer goods, where the nominal rate was 24.38% but the "real" rate was 11.12%.

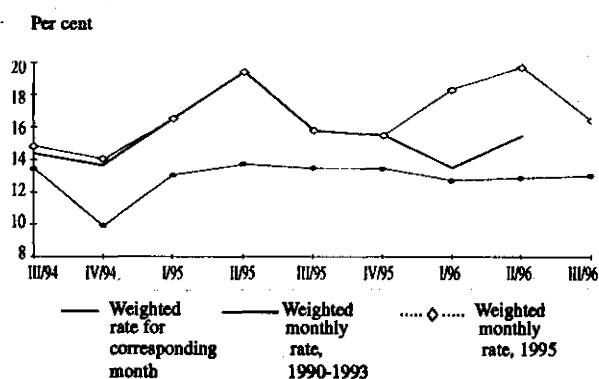
TABLE 4

Brazil: Simple and weighted rates of import duty, by quarters, 1994-1996

Period	Simple rate (per cent)	Weighted rate (per cent)		
		Average 1990-1993	Current quarter	Corresponding quarter in 1995
1994 III	12.95	13.45	14.36	14.85
IV	11.19	9.92	13.68	14.02
1995 I	12.62	13.04	16.57	16.57
II	13.18	13.74	19.46	19.46
III	13.22	13.49	15.79	15.79
IV	13.26	13.44	15.49	15.49
1996 I	13.13	12.70	13.51	18.39
II	12.99	12.86	15.47	19.72
III	13.19	13.03	...	16.45
Global average for the period July 1994-September 1996	12.86	13.16	15.54	16.75

Source: Prepared by the authors on the basis of primary data.

FIGURE 3
Brazil: Weighted import tariff rates



Before proceeding to make this detailed analysis, however, some comments are called for on the relationship between the national tariff structure and the Common External Tariff agreed with the other members of Mercosur.

2. The myth of the advance adoption of the Common External Tariff (CET)

It was thought that Brazil would bring forward to September 1994 the country's adoption of the Common External Tariff (CET) agreed within Mercosur and scheduled to come into effect in January 1995, but closer analysis reveals that this assertion calls for some reservations.

The belief that the CET would be applied three months in advance was due to Resolutions 506 and 507 of the Ministry of Finance, both dated September 1994. In fact, three important resolutions were adopted in that month: No. 492, which reduced the import duties for a number of products to a uniform level of 20%, and Nos. 506 and 507, which changed the specific rates for a list of products.

At the end of September 1994, however, after the entry into force of the three resolutions, there were still 124 products with import duties of over 20%,⁶ and not all of them corresponded to the exceptions provided for in the case of the information processing sector (only 48 products under item 84.71) and the telecommunications sector (only 6 products under item 85.17).

Furthermore, examination of the Brazilian tariff structure at the end of September 1994 shows that there were 2930 products with rates higher than those of the CET, 5102 with rates that were lower, and 5396 with rates equal to those of the CET.

In other words, at the end of September the CET tariff structure only applied to 42% of the total number of products on the import list. Thus, Brazil only partially applied the CET in advance.⁷ The effective adoption of the Common External Tariff and the

⁶ Compared with 452 products in August of the same year.

⁷ Combined with tariff reductions to levels below those laid down in the CET, for the purpose of domestic price stabilization.

Common Nomenclature only took place as from 1 January 1995, through Decree No. 1343. This does not mean to say that the convergence effort was not appreciable; it is simply meant to show that the CET was not applied in full before the scheduled date.

Another important observation for understanding the evolution of the Brazilian tariff structure in this period concerns the lists of exceptions. Between April and December 1995, in an effort to bring down domestic price levels through competition from imports, the government adopted Decrees Nos. 1453, 1471, 1490, 1550, 1678 and 1767, which established lists of products temporarily subject to differential tariff treatment.⁸ In April 1996, Decree No. 1848 established another list of exceptions.

With regard to the products affected, in January 1995, when the CET was adopted, there were 1272 products on the list of exceptions (annex to Decree No. 1343), and this figure rose to 1700 products in December of that year, as a result of the adoption of the two decrees already mentioned, which were consolidated in Decree No. 1767. In April 1996, Decree No. 1848 consolidated a new list of exceptions containing 1500 products.

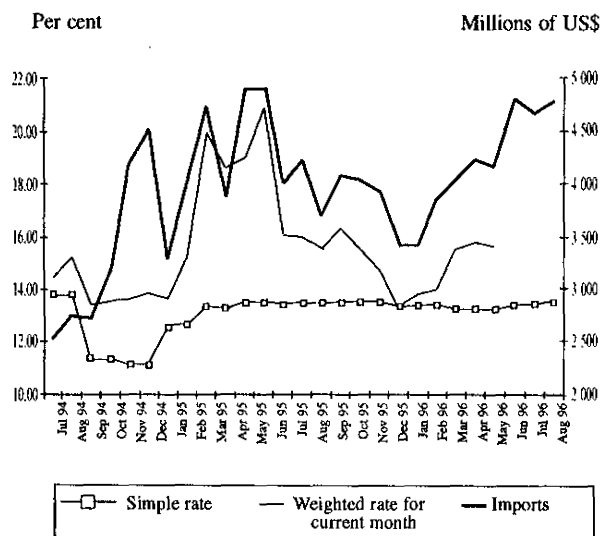
If we look at the whole set of movements effected in this period, in relation to the *number of times* the rates were changed (not the products affected), we see that for the period from July 1994 to September 1996 this number was broken down as follows:

- i) Partial adaptation of the Brazilian customs tariffs to the CET in September 1994 accounted for 23% of the cases, all involving tariff reductions.
- ii) The application of the CET in January 1995 accounted for 47% of the total number of changes in tariffs: 32% increases and 15% reductions.
- iii) The adoption of lists of exceptions accounted for 23% of the total: 16% reductions and 7% increases.

These data help us to understand the evolution of the weighted average rate of import duties. Figure 1 shows that there was an initial downward movement

FIGURE 4

Brazil: Import duty rates and import values - monthly figures
(Percentage rates and import values in millions of dollars)



in the fourth quarter of 1994, reflecting the partial advance application of the CET (and the additional adjustment in the tariff structure), followed by an increase when the Common External Tariff was applied in full, reaching a peak in the second quarter of 1995. Subsequently, up to the first quarter of 1996, new reductions were made on three occasions, reflecting the effect of the lists of exceptions, and thereafter there was an upward trend in tariff levels.

Analysis of the monthly data on the "simple" rate of import duties and the value of imports (see figure 4) also shows three distinct periods:

i) Initially, in July and August 1994, the total value of imports begins to rise, even before the changes in the tariff structure: the most likely explanation for this is the income-effect of the *Plano Real*, associated with the revaluation of the exchange rate.

ii) In a second period (between September and December 1994) the level of the "simple" tariff rate is reduced. In this period there is clearly an extra stimulus for imports due to the variation in the "simple" rate and the persistence of the income-effect and price-effect from the previous period.

iii) As from 1995 (especially as from March) the "simple" rate stabilizes around 13% (while at the same time the exchange rate changes again). The fluctuations in the total value of imports persist, however. Altogether, this set of data suggests that as from

⁸ The changes made during 1995 may be summarized as follows: a) Decree No. 1471 consolidated the exceptions to the Common External Tariff (annex 1 of the Decree gives the national list of exceptions and annexes 2 and 3 correspond to the so-called Dallari list); b) Decree No. 1490 established a new annex 1 which superseded the previous one; c) Decree No. 1550 corrected and slightly amended the Common External Tariff; and d) Decree No. 1678 repeated the foregoing procedure. We are indebted to Honorio Kume for this information.

the second quarter of 1995 the "simple" rate loses its capacity to determine imports: its influence seems to be limited to the level of the value of imports, but it does not explain the variations in this indicator, which tends to depend on other determinants such as exchange-rate and other policies.

The behaviour of the weighted rate reflects these three periods: it rises between July and August 1994 (even with a constant "simple" rate), remains stable between September 1994 and January 1995 (the reduction in the rate is offset by the increase in imports), and thereafter it directly reflects the variations in the value of imports.

This behaviour suggests that there are other factors that should be taken into account, especially analysis of the behaviour at the level of the most important sectors.

3. Tariffs by sectors

For this sectoral analysis, we selected 14 of the 97 chapters (two-digit categories) of the Nomenclatura Brasileira de Mercadorias/Harmonized System on the basis of two criteria: i) the number of variations in import duties they underwent in the period studied, and ii) their relative importance in the total value of imports.

The 14 chapters selected in line with these criteria accounted in 1995 for 74% of the total value of imports and 67% of the number of variations in tariff rates in the period in question. In other words, these chapters accounted for the major part of the variations in import duties between July 1994 and September 1996. These chapters also account for 65% of the total number of products (at the ten-digit level) affected by changes in tariff rates.⁹

Table 5 summarizes the basic information. It will be noted from it that—as in the universe of the import list—the number of reductions of tariff rates amply exceeds the number of increases in the period. In this sample of 14 tariff chapters, there were increases in

59% of the cases, whereas there were reductions in 72%. This reflects the sectoral dispersion of the trade liberalization process.

The fourth, fifth and sixth columns of table 5 also show that the "simple" rates for these 14 chapters were always higher than the rates for the total number of products.

This relation was maintained systematically. Figure 5 shows a comparison between the evolution of the rates in the sample and those of the whole 97 chapters during the period studied. Both show a marked reduction between July and September 1994 and relative stability as from May 1995. However, the "simple" rate for the 14 chapters is systematically higher than the rate for the totality of products, which explains the above-mentioned difference between the percentage shares of the sample group in the episodes of reduction and increase of rates.

Furthermore, as a result of the import policy, during the period in question there was a direct and systematic relation between the rates of duty on imports and the value of imports of the products in question (see table 6).¹⁰

Analysis of table 6 reveals that on average the products with the greatest weight in the total value of imports were subject to higher rates. There is a direct relation for each import value bracket.

Part of the explanation for these results must be sought in the policy on the sectors to which these products belong. The data indicate that the highest rates for this set of products were observed in the case of synthetic textiles, footwear, buses and utility vehicles, which suggests concern about the effects of imports on domestic producers.

For all the sectors studied, there was a sustained reduction of import duties between 1990 and 1993. In some cases, this reduction was quite marked, as for example in the case of milling industry products, where the tariff was reduced from 28.8% in 1990 to 9.9% in 1993. Other significant reductions were in plastics and plastic products, machinery and me-

⁹ The chapters were: Chap. 11 - Milling industry products; Chap. 27 - Mineral fuels and mineral oils; Chap. 28 - Inorganic chemical products; Chap. 29 - Organic chemical products; Chap. 39 - Plastics and products thereof; Chap. 48 - Paper and paperboard; Chap. 54 - Synthetic or artificial filaments; Chap. 55 - Synthetic or artificial fibres; Chap. 72 - Cast iron, iron and steel; Chap. 73 - Cast iron, iron or steel, worked; Chap. 84 - Machinery and mechanical equipment; Chap. 85 - Electrical equipment and components; Chap. 87 - Motor vehicles and other land transport equipment; Chap. 90 - Optical instruments and equipment.

¹⁰ This table shows the average level of the "simple" rates in effect during the period studied, by import value brackets. There were two products with import values over a million dollars in 1995: passenger vehicles and petroleum. As imports of petroleum are totally regulated in Brazil—this being a product with a very particular market—and as automobile import policy displayed extreme variations in the period, we decided not to include the data on these two products in the table, in order to avoid distortions.

TABLE 5

Brazil: Selected chapters, by number of variations in import duty rate and/or relative importance in total imports

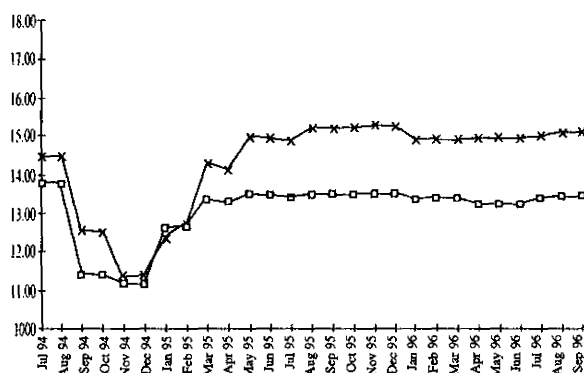
Selected chapters of NBM/HS ^a	Value of imports in 1995		Simple average rates			Total number of changes in rates in period			Number of products affected -total for period	
	Millions of dollars	Chapter as % of total imports	1994 2nd half-yr.	1995	1996 Jan-Sep	Reductions	Increases	Total		
11	1 161	2.36	10.00	10.38	10.50	0	10	10	0.06	48
27	5 541	11.24	6.94	9.95	8.34	110	34	144	0.87	93
28	583	1.18	3.96	5.49	5.62	68	384	452	2.72	578
29	2 976	6.04	6.77	8.25	8.27	1 524	1 565	3 089	18.60	2 210
39	1 596	3.24	13.15	13.39	13.85	226	160	386	2.32	285
48	919	1.86	9.50	12.02	12.71	38	286	324	1.95	220
54	531	1.08	12.89	12.30	16.46	455	203	658	3.96	215
55	286	0.58	15.31	14.52	17.81	247	78	325	1.96	142
72	320	0.65	9.88	10.06	10.05	142	273	415	2.50	331
73	377	0.76	12.41	14.86	14.97	91	196	287	1.73	282
84	7 990	16.20	19.31	17.98	16.95	2 261	146	2 407	14.49	1 302
85	5 705	11.57	18.07	22.01	19.36	861	184	1 045	6.29	645
87	5 560	11.28	22.46	34.72	37.65	369	259	628	3.78	220
90	1 622	3.29	17.11	16.10	15.59	638	83	721	4.34	508
<i>Total number of chapters selected</i>	<i>35 167</i>	<i>73.70</i>				<i>7 030</i>	<i>3 861</i>	<i>10 891</i>	<i>65.57</i>	<i>7 256</i>
<i>Total NBM/HS</i>	<i>49 311</i>	<i>100.00</i>	<i>12.07</i>	<i>13.07</i>	<i>13.10</i>	<i>10 014</i>	<i>6 599</i>	<i>16 613</i>	<i>100.00</i>	<i>11 183</i>

Source: Tabulation prepared by the authors on the basis of primary data.

^a NBM/HS = Brazilian Nomenclature of Goods/Harmonized System.

FIGURE 5

Brazil: Simple average tariff rate, for total imports and for selected chapters (Per cent)



chanical equipment, electrical equipment and components, and the motor industry, where the tariff went down from 63.6% to 32.2% over the same period.

The sectoral data for the period from July 1994 to September 1996 also show that the “simple” rates displayed a varied trajectory.¹¹ Thus, for example, in the case of mineral fuels, plastics and plastic products, paper and paperboard, inorganic chemical products, organic chemical products and motor vehicles, import duties reached their lowest level in the fourth quarter of 1994, while in the case of synthetic or artificial filaments and synthetic or artificial fibres they did so in the first quarter of 1995. In the case of machinery and mechanical equipment, the “simple” rates display a systematic downward path.

What these different trajectories show is that –although the global indicators suggest that the first quarter of 1995 was the moment of greatest openness of the economy– the different forms of evolution of the sectoral rates also indicate that the policy of greater economic openness did not correspond to a generalized uniform movement, as may also be seen from the evolution of the standard deviations of the

¹¹ Possible exceptions to this were the milling industry, cast iron, iron and steel products, and optical instruments and equipment, where the variations in the nominal rates were very small.

TABLE 6

Brazil: Relation between value of imports and tariff rate applied

Value of imports per product (millions of dollars)	Number of products	Percentage share in total value of imports (1995)	"Simple" rate, ^a %
Over 20	369	56.97	14.93
Over 50	132	42.62	27.88
Over 100	52	31.06	36.43
Over 150	34	26.88	50.01

Source: Tabulation prepared by the authors on the basis of primary data.

^a Average rate between July 1994 and September 1996.

tariff rates already referred to. In other words, a period which is often associated in the minds of observers with trade openness actually covers a varied range of types of sectoral treatment.

A third aspect which emerges from analysis at the sectoral level is the behaviour of the "simple" and weighted rates. In some sectors, the weight of imports of products subject to higher rates than the sectoral average was enough to bring about a systematic rise in the weighted tariffs compared with the simple rates, as occurred in the case of mineral fuels, synthetic filaments (in 1994 and 1995) and automobiles and other land vehicles. On the other hand, in the case of inorganic chemical products, plastics and plastic products, paper and paperboard, electrical equipment and components, and optical instruments

and equipment, the opposite took place because of the predominance in the imports of products subject to lower rates.¹²

Protection theory notes that in some situations the tariff level established may be excessive, giving rise to what is known as "tariff dilution" (a rate which exceeds the desirable level of protection). The same theory also notes that tariff levels may be so high as to make international trade inviable.

If the calculations show that some weighted tariffs are below the average for the sector, this may indicate that –taking account of the import structure and despite the generalized process of increased openness– in some industries there may have been some degree of excessive protection during the period studied.

III

Factors conditioning tariff policy

The first aspect to be highlighted in the analysis of tariff policy in this period is the concern displayed, in the design of this policy, to stabilize the level of domestic prices in the broad sense. This concern is clearly reflected both in the preparation of the lists of

exceptions¹³ and in the diagnosis underlying the whole process: it is based on the idea that access to products (especially inputs) at prices close to international levels helps to improve the efficiency of the entire production process, the competitiveness of domestic production, and the sustainability of the stabilization process itself.

Global data show a clear movement towards a generalized reduction in trade barriers, one of the most significant results of which has been an increase in the imported component of domestic supply:

¹² With regard to other sectors –such as milling industry products, organic chemical products, cast iron, iron and steel products, and machinery and mechanical equipment– the degree of dispersion of the rates for the various products is only small, so that the structure of the weighted rates is similar to that of the "simple" rates; in view of the relative homogeneity of the rates for the different products in these sectors, the estimation of the weighted rates does not suffer from the influence of the import value, which appears both in the numerator and the denominator of the formula used for calculation.

¹³ It may be noted that these were prepared after the adoption of the Common External Tariff.

TABLE 7

**Brazil: Some examples of products with
five or more variations in tariff rates**

Chapter	Name	Number of products	Number of variations
15	Oils and fats	1	6
29	Organic chemical products	1	7
		6	5
34	Cleaning products	12	6
54	Synthetic filaments	7	6
		5	7
76	Aluminium	2	6
83	Base metal products	1	6
84	Machinery and mechanical equipment	1	6
		2	5
85	Electrical machinery and equipment	11	5
87	Motor vehicles	61	5

Source: Prepared by the authors on the basis of primary data.

according to estimates by Moreira and Correa (1996), the share of imports in the apparent consumption of manufacturing industry rose from 9.4% in 1993 to 15.5% in 1995, especially imports of capital goods, whose share rose from 28% to 42% in the same period.¹⁴

Equally important was the decisive influence exerted on customs policy by the political decision to consolidate the process of formation of Mercosur. This factor –unprecedented in the country's economic policy –undoubtedly affected the results in late 1994 and early 1995.

Finally, this period is marked by a new approach, compared with Brazil's experience in recent decades, regarding the process of determining import duty rates. Traditionally, the tariffs for Brazil's imports were determined –since the 1957 Tariff Act– on the basis of negotiations between producers, marketers and the government authorities. This is a feature which has very few parallels in other countries; it might be maintained that this practice could have helped avoid the crises caused in other Latin American countries by the rate of trade reforms. At the same time, however, it must also be acknowledged that the influence of different interests could often have slowed down the desirable (or economically advisable) rate of changes in import duties.

However its actions may be interpreted, the fact is that the existence of a customs policy committee made up of representatives of government and of the private sector (including representatives of agriculture, industry and trade) played an important part because it promoted transparency and joint definition of criteria for changes in the tariff structure.¹⁵

This mechanism disappeared in 1990 (its absence is therefore one of the special features of the period studied), and the definition of tariff rates became the responsibility of a sectoral ministry (the Ministry of Industry) and the Ministry of Finance.

It may be noted in this respect that the lack of such a policy-making instrument may involve costs. For example, if we analyse the rate of import duty on some specific products over a period of time we note that its evolution during the period in question does not display the stability recommended by protection theory as an important element for defining expectations and, ultimately, facilitating the action of the economic agents. Table 7 illustrates several such cases.

Protection theory suggests that the expectations of the economic agents –both producers and consumers– are influenced by their hope of deriving benefits from a given tariff structure. The more homogeneous that structure is, the fewer skews there will be in terms of added value,¹⁶ and hence the fewer distor-

¹⁴ As Moreira and Correa (1996) note, this occurred without any parallel increase in exports. For manufacturing as a whole, the export/output ratio remained almost constant: 14.5% in 1993 and 14.9% in 1995.

¹⁵ For a description of the features, procedures and actions involved and some of the results obtained, see Baumann and Morais (1988) and Baumann (1993).

¹⁶ For an analysis of the levels of effective protection in recent times in Brazil, see Kume (1996).

TABLE 8

Brazil: Examples of variations in tariff rates for selected products

Product	Evolution of import duty (percentage levels)							
29.26.90.02.00	Adiponitrile							
	7/1994	9/1994	12/1994	5/1995	11/1995	2/1996	4/1996	8/1996
	15	14	2	4	8	10	2	12
34.01.19.03.00	Industrial soap							
	7/1994	1/1995	5/1995	11/1995	2/1996	4/1996	8/1996	
	10	11	4	6	8	2	18	
54.02.49.02.01	Acrylic dyes							
	7/1994	9/1994	11/1994	4/1995	5/1995	2/1996	4/1996	8/1996
	20	16	2	0	6	10	6	16
54.02.49.04.01	Polypropylene dyes							
	7/1994	9/1994	11/1994	4/1995	5/1995	2/1996	4/1996	8/1996
	20	16	2	0	6	10	6	16
84.22.40.99.00	Goods packaging machines							
	7/1994	11/1994	1/1995	6/1995	7/1995	1/1996		
	20	0	19	0	19	18		
85.17.10.99.00	Telephone apparatus							
	7/1994	1/1995	3/1995	5/1995	1/1996	4/1996		
	30	19	70	63	56	30		
87.03	Passenger cars							
	7/1994	9/1994	1/1995	2/1995	1/1996	4/1996		
	35	20	32	70	62	70		

Source: Prepared by the authors on the basis of primary data.

tions will be caused in resource allocation. Furthermore, the more stable this structure is over time, the longer will be the planning horizon of the agents and the greater the efficiency of resource allocation. Long-term projects need stable rules.

However, the data in table 7 show that for some products (in a ten-digit classification) the period between July 1994 and September 1996 was one of instability, with marked fluctuations in the rates of import duty. There is no set rule for knowing what the time interval between tariff changes should be, but it seems reasonable to assume that producers (and consumers) of a product which undergoes six or more changes in its rate of duty over a period of 27 months must have some difficulty in programming their activities with any degree of precision, especially when those variations are both upward and downward and are of considerable magnitude. Table 8 shows some examples of

products where these fluctuations were quite marked and where the process of fixing import duties did not follow any clear line, whether in terms of establishing greater trade openness or creating a more autarkic system. Nor is there any clear sectoral rationale. Producers in such widely different sectors as the manufacture of cleaning products, machinery, yarns and automobiles all suffered marked variations without any apparent direction: fluctuations which amounted in some cases to as much as nineteen percentage points in one or the other direction within a period of six months.

The most likely explanation of this is that import policy pursued multiple objectives which were not always compatible with each other, such as giving broader access to imported goods and contributing to the price stabilization programme while—in some cases—reducing the costs of domestic producers of those goods.

IV

Summary and final remarks

In this article we have sought to analyse the evolution of import tariffs in the first two years of application of the *Plano Real* (July 1994 to September 1996), by examining the whole structure of tariff rates. The period studied coincided with a marked intensification of the process of greater trade openness of the Brazilian economy, which began in 1988 and was stepped up as from 1990 with the definition of a downward movement of tariff rates.

In this period there was a process of trade liberalization—reflected in the average level of tariffs and the degree of dispersion of their structure—which reached its peak in the first quarter of 1995. After that, there were various increases in tariff rates, differentiated by sectors, which led to greater dispersion of the tariff structure. At the same time, these events suggest that the average level of nominal import duties remained relatively constant since the second quarter of 1995, so that the behaviour of the total value of imports was determined by other elements.

This process affected practically 90% of the Brazilian import list and took place in stages which were associated with a process of openness in the broad sense, the partial advance application of the Mercosur Common External Tariff structure, and the adoption of lists of exceptions.

Analysis of the process by sectors of production reveals (if we leave aside the particular cases of petroleum and automobiles, which received differential treatment and had significant weight in imports as a whole) that there was a direct relation between the nominal tariff rate and the value of imports for each product (which indicates a concern for specific sectors of production) and that there were marked variations during the period studied. Furthermore, the fact that in the case of some sectors the weighted rate (weighted by the value of imports) was below the simple average rate for a number of months indicates that there is room for reviewing the tariff levels in some cases.

These observations give grounds for some reflections on the design of import policy. In principle, this design should reflect a clear target function for

the economic agents so that investment decisions may be based on the largest possible amount of information. This clarity stems not only from the identification of purposes but also from the manner of achieving the objectives. The Brazilian experience is unique and valuable in the sense that there was a collegiate body for this task. There are pros and cons with regard to this manner of operation, as a decision on goods manufactured by only a few domestic producers may not be efficient if it is not based on ample information.

Moreover, protection should not be an aim in itself, nor should it be maintained without taking account of its alteration of the basic economic relations. In other words, there should be some degree of flexibility for making adjustments, either by using a practice which is common in other countries (the application of non-tariff mechanisms) or by making corresponding changes in the exchange rate.¹⁷ However, fluctuations in nominal tariff rates which exceed a certain level in a relatively short space of time are certainly not desirable, because tariffs represent only one of the price signals (along with the exchange rate and other factors) which are important for the agents concerned, and the direction of variation is not always immediately identified. Theoretically, the ideal is indeed a single, uniform rate maintained in time, but this is not always feasible. One possibility that might be explored is the definition of possible margins of variation for given periods of time, as a way of reducing the excessive instability which marked the period studied.

(Original: Portuguese)

¹⁷ This method was typical of Brazilian practice in the 1970s and 1980s, but its use should be viewed with caution in the light of the growing importance of external financial flows for the Brazilian economy and—in the period in question—the whole rationale of the stabilization process, which requires a relatively low and constant exchange rate.

ANNEX 1

Methodology used

The aim of the study was to describe the policy followed in defining the rates of import duties in Brazil during the period from July 1994 to September 1996 and analyse the resulting structures. It was therefore necessary to work with the universe of products in the Brazilian Nomenclature of Goods, Harmonized System (13,428 products in the 10-digit classification) and examine all the documents published in the Official Gazette which involved changes in those rates.

The second step was to organize and harmonize the information on import duty rates according to the data of the Brazilian customs tariff (products classified at the 10-digit level under the Harmonized System) and the Common External Tariff (8-digit classification of the common Mercosur nomenclature). This process was carried out on the basis of the common root for each product (6-digit classification), using the compatibility scheme prepared for the Common External Tariff and published in customs reference works.

The third stage in the work was to determine the rates applicable to each product in July 1994 and then tabulate, for each succeeding month, the changes made through resolutions or decrees. Of the 13,428 products, 11,183 underwent some type of change in the applicable rate and 939 underwent three or more changes in the period.

On the basis of this information, vectors of the rates applicable in each month to each product were then constructed.

In order to facilitate the analysis, the monthly data were grouped in quarters. The basic criterion used for this grouping was the assumption that the representative rate for each quarter was the rate which was in force for the longest period of time. On the basis of this assumption, we then calculated what we have called the "simple rate", which is actually the average of the rates applicable to each product, weighted by the period of applicability of the rates in each quarter.

This estimate enabled us to identify the sectors most strongly affected and the number of cases of increases or reductions in rates, and also to calculate the generic descriptive statistics: the mean, mode and standard deviation of the rates.

However, the evaluation of a tariff structure also requires that the estimated representative rate should reflect the relative importance of the various products in terms of their share of the total value of imports. A structure in which the tariffs are weighted by the value of imports of each product has more economic significance than a vector of simple nominal rates.

This raises the problem of defining an import structure which can be used as a reference for the weighting process. In the period studied a marked influence was exerted by the income-effects and price-effects deriving from the process of stabilization of domestic prices, as well as the effect exerted on demand by the process of greater external trade openness. Consequently, the composition of Brazilian imports in 1994 and 1995 was very different from the structure in previous years.

In order to overcome this problem, we considered three alternative weighting structures:

i) as a structure "representative" of the period immediately before the adoption of the *Plano Real* we used the import structure observed in 1990-1993 (average import values for each product);

ii) as a reference value for testing substantive changes in import structure, we used the 1995 import structure;

iii) we assumed that a) changes in tariff rates have helped to change import values and also, because of the effect of this on certain products, that b) variations in the value imported affect decisions to change the levels of import duties. We also assumed (in a consciously arbitrary manner) that c) these effects took place with a lag of not more than one quarter. This gave rise to a third weighting criterion, in which the rates for a given quarter are weighted by the current value of imports in that quarter.

Special care was taken in the tabulation of the data for the fourth quarter of 1994, which is considered by various analysts to be the period of greatest intensification of the trade openness process. As we had a very detailed knowledge of the whole regulation process, it was possible to follow up closely, among other things, the effective relation between the Brazilian tariff structure and the Common External Tariff, leading us to make some reservations with regard to some conclusions frequently found in studies of this period.

The data on import duty rates were compiled from an analysis of the resolutions and decrees published in the Official Gazette of the Union during the period studied, as well as the foreign trade legislation published in customs reference works.

The data on the monthly value of imports of each product were obtained directly from the primary processing carried out by the Ministry of Federal Revenues, which enabled us to calculate the weighted rates (weighted by value and by period of applicability) and to group the data by chapters (two digits of the Harmonized System) and by sub-periods.

ANNEX 2

Brazil: Nominal percentage import duty rates for selected sectors, 1990-1996

Period	Chap.11	Chap.27	Chap.28	Chap.29	Chap.39	Chap.48	Chap.54	Chap.55	Chap.72	Chap.73	Chap.84	Chap.85	Chap.87	Chap.90
1990	28.75	5.00	13.55	24.21	32.26	26.31	25.53	30.00	21.99	26.95	36.56	38.89	63.57	29.97
1991	21.15	1.49	7.70	17.12	25.91	15.09	24.37	30.00	16.43	22.73	28.90	31.79	48.72	25.63
1992	12.08	0.53	7.07	15.69	21.86	12.04	21.17	25.00	13.98	18.78	24.72	26.84	40.63	21.24
1993	9.90	0.57	5.10	13.03	16.28	10.49	21.21	24.26	11.09	17.29	20.29	22.11	32.18	19.34
1994	9.48	0.41	4.52	12.30	14.74	10.49	18.06	19.07	10.21	13.35	19.37	19.01	27.39	17.77
1995	10.40	9.95	5.49	8.25	13.39	12.02	12.30	14.52	10.06	14.86	17.98	22.01	34.72	16.10
1996 (jan./sep.)	10.50	8.34	5.62	8.27	13.85	12.71	16.46	17.81	10.05	14.97	16.95	19.36	37.65	15.59
1994 III	10.00	7.24	4.25	9.41	14.03	9.50	16.37	18.06	10.22	12.78	19.37	18.34	24.99	17.45
1994 IV	10.00	6.65	3.66	4.13	12.28	9.50	9.40	12.55	9.54	12.04	19.24	17.80	19.93	16.77
1995 I	10.38	9.95	5.44	8.23	13.24	12.73	7.13	10.38	10.66	14.92	17.63	18.70	26.52	16.28
1995 II	10.38	9.95	5.46	8.26	13.35	12.02	10.76	13.55	9.95	14.80	18.34	23.52	37.49	16.28
1995 III	10.38	9.96	5.48	8.27	13.52	11.67	15.04	16.59	9.68	14.84	17.97	22.90	37.44	16.10
1995 IV	10.38	9.96	5.57	8.26	13.46	11.67	16.26	17.57	9.95	14.87	17.97	22.90	37.44	15.74
1996 I	10.50	8.32	5.60	8.27	13.85	12.46	16.42	17.81	10.04	14.97	17.29	21.78	34.25	15.47
1996 II	10.50	8.35	5.60	8.27	13.85	12.46	16.34	17.81	10.04	14.97	16.80	18.16	39.05	15.67
1996 III	10.50	8.35	5.65	8.27	13.85	13.21	16.62	17.81	10.05	14.97	16.78	18.13	39.64	15.64

Source: Tabulation of primary data (see text).

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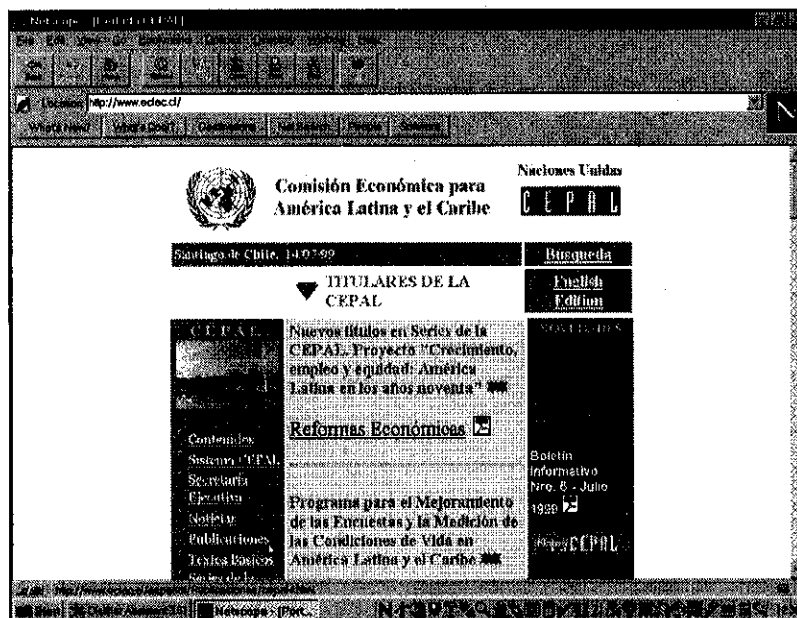
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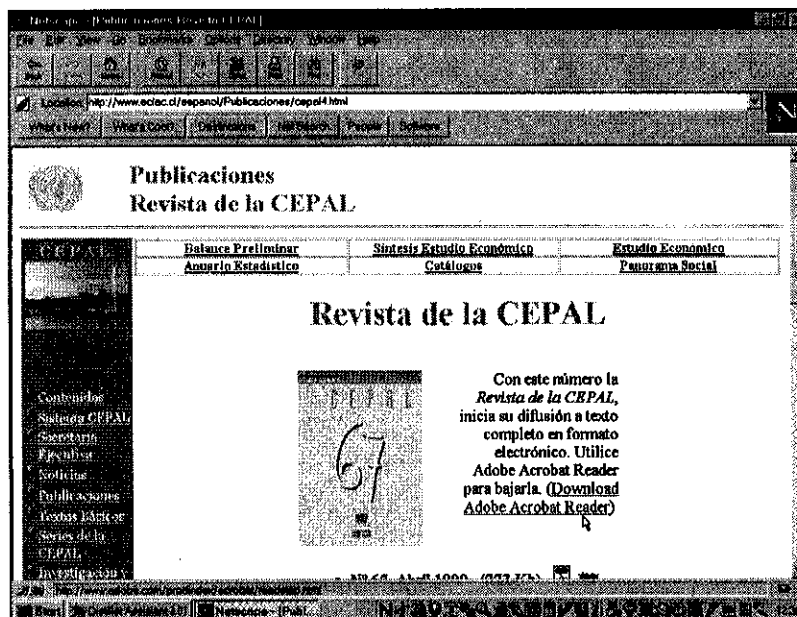
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The screenshot shows the homepage of the Comisión Económica para América Latina y el Caribe (CEPAL). At the top, there is a navigation bar with the URL <http://www.edec.cl/>. The main header features the CEPAL logo and the text "Comisión Económica para América Latina y el Caribe" and "Naciones Unidas CEPAL". Below this, there is a section titled "TITULARES DE LA CEPAL" with a dropdown arrow. To the right, there is a "Busqueda" (Search) box with "English" and "Español" options. The main content area is divided into several sections: "Nuevos títulos en Series de la CEPAL. Proyecto 'Crecimiento, empleo y equidad: América Latina en los años noventa'", "Reformas Económicas", and "Programa para el Mejoramiento de las Encuestas y la Medición de las Condiciones de Vida en América Latina y el Caribe". A sidebar on the left contains a "Contenido" (Content) menu with links to "Sistema CEPAL", "Secretaría", "Ejecutiva", "Noticias", "Publicaciones", "Tratados Básicos", and "Series de la CEPAL". A "Boletín Informativo" (Information Bulletin) section on the right mentions "Nro. 6 - Julio 1995".



The screenshot shows the "Publicaciones" (Publications) page of the CEPAL website. The URL is <http://www.edec.cl/espanol/Publicaciones/cepal.html>. The page is titled "Publicaciones Revista de la CEPAL". Below the title, there are several links: "Balance Preliminar", "Anuario Estadístico", "Síntesis Estudio Económico", "Catálogos", "Estudio Económico", and "Panorama Social". The main content area features the title "Revista de la CEPAL" and a large image of the journal cover, which has the number "67" on it. To the right of the cover, there is a text box that reads: "Con este número la Revista de la CEPAL, inicia su difusión a todo completo en formato electrónico. Utilice Adobe Acrobat Reader para bajarla. (Download Adobe Acrobat Reader)". A sidebar on the left contains a "Contenido" (Content) menu with links to "Sistema CEPAL", "Secretaría", "Ejecutiva", "Noticias", "Publicaciones", "Tratados Básicos", "Series de la CEPAL", and "Investigación".

Recent ECLAC publications

Periodical publications

Selected Statistical Indicators of Caribbean Countries, 1997, LC/CAR/G.535, vol. X. ECLAC Subregional Headquarters for the Caribbean, Port of Spain, Trinidad and Tobago, January 1998, 304 pages.

This publication represents the tenth edition of *Selected Statistical Indicators of Caribbean Countries*. It includes statistical information on exchange rates, current account, balance of payments, external trade, financial and fiscal information, price indexes, and data on the tourism sector. The geographical coverage of the individual indicators is variable.

The presentation of the statistical information has been changed in order to follow more closely the national publications on the various items. This will make it possible to consult the ECLAC Subregional Headquarters for the Caribbean on line, as well as using the more traditional methods.

Clasificaciones estadísticas internacionales incorporadas en el banco de datos del comercio exterior de América Latina y el Caribe de la CEPAL (Revisión I) (International statistical classifications incorporated in the ECLAC External Trade Data Bank for Latin America and the Caribbean (Revision I), LC/G.1996-P, "Cuadernos Estadísticas de la CEPAL" series, No. 25, ECLAC, Santiago, Chile, July 1998, 287 pages.

The purpose of this publication, which is aimed at users and producers of information on international trade in tradeable goods, is to publicize the changes made in the Harmonized Commodity Description and Coding System (HS), revision 2 (HS96), applicable as from 1 January 1996, and their effects on the other international statistical classifications contained in the ECLAC External Trade Data Bank for Latin America and the Caribbean (BADECEL).

Setting out these schemes side by side also seeks to provide a general overview for both producers and users of external trade statistics, since knowledge of the objectives and nature of the different international classifications is an indispensable starting point for the proper use of such statistics.

In accordance with this line of approach, part I sets forth some general considerations and briefly comments on the scope and objectives of each classification. In addition, in order to help define their characteristics and form of organization, details are given of the broadest categories of the Harmonized Commodity Description and Coding System (HS 96), the Standard International Trade Classification, Revision 3 (SITC, Rev. 3), the International Standard Industrial Classification of All Economic Activities, Revision 3 (ISIC, Rev. 3), the Classification by Broad Economic Categories, Revision 3 (CBEC, Rev. 3), and the Provisional Central Product Classification (CPC). The relations between these classifications, which are set forth in two

forms in parts II and III of the document, are also briefly explained as from paragraph 53, while the aspects in which they correspond are illustrated with two figures.

Part II contains a matrix of correlations prepared in line with the set of (five-digit) items in SITC, Rev. 3. This establishes the correspondence between the item codes of SITC, Rev. 3 and those of HS96, CPC, SITC, Rev. 3, and CBEC, Rev. 3. With regard to the CPC, it should be noted that only the first four sections of its structure, concerning tradeable goods, were taken into account. In addition, the correspondences are shown between revisions 3 and 2 of the SITC and between the SITC and the CBEC, Rev. 1 and the SITC, Rev. 2, as well as between the SITC, Rev. 2 and the modified SITC (Rev. 1), and between the latter and the CBEC.

Finally, part III contains a list of codes ordered according to the HS96 sequence and the correlations between these codes and those of the other statistical classifications contained in BADECEL.

Because a large number of users—Central Banks, statistical institutes, national and private bodies, international organizations, research organizations, etc.—are interested in having access to the computerized files of No. 18 of the "Cuadernos Estadísticas de la CEPAL" series, it has been decided to distribute this document on diskettes to applicants requesting it from the email address divest@eclac.cl of the ECLAC Statistics and Economic Projections Division.

América Latina y el Caribe: Serie Estadísticas sobre comercio de servicios 1980-1997 (Latin America and the Caribbean: Statistical series on trade in services, 1980-1997), "Cuadernos Estadísticos de la CEPAL" series, United Nations publication, Sales No. S.98.II.G.8, ECLAC, Santiago, Chile, July 1998, 124 pages.

In the countries of the region, the availability of information on external trade in goods is very different from that which is available on external trade in services.

In the case of trade in goods, the information available is quite complete, reliable and timely, since the trade in goods is one of the areas best covered by national statistical systems. The available data give accurate information on the origin and destination of the goods traded, as well as their prices, and classify the data according to internationally uniform patterns which ensure their international comparability.

The information on internationally traded services has not been developed to this extent, however. In some countries relatively detailed information is available on certain specific operations such as tourist arrivals and travel, but in most cases there are serious difficulties in measuring these indicators and it is necessary to resort to indirect methods or approximate estimates.

The general dissatisfaction with the state of statistics on services has been evident both among national and academic authorities and among international and regional bodies, and has led to the adoption of measures to overcome the existing limitations. The expected improvements are not yet reflected, however, in the data presented by the great majority of countries of the region.

Part I of the introduction gives the new definitions and coverage of the items making up international trade in services, and part II gives a comparison between the way those services are classified in the balance of payments and in the Central Product Classification. The central part of this study provides historical series fully covering

the 1980-1997 period for 35 countries of the region, together with tables summarizing each of these components at the regional level.

These data are taken basically from the balance of payments accounts prepared and published by the International Monetary Fund. On the basis of information provided by the national sources of each country, ECLAC has in some cases updated and in others adapted the available information to the presentation scheme followed in this study. This scheme is in line with the form of presentation of the normalized components laid down in the fifth edition of the IMF Balance of Payments Manual, 1993, which incorporates substantial changes that seek to give a better picture of the evolution of international trade in services and finance.

Ciudades intermedias en América Latina y el Caribe: propuesta para la gestión urbana (Intermediate cities in Latin America and the Caribbean: Proposals for urban management), LC/L.1117, Ricardo Jordán and Daniela Simeoni (eds.), ECLAC, Santiago, Chile, June 1998, 450 pages.

This book contains the results of the "Urban management in selected intermediate cities of Latin America and the Caribbean" (GUCl) project carried out by ECLAC with the sponsorship of the Italian Government in association with the municipal authorities of the six cities selected for the corresponding case studies: Córdoba (Argentina), Cuzco (Peru), Manizales (Colombia), Ouro Preto (Brazil), Port of Spain (Trinidad and Tobago) and Valdivia (Chile).

Part I consists of four chapters. In chapter 1, thanks to the collaboration of the Latin American Demographic Centre (CELADE), a demographic and statistical analysis is given of urban structure and dynamics in the region in the 1990s. A number of authors and institutions in Latin America consider that it was the intermediate cities which grew most during the last decade. The queries in this respect are clarified through a research methodology which differentiates these cases of urban development in line with subregional territorial conditions.

Chapter 2 describes the scope and projections of the decentralization process in Latin America and Caribbean, highlighting not only the political dimension of the process but also its administrative and fiscal aspects. Special emphasis is placed on the successful examples of municipal modernization in the rationalization of municipal finances, municipal revenue collection and the preparation of participative budgets.

Chapter 3 deals with the present conditions of operation and action of municipal institutions, highlighting the particular situations of globalization, liberalization and democratization in which they have had to operate. More specifically, emphasis is placed on some elements such as urban competitiveness, the urban "project", and public-private relations, among others, which form the framework for change and the incorporation of "new" urban management.

Chapter 4 sets out the future issues in urban management, describing in detail the elements that define the concepts and actions relating to local planning and strategic management. A detailed analysis is made of future lines of research and the relation between theory and practice, as a way of channeling future efforts in planning. A fundamental aspect in this respect is the way of harmonizing the working styles of strategic planning with the inertia of a traditional public sector resisting greater openness and change, and a decisive element is an analysis of the necessary balance between planning and the market as part of urban public management in the last years of the century.

Part II consists of chapters 5 and 6. Chapter 5 sets forth the action principles, assumptions and objectives of urban management as defined in the GUCl project. It also sets forth the methodology used, describing in detail the first section of the case studies, corresponding to participative diagnosis, and the second section, corresponding to systems for improving urban management, with the aim of promoting a particular and more efficient way of tackling these studies in other regional situations.

Chapter 6 is organized in the form of a system of technical files which present six case studies, considering both the diagnosis of the management in each municipal area and ways of improving this for a "new" form of urban management.



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PERIODIC PUBLICATIONS

CEPAL Review

CEPAL Review first appeared in 1976 as part of the Publications Programme of the Economic Commission for Latin America and the Caribbean, its aim being to make a contribution to the study of the economic and social development problems of the region. The views expressed in signed articles, including those by Secretariat staff members, are those of the authors and therefore do not necessarily reflect the point of view of the Organization.

CEPAL Review is published in Spanish and English versions three times a year.

Annual subscription costs for 1999 are US\$ 30 for the Spanish version and US\$ 35 for the English version. The price of single issues is US\$ 15 in both cases.

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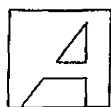
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